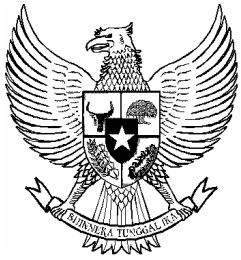

LEMBARAN NEGARA REPUBLIK INDONESIA

No.78, 2012 AGREEMENT. Pengesahan. Konvensi Internasional. Pencegahan. Pencemaran. Kapal.

PERATURAN PRESIDEN REPUBLIK INDONESIA
NOMOR 29 TAHUN 2012
TENTANG
PENGESAHAN *ANNEX III, ANNEX IV, ANNEX V, AND ANNEX VI OF THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS 1973 AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO* (LAMPIRAN III, LAMPIRAN IV, LAMPIRAN V, DAN LAMPIRAN VI DARI KONVENSI INTERNASIONAL TAHUN 1973 TENTANG PENCEGAHAN PENCEMARAN DARI KAPAL SEBAGAIMANA DIUBAH DENGAN PROTOKOL TAHUN 1978 YANG TERKAIT DARIPADANYA)

DENGAN RAHMAT TUHAN YANG MAHA ESA
PRESIDEN REPUBLIK INDONESIA,

Menimbang : a. bahwa di London, Inggris, pada tanggal 2 November 1973 dan 17 Februari 1978, telah diterima *International Convention for the Prevention of Pollution from Ships, 1973 as Modified by the Protocol of 1978 Relating Thereto* sebagaimana terakhir ditetapkan pada Sidang *Marine Environment Protection Committee* (*MEPC*) ke-58 dalam Resolusi MEPC.176 (58) tanggal 10 Oktober 2008 di London, Inggris;

b. bahwa sebagai komitmen dalam rangka mencegah pencemaran lingkungan yang berasal dari pengoperasian kapal, baik yang berbendera Indonesia maupun berbendera asing, Pemerintah Indonesia perlu mengesahkan Lampiran III, Lampiran IV, Lampiran V, dan Lampiran VI dari Konvensi;

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c. bahwa berdasarkan pertimbangan sebagaimana dimaksud pada huruf a dan huruf b, perlu menetapkan Peraturan Presiden tentang Pengesahan *Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973 as Modified by the Protocol of 1978 Relating Thereto* (Lampiran III, Lampiran IV, Lampiran V, dan Lampiran VI dari Konvensi Internasional Tahun 1973 tentang Pencegahan Pencemaran dari Kapal Sebagaimana Diubah dengan Protokol Tahun 1978 yang Terkait Daripadanya);

Mengingat : 1. Pasal 4 ayat (1) dan Pasal 11 Undang-Undang Dasar Negara Republik Indonesia Tahun 1945;

2. Undang-Undang Nomor 24 Tahun 2000 tentang Perjanjian Internasional (Lembaran Negara Republik Indonesia Tahun 2000 Nomor 185, Tambahan Lembaran Negara Republik Indonesia Nomor 4012);

3. Keputusan Presiden Nomor 46 Tahun 1986 tentang Pengesahan *International Convention for the Prevention of Pollution from Ships, 1973*, beserta Protokol (*the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973*) (Lembaran Negara Republik Indonesia Tahun 1986 Nomor 59);

MEMUTUSKAN :

Menetapkan : PERATURAN PRESIDEN TENTANG PENGESAHAN *ANNEX III, ANNEX IV, ANNEX V, AND ANNEX VI OF THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS 1973 AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO* (LAMPIRAN III, LAMPIRAN IV, LAMPIRAN V, DAN LAMPIRAN VI DARI KONVENSI INTERNASIONAL TAHUN 1973 TENTANG PENCEGAHAN PENCEMARAN DARI KAPAL SEBAGAIMANA DIUBAH DENGAN PROTOKOL TAHUN 1978 YANG TERKAIT DARIPADANYA).

Pasal 1

Mengesahkan *Annex III, Annex IV, Annex V, and Annex VI of the International Convention for the Prevention of Pollution from Ships 1973 as Modified by the Protocol of 1978 Relating Thereto* (Lampiran III, Lampiran IV, Lampiran V, dan Lampiran VI dari Konvensi Internasional Tahun 1973 tentang Pencegahan Pencemaran dari Kapal Sebagaimana Diubah dengan Protokol Tahun 1978 yang Terkait Daripadanya), sebagaimana terakhir

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ditetapkan pada Sidang *Marine Environment Protection Committee* (MEPC) ke-58 dalam Resolusi MPEC.176 (58) tanggal 10 Oktober 2008 di London, Inggris yang naskah aslinya dalam Bahasa Inggris, Bahasa Perancis, Bahasa Rusia, dan Bahasa Spanyol serta terjemahannya dalam Bahasa Indonesia sebagaimana terlampir dan merupakan bagian yang tidak terpisahkan dari Peraturan Presiden ini.

Pasal 2

Apabila terjadi perbedaan penafsiran antara naskah terjemahan Lampiran-lampiran Konvensi dalam Bahasa Indonesia dengan naskah aslinya sebagaimana dimaksud dalam Pasal 1, yang berlaku adalah naskah aslinya dalam Bahasa Inggris, Bahasa Perancis, Bahasa Rusia, dan Bahasa Spanyol.

Pasal 3

Peraturan Presiden ini mulai berlaku pada tanggal diundangkan.

Agar setiap orang mengetahuinya, memerintahkan pengundangan Peraturan Presiden ini dengan penempatannya dalam Lembaran Negara Republik Indonesia.

Ditetapkan di Jakarta
pada tanggal 20 Maret 2012

PRESIDEN REPUBLIK INDONESIA,

DR. H. SUSILO BAMBANG YUDHOYONO

Diundangkan di Jakarta
pada tanggal 20 Maret 2012

MENTERI HUKUM DAN HAK ASASI MANUSIA
REPUBLIK INDONESIA,

AMIR SYAMSUDIN

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FINAL ACT OF THE

INTERNATIONAL CONFERENCE

ON

MARINE POLLUTION, 1973

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FINAL ACT OF THE INTERNATIONAL CONFERENCE ON MARINE POLLUTION, 1973

1. By its Resolution A.176(VI) of 21 October 1969, the Assembly of the Inter-Governmental Maritime Consultative Organization decided to convene in 1973 an International Conference on Marine Pollution. This Conference was held in London from 8 October to 2 November 1973.

2. The following States were represented by delegations at the Conference:

Argentina
Australia
Bahrain
Belgium
Brazil
Bulgaria
Byelorussian Soviet Socialist Republic
Canada
Chile
Cuba
Cyprus
Denmark
Dominican Republic
Ecuador
Egypt
Finland
France
German Democratic Republic
Germany, Federal Republic of
Ghana
Greece
Haiti
Hungary
Iceland
India
Indonesia
Iran
Iraq
Ireland
Italy
Ivory Coast
Japan
Jordan
Kenya
Khmer Republic
Kuwait
Liberia
Libyan Arab Republic
Madagascar
Mexico
Monaco
Morocco
Netherlands
New Zealand
Nigeria
Norway
Panama
Peru
Philippines
Poland
Portugal
Republic of Korea
Romania
Saudi Arabia
Singapore
South Africa
Spain
Sri Lanka
Sweden
Switzerland
Thailand
Trinidad and Tobago
Tunisia
Ukrainian Soviet Socialist Republic
Union of Soviet Socialist Republics
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland
United Republic of Tanzania
United States of America
Uruguay
Venezuela

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3. The following States were represented at the Conference by observers:

Colombia
Jamaica
Malawi
Oman
Republic of Viet-Nam
Turkey
Yugoslavia

The Government of Hong Kong was also represented by an observer.

4. At the invitation of the Assembly the following organizations in the United Nations system sent representatives to the Conference:

United Nations
United Nations Environment Programme
Food and Agriculture Organization
United Nations Educational, Scientific and Cultural Organization
International Bank for Reconstruction and Development
International Atomic Energy Agency

5. The following inter-governmental organizations sent observers to the Conference:

European Economic Community
International Institute for the Unification of Private Law

6. The following non-governmental organizations also sent observers to the Conference:

International Chamber of Shipping
International Organization for Standardization
International Electrotechnical Commission
International Union of Marine Insurance
International Association of Ports and Harbors
The Baltic and International Maritime Conference
International Association of Classification Societies
International Law Association
European Council of Chemical Manufacturers' Federation
Oil Companies International Marine Forum
International Shipowners' Association
Friends of the Earth International

7. At the opening of the Conference The Hon. Michael Heseltine, Minister of Aerospace and Shipping of the United Kingdom and Mr. Maurice Strong, Executive Director of the United Nations Environment Programme made statements supporting the objectives of the Conference.

8. The Conference elected Mr. S. V. Bhave, Head of the Indian delegation, as President of the Conference.

9. Twenty-four Vice-Presidents of the Conference were elected, as follows:

First Vice-President: Mr. G. Lindencrona (Sweden)

Mr. R.M. Gowland (Argentina)
H.E. Mr. M. Raffaelli (Brazil)

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The Hon. Jack Davis (Canada)
Dr. M. Oporto (Cuba)
Mr. M.A. El-Sammak (Egypt)
Mr. J.P. Cahouat (France)
Dr. H. Rentner (German Democratic Republic)
Dr. G. Breuer (Germany, Federal Republic of)
H.E. Mr. H.V.H. Sekyi (Ghana)
Mr. M. Sjadzali (Indonesia)
Mr. H. Afshar (Iran)
Mr. K.G. Loukou (Ivory Coast)
H.E. Mr. S. Sugihara (Japan)
Mr. A.G. Toukan (Jordan)
Mr. E. Dinga (Kenya)
Mr. N.A. Al-Nakib (Kuwait)
Mr. M. Ramarozaka (Madagascar)
Dr. Vizcaíno Murray (Mexico)
Captain D.W. Boyes (New Zealand)
Mr. S. Perkowicz (Poland)
H.E. Mr. G. Nhigula (United Republic of Tanzania)
Mr. V. Tikhonov (USSR)
Mr. J.N. Archer (United Kingdom)

10. Mr. Colin Goad, Secretary-General of the Organization, acted as Secretary-General of the Conference with Mr. J. Quéguiner, Deputy Secretary-General, as Deputy Secretary-General of the Conference. Captain A. Saveliev, Secretary of the Maritime Safety Committee of the Organization, was appointed Executive Secretary of the Conference and Mr. Y. Sasamura, Head of Marine Science and Technology Division, and Mr. T. Mensah, Head of Legal Division, of the Organization were appointed Deputy Executive Secretaries of the Conference.

11. The Conference established the following Committees and a Steering Committee composed of officers of the Conference:

Committee I

Chairman:	H.E. Dr. P.V.J. Solomon (Trinidad and Tobago)
Vice-Chairman:	Mr. G. Lindencrona (Sweden)

Committee II

Chairman:	Dr. L. Spinelli (Italy)
Vice-Chairman:	Dr. W. Al-Nimer (Bahrain)

Committee III

Chairman:	Mr. R.J. Lakey (United States of America)
Vice-Chairman:	Mr. Koh Eng Tian (Singapore)

Committee IV

Chairman:	H.E. Prof. A. Yankov (Bulgaria)
Vice-Chairman:	The Hon. G.T.B. Cooper (Liberia)

Credentials Committee

Chairman:	Mr. P.A. Araque (Philippines)

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Drafting Committee

Chairman:	Mr. G.A.B. Longe (Nigeria)
Vice-Chairman:	H.E. Mr. J.D. del Campo (Uruguay)

12. The following documentation formed the basis of the work of the Conference:

- Draft Text of an International Convention for the Prevention of Pollution from Ships, 1973
- Draft Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil
- Draft Resolutions relating to the prevention and control of marine pollution
- Proposals and comments, including amendments to the drafts mentioned above, submitted to the Conference by interested Governments and Organizations.

13. As a result of its deliberations, recorded in the summary records and reports of the Conference, the following instruments were adopted by the Conference:

INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

with its Protocols, Annexes and Appendices; and

PROTOCOL RELATING TO INTERVENTION ON THE HIGH SEAS IN CASES OF MARINE POLLUTION BY SUBSTANCES OTHER THAN OIL

The Convention and the Protocol constitute Attachments 1 and 2 to this Final Act respectively.

14. The Conference also adopted Resolutions the texts of which comprise Attachment 3 of this Final Act.

15. The text of this Final Act including its attachments, is deposited with the Secretary-General of the Inter-Governmental Maritime Consultative Organization (IMCO). It is established in a single original in the English, French, Russian and Spanish languages, and accompanied by the texts of the International Convention for the Prevention of Pollution from Ships, 1973, with its Protocols, Annexes and Appendices, the Protocol relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil, and the Resolutions of the Conference. The texts of the Convention, its Protocols, Annexes and Appendices, as well as of the Protocol, appear in their authentic languages, English, French, Russian and Spanish. The texts of Resolutions of the Conference appear in English, French, Russian and Spanish. Official translations of the Convention with its Protocols, Annexes and Appendices, and the Protocol, shall be prepared in the Arabic, German, Italian and Japanese languages. Originals of these official translations shall be deposited with this Final Act.

16. The Secretary-General of the Inter-Governmental Maritime Consultative Organization shall send a certified copy of this Final Act and, when they have been

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prepared, certified copies of the official translations of the Convention with its Protocols, Annexes and Appendices, the Protocol and the Resolutions of the Conference to the Governments invited to be represented at the Conference in accordance with the wishes of those Governments.

IN WITNESS WHEREOF the undersigned have affixed their signatures to this Final Act.

DONE AT LONDON this second day of November, one thousand nine hundred and seventy-three.

[5]

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President
Président
Presidente
Председатель

Secretary-General of the Inter-Governmental Maritime Consultative Organization
Secrétaire général de l'Organisation intergouvernementale consultative de la navigation maritime
Secretario General de la Organización Consultiva Marítima Intergubernamental
Генеральный Секретарь Межправительственной Морской Консультативной Организации

Deputy Secretary-General of the Inter-Governmental Maritime Consultative Organization
Secrétaire général adjoint de l'Organisation intergouvernementale consultative de la navigation maritime
Secretario General Adjunto de la Organización Consultiva Marítima Intergubernamental
Заместитель Генерального Секретаря Межправительственной Морской Консультативной Организации

Executive Secretary of the Conference
Secrétaire exécutif de la Conférence
Secretario Ejecutivo de la Conferencia
Исполнительный Секретарь Конференции

[6]

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Deputy Executive Secretary of the Conference
Secrétaire exécutif adjoint de la Conférence
Secretario Ejecutivo Adjunto de la Conferencia
Заместитель Исполнительного Секретаря Конференции

Deputy Executive Secretary of the Conference
Secrétaire exécutif adjoint de la Conférence
Secretario Ejecutivo Adjunto de la Conferencia
Заместитель Исполнительного Секретаря Конференции

[7]

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For the Government of the Argentine Republic
Pour le Gouvernement de la République Argentine
Por el Gobierno de la República Argentina
От имени Правительства Аргентинской Республики

For the Government of the Commonwealth of Australia
Pour le Gouvernement du Commonwealth d'Australie
Por el Gobierno del Commonwealth de Australia
От имени Правительства Австралийского Союза

For the Government of the State of Bahrain
Pour le Gouvernement de l'Etat de Bahreïn
Por el Gobierno del Estado de Bahrein
От имени Правительства Государства Бахрейн

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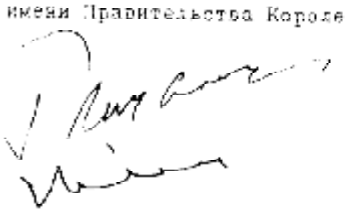
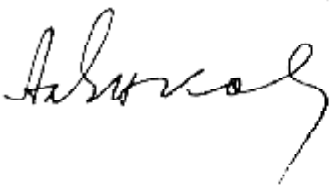
For the Government of the Kingdom of Belgium
Pour le Gouvernement du Royaume de Belgique
Por el Gobierno del Reino de Bélgica
От имени Правительства Королевства Бельгии



For the Government of the Federative Republic of Brazil
Pour le Gouvernement de la République fédérative du Brésil
Por el Gobierno de la República Federativa del Brasil
От имени Правительства Федеративной Республики Бразилии

For the Government of the People's Republic of Bulgaria
Pour le Gouvernement de la République populaire de Bulgarie
Por el Gobierno de la República Popular de Bulgaria
От имени Правительства Народной Республики Болгарии



[9]

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For the Government of the Byelorussian Soviet Socialist Republic

Pour le Gouvernement de la République socialiste soviétique de Biélorussie

Por el Gobierno de la República Socialista Soviética de Bielorrusia

От имени Правительства Белорусской Советской Социалистической Республики

For the Government of Canada

Pour le Gouvernement du Canada

Por el Gobierno del Canadá

От имени Правительства Канады

For the Government of the Republic of Chile

Pour le Gouvernement de la République du Chili

Por el Gobierno de la República de Chile

От имени Правительства Республики Чили.

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Pour le Gouvernement de la République de Cuba
Por el Gobierno de la República de Cuba
От имени Правительства Республики Кубы

For the Government of the Republic of Cyprus
Pour le Gouvernement de la République de Chypre
Por el Gobierno de la República de Chipre
От имени Правительства Республики Кипр

Michael V. Vassiliades

For the Government of the Kingdom of Denmark
Pour le Gouvernement du Royaume du Danemark
Por el Gobierno del Reino de Dinamarca
От имени Правительства Королевства Дании

For the Government of the Dominican Republic
Pour le Gouvernement de la République Dominicaine
Por el Gobierno de la República Dominicana
От имени Правительства Доминиканской Республики

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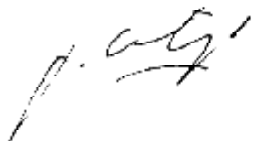
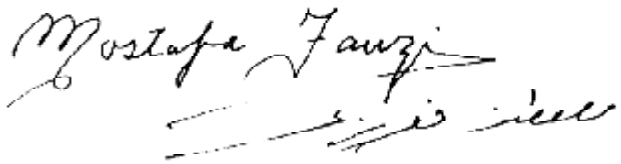
For the Government of the Republic of Ecuador
Pour le Gouvernement de la République de l'Equateur
Por el Gobierno de la República del Ecuador
От имени Правительства Республики Эквадор



For the Government of the Arab Republic of Egypt
Pour le Gouvernement de la République arabe d'Egypte
Por el Gobierno de la República Arabe de Egipto
От имени Правительства Арабской Республики Египет



For the Government of the Republic of Finland
Pour le Gouvernement de la République de Finlande
Por el Gobierno de la República de Finlandia
От имени Правительства Республики Финляндии

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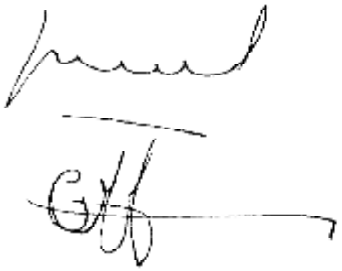
For the Government of the French Republic
Pour le Gouvernement de la République française
Por el Gobierno de la República Francesa
От имени Правительства Французской Республики



For the Government of the German Democratic Republic
Pour le Gouvernement de la République démocratique allemande
Por el Gobierno de la República Democrática Alemana
От имени Правительства Германской Демократической Республики

For the Government of the Federal Republic of Germany
Pour le Gouvernement de la République fédérale d'Allemagne
Por el Gobierno de la República Federal de Alemania
От имени Правительства Федеративной Республики Германии

[13]

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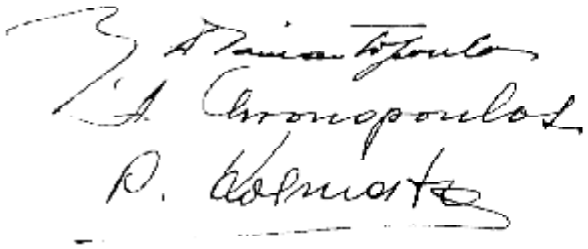
For the Government of the Republic of Ghana
Pour le Gouvernement de la République du Ghana
Por el Gobierno de la República de Ghana
От имени Правительства Республики Ганы

For the Government of the Republic of Greece
Pour le Gouvernement de la République de Grèce
Por el Gobierno de la República de Grecia
От имени Правительства Республики Греции



For the Government of the Republic of Haiti
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Por el Gobierno de la República de Haití
От имени Правительства Республики Гаити

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Pour le Gouvernement de la République populaire hongroise
Por el Gobierno de la República Popular Húngara
От имени Правительства Венгерской Народной Республики

For the Government of the Republic of Iceland
Pour le Gouvernement de la République d'Islande
Por el Gobierno de la República de Islandia
От имени Правительства Республики Исландии

For the Government of the Republic of India
Pour le Gouvernement de la République de l'Inde
Por el Gobierno de la República de la India
От имени Правительства Республики Индии

S. V. Rhaw

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For the Government of the Republic of Indonesia
Pour le Gouvernement de la République d'Indonésie
Por el Gobierno de la República de Indonesia
От имени Правительства Республики Индонезии

For the Government of the Empire of Iran
Pour le Gouvernement de l'Empire d'Iran
Por el Gobierno del Imperio del Irán
От имени Правительства Иранской Империи

For the Government of the Republic of Iraq
Pour le Gouvernement de la République d'Irak
Por el Gobierno de la República del Irak
От имени Правительства Республики Ирак

A. Al-Kadhi

[16]

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For the Government of Ireland
Pour le Gouvernement de l'Irlande
Por el Gobierno de Irlanda
От имени Правительства Ирландии

For the Government of the Italian Republic
Pour le Gouvernement de la République Italienne
Por el Gobierno de la República Italiana
От имени Правительства Итальянской Республики

For the Government of the Republic of the Ivory Coast
Pour le Gouvernement de la République de Côte d'Ivoire
Por el Gobierno de la República de la Costa de Marfil
От имени Правительства Республики Берега Слоновой Кости

[17]

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For the Government of Japan
Pour le Gouvernement du Japon
Por el Gobierno del Japón
От имени Правительства Японии

杉原眞一

For the Government of the Hashemite Kingdom of Jordan
Pour le Gouvernement du Royaume hachémite de Jordanie
Por el Gobierno del Reino Hachemita de Jordania
От имени Правительства Хашемитского Королевства Иордании

Э.Р.Тоукан

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For the Government of the Republic of Kenya
Pour le Gouvernement de la République du Kenya
Por el Gobierno de la República de Kenia
От имени Правительства Республики Кения

For the Government of the Khmer Republic
Pour le Gouvernement de la République khmère
Por el Gobierno de la República Khmer
От имени Правительства Кхмерской Республики

For the Government of the State of Kuwait
Pour le Gouvernement de l'Etat du Koweït
Por el Gobierno del Estado de Kuwait
От имени Правительства Государства Кувейт

[19]

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For the Government of the Republic of Liberia
Pour le Gouvernement de la République du Libéria
Por el Gobierno de la República de Liberia
От имени Правительства Республики Либерии

For the Government of the Libyan Arab Republic
Pour le Gouvernement de la République arabe libyenne
Por el Gobierno de la República Arabe Libia
От имени Правительства Ливийской Арабской Республики

For the Government of the Malagasy Republic
Pour le Gouvernement de la République malgache
Por el Gobierno de la República Malgache
От имени Правительства Малагасийской Республики

[20]

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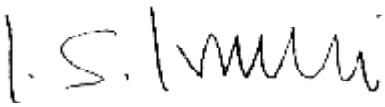
For the Government of the United Mexican States
Pour le Gouvernement des Etats-Unis du Mexique
Por el Gobierno de los Estados Unidos Mexicanos
От имени Правительства Соединенных Штатов Мексики

For the Government of the Principality of Monaco
Pour le Gouvernement de la Principauté de Monaco
Por el Gobierno del Principado de Mónaco
От имени Правительства Княжества Монако



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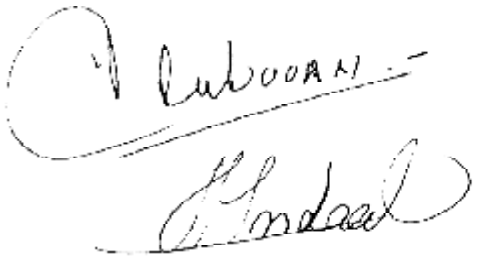

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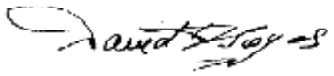

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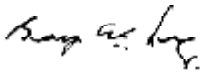

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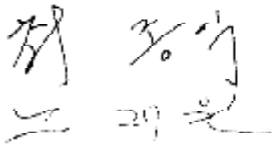

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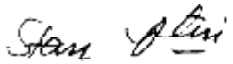

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Por el Gobierno del Reino de Arabia Saudita
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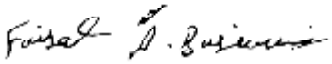

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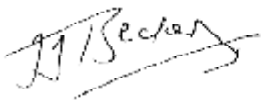

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Pour le Gouvernement de l'Etat espagnol
Por el Gobierno del Estado Español
От имени Правительства Испанского Государства

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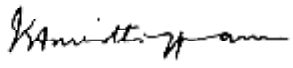

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Pour le Gouvernement de la République socialiste soviétique d'Ukraine
Por el Gobierno de la República Socialista Soviética de Ucrania
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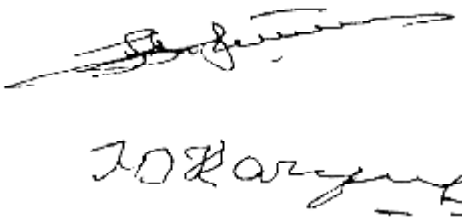

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Pour le Gouvernement de l'Union des Républiques socialistes soviétiques

Por el Gobierno de la Unión de Repúblicas Socialistas Soviéticas

От имени Правительства Союза Советских Социалистических Республик

For the Government of the United Arab Emirates

Pour le Gouvernement des Emirats arabes unis

Por el Gobierno de los Emiratos Arabes Unidos

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Por el Gobierno del Reino Unido de Gran Bretaña e Irlanda del Norte

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Pour le Gouvernement de la République-Unie de Tanzanie

Por el Gobierno de la República Unida de Tanzania

От имени Правительства Объединенной Республики Танзании

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Pour le Gouvernement des Etats-Unis d'Amérique
Por el Gobierno de los Estados Unidos de América
От имени Правительства Соединенных Штатов Америки

Russell E. Train
Under Secretary
of the Interior

For the Government of the Eastern Republic of Uruguay
Pour le Gouvernement de la République orientale de l'Uruguay
Por el Gobierno de la República Oriental del Uruguay
От имени Правительства Восточной Республики Уругвай

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Pour le Gouvernement de la République du Venezuela
Por el Gobierno de la República de Venezuela
От имени Правительства Республики Венесуэлы

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ATTACHMENT I

INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

THE PARTIES TO THE CONVENTION,

BEING CONSCIOUS of the need to preserve the human environment in general and the marine environment in particular,

RECOGNIZING that deliberate, negligent or accidental release of oil and other harmful substances from ships constitutes a serious source of pollution,

RECOGNIZING ALSO the importance of the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as being the first multilateral instrument to be concluded with the prime objective of protecting the environment, and appreciating the significant contribution which that Convention has made in preserving the seas and coastal environment from pollution,

DESIRING to achieve the complete elimination of intentional pollution of the marine environment by oil and other harmful substances and the minimization of accidental discharge of such substances,

CONSIDERING that this object may best be achieved by establishing rules not limited to oil pollution having a universal purport,

HAVE AGREED as follows:

ARTICLE 1

General Obligations under the Convention

(1) The Parties to the Convention undertake to give effect to the provisions of the present Convention and those Annexes thereto by which they are bound, in order to prevent the pollution of the marine environment by the discharge of harmful substances or effluents containing such substances in contravention of the Convention.

(2) Unless expressly provided otherwise, a reference to the present Convention constitutes at the same time a reference to its Protocols and to the Annexes.

ARTICLE 2

Definitions

For the purposes of the present Convention, unless expressly provided otherwise:

(1) "Regulations" means the Regulations contained in the Annexes to the present Convention;

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(2) "Harmful substance" means any substance which, if introduced into the sea, is liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea, and includes any substance subject to control by the present Convention.

(3) (a) "Discharge", in relation to harmful substances or effluents containing such substances, means any release howsoever caused from a ship and includes any escape, disposal, spilling, leaking, pumping, emitting or emptying;

(b) "Discharge" does not include:

(i) dumping within the meaning of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, done at London on 13 November 1972; or

(ii) release of harmful substances directly arising from the exploration, exploitation and associated off-shore processing of sea-bed mineral resources, or

(iii) release of harmful substances for purposes of legitimate scientific research into pollution abatement or control.

(4) "Ship" means a vessel of any type whatsoever operating in the marine environment and includes hydrofoil boats, air-cushion vehicles, submersibles, floating craft and fixed or floating platforms.

(5) "Administration" means the Government of the State under whose authority the ship is operating. With respect to a ship entitled to fly a flag of any State, the Administration is the Government of that State. With respect to fixed or floating platforms engaged in exploration and exploitation of the sea-bed and subsoil thereof adjacent to the coast over which the coastal State exercises sovereign rights for the purposes of exploration and exploitation of their natural resources, the Administration is the Government of the coastal State concerned.

(6) "Incident" means an event involving the actual or probable discharge into the sea of a harmful substance, or effluents containing such a substance.

(7) "Organization" means the Inter-Governmental Maritime Consultative Organization.

ARTICLE 3

Application

(1) The present Convention shall apply to:

(a) ships entitled to fly the flag of a Party to the Convention; and

(b) ships not entitled to fly the flag of a Party but which operate under the authority of a Party.

(2) Nothing in the present Article shall be construed as derogating from or extending the sovereign rights of the Parties under international law over the sea-bed and subsoil thereof adjacent to their coasts for the purposes of exploration and exploitation of their natural resources.

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(3) The present Convention shall not apply to any warship, naval auxiliary or other ship owned or operated by a State and used, for the time being, only on government non-commercial service. However, each Party shall ensure by the adoption of appropriate measures not impairing the operations or operational capabilities of such ships owned or operated by it, that such ships act in a manner consistent, so far as is reasonable and practicable, with the present Convention.

ARTICLE 4

Violation

(1) Any violation of the requirements of the present Convention shall be prohibited and sanctions shall be established therefor under the law of the Administration of the ship concerned wherever the violation occurs. If the Administration is informed of such a violation and is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken as soon as possible, in accordance with its law.

(2) Any violation of the requirements of the present Convention within the jurisdiction of any Party to the Convention shall be prohibited and sanctions shall be established therefor under the law of that Party. Whenever such a violation occurs, that Party shall either:

(a) cause proceedings to be taken in accordance with its law; or

(b) furnish to the Administration of the ship such information and evidence as may be in its possession that a violation has occurred.

(3) Where information or evidence with respect to any violation of the present Convention by a ship is furnished to the Administration of that ship, the Administration shall promptly inform the Party which has furnished the information or evidence, and the Organization, of the action taken.

(4) The penalties specified under the law of a Party pursuant to the present Article shall be adequate in severity to discourage violations of the present Convention and shall be equally severe irrespective of where the violations occur.

ARTICLE 5

Certificates and Special Rules on Inspection of Ships

(1) Subject to the provisions of paragraph (2) of the present Article a certificate issued under the authority of a Party to the Convention in accordance with the provisions of the Regulations shall be accepted by the other Parties and regarded for all purposes covered by the present Convention as having the same validity as a certificate issued by them.

(2) A ship required to hold a certificate in accordance with the provisions of the Regulations is subject, while in the ports or off-shore terminals under the jurisdiction of a Party, to inspection by officers duly authorized by that Party. Any such inspection shall be limited to verifying that there is on board a valid certificate, unless there are clear grounds for believing that the condition of the ship or its equipment

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does not correspond substantially with the particulars of that certificate. In that case, or if the ship does not carry a valid certificate, the Party carrying out the inspection shall take such steps as will ensure that the ship shall not sail until it can proceed to sea without presenting an unreasonable threat of harm to the marine environment. That Party may, however, grant such a ship permission to leave the port or off-shore terminal for the purpose of proceeding to the nearest appropriate repair yard available.

(3) If a Party denies a foreign ship entry to the ports or off-shore terminals under its jurisdiction or takes any action against such a ship for the reason that the ship does not comply with the provisions of the present Convention, the Party shall immediately inform the consul or diplomatic representative of the Party whose flag the ship is entitled to fly, or if this is not possible, the Administration of the ship concerned. Before denying entry or taking such action the Party may request consultation with the Administration of the ship concerned. Information shall also be given to the Administration when a ship does not carry a valid certificate in accordance with the provisions of the Regulations.

(4) With respect to the ships of non-Parties to the Convention, Parties shall apply the requirements of the present Convention as may be necessary to ensure that no more favourable treatment is given to such ships.

ARTICLE 6

Detection of Violations and Enforcement of the Convention

(1) Parties to the Convention shall co-operate in the detection of violations and the enforcement of the provisions of the present Convention, using all appropriate and practicable measures of detection and environmental monitoring, adequate procedures for reporting and accumulation of evidence.

(2) A ship to which the present Convention applies may, in any port or off-shore terminal of a Party, be subject to inspection by officers appointed or authorized by that Party for the purpose of verifying whether the ship has discharged any harmful substances in violation of the provisions of the Regulations. If an inspection indicates a violation of the Convention, a report shall be forwarded to the Administration for any appropriate action.

(3) Any Party shall furnish to the Administration evidence, if any, that the ship has discharged harmful substances or effluents containing such substances in violation of the provisions of the Regulations. If it is practicable to do so, the competent authority of the former Party shall notify the Master of the ship of the alleged violation.

(4) Upon receiving such evidence, the Administration so informed shall investigate the matter, and may request the other Party to furnish further or better evidence of the alleged contravention. If the Administration is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken in accordance with its law as soon as possible. The Administration shall promptly inform the Party which has reported the alleged violation, as well as the Organization, of the action taken.

(5) A Party may also inspect a ship to which the present Convention applies when it enters the ports or off-shore terminals under its jurisdiction, if a request for an

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investigation is received from any Party together with sufficient evidence that the ship has discharged harmful substances or effluents containing such substances in any place. The report of such investigation shall be sent to the Party requesting it and to the Administration so that the appropriate action may be taken under the present Convention.

ARTICLE 7

Undue Delay to Ships

(1) All possible efforts shall be made to avoid a ship being unduly detained or delayed under Article 4, 5 or 6 of the present Convention.

(2) When a ship is unduly detained or delayed under Article 4, 5 or 6 of the present Convention, it shall be entitled to compensation for any loss or damage suffered.

ARTICLE 8

Reports on Incidents Involving Harmful Substances

(1) A report of an incident shall be made without delay to the fullest extent possible in accordance with the provisions of Protocol I to the present Convention.

(2) Each Party to the Convention shall:

(a) make all arrangements necessary for an appropriate officer or agency to receive and process all reports on incidents; and

(b) notify the Organization with complete details of such arrangements for circulation to other Parties and Member States of the Organization.

(3) Whenever a Party receives a report under the provisions of the present Article, that Party shall relay the report without delay to:

(a) the Administration of the ship involved; and

(b) any other State which may be affected.

(4) Each Party to the Convention undertakes to issue instructions to its maritime inspection vessels and aircraft and to other appropriate services, to report to its authorities any incident referred to in Protocol I to the present Convention. That Party shall, if it considers it appropriate, report accordingly to the Organization and to any other party concerned.

ARTICLE 9

Other Treaties and Interpretation

(1) Upon its entry into force, the present Convention supersedes the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as amended, as between Parties to that Convention.

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(2) Nothing in the present Convention shall prejudice the codification and development of the law of the sea by the United Nations Conference on the Law of the Sea convened pursuant to Resolution 2750 C(XXV) of the General Assembly of the United Nations nor the present or future claims and legal views of any State concerning the law of the sea and the nature and extent of coastal and flag State jurisdiction.

(3) The term "jurisdiction" in the present Convention shall be construed in the light of international law in force at the time of application or interpretation of the present Convention.

ARTICLE 10

Settlement of Disputes

Any dispute between two or more Parties to the Convention concerning the interpretation or application of the present Convention shall, if settlement by negotiation between the Parties involved has not been possible, and if these Parties do not otherwise agree, be submitted upon request of any of them to arbitration as set out in Protocol II to the present Convention.

ARTICLE 11

Communication of Information

(1) The Parties to the Convention undertake to communicate to the Organization:

(a) the text of laws, orders, decrees and regulations and other instruments which have been promulgated on the various matters within the scope of the present Convention;

(b) a list of non-governmental agencies which are authorized to act on their behalf in matters relating to the design, construction and equipment of ships carrying harmful substances in accordance with the provisions of the Regulations;

(c) a sufficient number of specimens of their certificates issued under the provisions of the Regulations;

(d) a list of reception facilities including their location, capacity and available facilities and other characteristics;

(e) official reports or summaries of official reports in so far as they show the results of the application of the present Convention; and

(f) an annual statistical report, in a form standardized by the Organization, of penalties actually imposed for infringement of the present Convention.

(2) The Organization shall notify Parties of the receipt of any communications under the present Article and circulate to all Parties any information communicated to it under sub-paragraphs (1)(b) to (f) of the present Article.

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ARTICLE 12

Casualties to Ships

(1) Each Administration undertakes to conduct an investigation of any casualty occurring to any of its ships subject to the provisions of the Regulations if such casualty has produced a major deleterious effect upon the marine environment.

(2) Each Party to the Convention undertakes to supply the Organization with information concerning the findings of such investigation, when it judges that such information may assist in determining what changes in the present Convention might be desirable.

ARTICLE 13

Signature, Ratification, Acceptance, Approval and Accession

(1) The present Convention shall remain open for signature at the Headquarters of the Organization from 15 January 1974 until 31 December 1974 and shall thereafter remain open for accession. States may become Parties to the present Convention by:

(a) signature without reservation as to ratification, acceptance or approval; or

(b) signature subject to ratification, acceptance or approval, followed by ratification, acceptance or approval; or

(c) accession.

(2) Ratification, acceptance, approval or accession shall be effected by the deposit of an instrument to that effect with the Secretary-General of the Organization.

(3) The Secretary-General of the Organization shall inform all States which have signed the present Convention or acceded to it of any signature or of the deposit of any new instrument of ratification, acceptance, approval or accession and the date of its deposit.

ARTICLE 14

Optional Annexes

(1) A State may at the time of signing, ratifying, accepting, approving or acceding to the present Convention declare that it does not accept any one or all of Annexes III, IV and V (hereinafter referred to as "Optional Annexes") of the present Convention. Subject to the above, Parties to the Convention shall be bound by any Annex in its entirety.

(2) A State which has declared that it is not bound by an Optional Annex may at any time accept such Annex by depositing with the Organization an instrument of the kind referred to in Article 13(2).

(3) A State which makes a declaration under paragraph (1) of the present Article in respect of an Optional Annex and which has not subsequently accepted that Annex in accordance with paragraph (2) of the present Article shall not be under any obligation nor entitled to claim any privileges under the present Convention in

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respect of matters related to such Annex and all references to Parties in the present Convention shall not include that State in so far as matters related to such Annex are concerned.

(4) The Organization shall inform the States which have signed or acceded to the present Convention of any declaration under the present Article as well as the receipt of any instrument deposited in accordance with the provisions of paragraph (2) of the present Article.

ARTICLE 15

Entry into Force

(1) The present Convention shall enter into force twelve months after the date on which not less than 15 States, the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant shipping, have become parties to it in accordance with Article 13.

(2) An Optional Annex shall enter into force twelve months after the date on which the conditions stipulated in paragraph (1) of the present Article have been satisfied in relation to that Annex.

(3) The Organization shall inform the States which have signed the present Convention or acceded to it of the date on which it enters into force and of the date on which an Optional Annex enters into force in accordance with paragraph (2) of the present Article.

(4) For States which have deposited an instrument of ratification, acceptance, approval or accession in respect of the present Convention or any Optional Annex after the requirements for entry into force thereof have been met but prior to the date of entry into force, the ratification, acceptance, approval or accession shall take effect on the date of entry into force of the Convention or such Annex or three months after the date of deposit of the instrument whichever is the later date.

(5) For States which have deposited an instrument of ratification, acceptance, approval or accession after the date on which the Convention or an Optional Annex entered into force, the Convention or the Optional Annex shall become effective three months after the date of deposit of the instrument.

(6) After the date on which all the conditions required under Article 16 to bring an amendment to the present Convention or an Optional Annex into force have been fulfilled, any instrument of ratification, acceptance, approval or accession deposited shall apply to the Convention or Annex as amended.

ARTICLE 16

Amendments

(1) The present Convention may be amended by any of the procedures specified in the following paragraphs.

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(2) Amendments after consideration by the Organization:

(a) any amendment proposed by a Party to the Convention shall be submitted to the Organization and circulated by its Secretary General to all Members of the Organization and all Parties at least six months prior to its consideration;

(b) any amendment proposed and circulated as above shall be submitted to an appropriate body by the Organization for consideration;

(c) Parties to the Convention, whether or not Members of the Organization, shall be entitled to participate in the proceedings of the appropriate body;

(d) amendments shall be adopted by a two thirds majority of only the Parties to the Convention present and voting;

(e) if adopted in accordance with sub-paragraph (d) above, amendments shall be communicated by the Secretary-General of the Organization to all the Parties to the Convention for acceptance;

(f) an amendment shall be deemed to have been accepted in the following circumstances:

(i) an amendment to an Article of the Convention shall be deemed to have been accepted on the date on which it is accepted by two-thirds of the Parties, the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant fleet;

(ii) an amendment to an Annex to the Convention shall be deemed to have been accepted in accordance with the procedure specified in sub-paragraph (f)(iii) unless the appropriate body, at the time of its adoption, determines that the amendment shall be deemed to have been accepted on the date on which it is accepted by two-thirds of the Parties, the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant fleet. Nevertheless, at any time before the entry into force of an amendment to an Annex to the Convention, a Party may notify the Secretary-General of the Organization that its express approval will be necessary before the amendment enters into force for it. The latter shall bring such notification and the date of its receipt to the notice of Parties;

(iii) an amendment to an Appendix to an Annex to the Convention shall be deemed to have been accepted at the end of a period to be determined by the appropriate body at the time of its adoption, which period shall be not less than ten months, unless within that period an objection is communicated to the Organization by not less than one-third of the Parties or by the Parties the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant fleet whichever condition is fulfilled;

(iv) an amendment to Protocol I to the Convention shall be subject to the same procedures as for the amendments to the Annexes to the Convention, as provided for in sub-paragraphs (f)(ii) or (f)(iii) above;

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(v) an amendment to Protocol II to the Convention shall be subject to the same procedures as for the amendments to an Article of the Convention, as provided for in sub-paragraph (f)(i) above;

(g) the amendment shall enter into force under the following conditions:

(i) in the case of an amendment to an Article of the Convention, to Protocol II, or to Protocol I or to an Annex to the Convention not under the procedure specified in sub-paragraph (f)(iii), the amendment accepted in conformity with the foregoing provisions shall enter into force six months after the date of its acceptance with respect to the Parties which have declared that they have accepted it;

(ii) in the case of an amendment to Protocol I, to an Appendix to an Annex or to an Annex to the Convention under the procedure specified in sub-paragraph (f)(iii), the amendment deemed to have been accepted in accordance with the foregoing conditions shall enter into force six months after its acceptance for all the Parties with the exception of those which, before that date, have made a declaration that they do not accept it or a declaration under sub-paragraph (f)(ii), that their express approval is necessary.

(3) Amendment by a Conference:

(a) Upon the request of a Party, concurred in by at least one-third of the Parties, the Organization shall convene a Conference of Parties to the Convention to consider amendments to the present Convention.

(b) Every amendment adopted by such a Conference by a two-thirds majority of those present and voting of the Parties shall be communicated by the Secretary-General of the Organization to all Contracting Parties for their acceptance.

(c) Unless the Conference decides otherwise, the amendment shall be deemed to have been accepted and to have entered into force in accordance with the procedures specified for that purpose in paragraph (2)(f) and (g) above.

(4) (a) In the case of an amendment to an Optional Annex, a reference in the present Article to a "Party to the Convention" shall be deemed to mean a reference to a Party bound by that Annex.

(b) Any Party which has declined to accept an amendment to an Annex shall be treated as a non-Party only for the purpose of application of that Amendment.

(5) The adoption and entry into force of a new Annex shall be subject to the same procedures as for the adoption and entry into force of an amendment to an Article of the Convention.

(6) Unless expressly provided otherwise, any amendment to the present Convention made under this Article, which relates to the structure of a ship, shall apply only to ships for which the building contract is placed, or in the absence of a building contract, the keel of which is laid, on or after the date on which the amendment comes into force.

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(7) Any amendment to a Protocol or to an Annex shall relate to the substance of that Protocol or Annex and shall be consistent with the Articles of the present Convention.

(8) The Secretary-General of the Organization shall inform all Parties of any amendments which enter into force under the present Article, together with the date on which each such amendment enters into force.

(9) Any declaration of acceptance or of objection to an amendment under the present Article shall be notified in writing to the Secretary-General of the Organization. The latter shall bring such notification and the date of its receipt to the notice of the Parties to the Convention.

ARTICLE 17

Promotion of Technical Co-operation

The Parties to the Convention shall promote, in consultation with the Organization and other international bodies, with assistance and co-ordination by the Executive Director of the United Nations Environment Programme, support for those Parties which request technical assistance for:

(a) the training of scientific and technical personnel;

(b) the supply of necessary equipment and facilities for reception and monitoring;

(c) the facilitation of other measures and arrangements to prevent or mitigate pollution of the marine environment by ships; and

(d) the encouragement of research;

preferably within the countries concerned, so furthering the aims and purposes of the present Convention.

ARTICLE 18

Denunciation

(1) The present Convention or any Optional Annex may be denounced by any Parties to the Convention at any time after the expiry of five years from the date on which the Convention or such Annex enters into force for that Party.

(2) Denunciation shall be effected by notification in writing to the Secretary-General of the Organization who shall inform all the other Parties of any such notification received and of the date of its receipt as well as the date on which such denunciation takes effect.

(3) A denunciation shall take effect twelve months after receipt of the notification of denunciation by the Secretary-General of the Organization or after the expiry of any other longer period which may be indicated in the notification.

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ARTICLE 19

Deposit and Registration

(1) The present Convention shall be deposited with the Secretary-General of the Organization who shall transmit certified true copies thereof to all States which have signed the present Convention or acceded to it.

(2) As soon as the present Convention enters into force, the text shall be transmitted by the Secretary-General of the Organization to the Secretary-General of the United Nations for registration and publication, in accordance with Article 102 of the Charter of the United Nations.

ARTICLE 20

Languages

The present Convention is established in a single copy in the English, French, Russian and Spanish languages, each text being equally authentic. Official translations in the Arabic, German, Italian and Japanese languages shall be prepared and deposited with the signed original.

IN WITNESS WHEREOF the undersigned being duly authorized by their respective Governments for that purpose have signed the present Convention.

DONE AT LONDON this second day of November, one thousand nine hundred and seventy-three.

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PROTOCOL I

PROVISIONS CONCERNING REPORTS ON INCIDENTS INVOLVING HARMFUL SUBSTANCES
(in accordance with Article 8 of the Convention)

Article I

Duty to Report

(1) The Master of a ship involved in an incident referred to in Article III of this Protocol, or other person having charge of the ship, shall report the particulars of such incident without delay and to the fullest extent possible in accordance with the provisions of this Protocol.

(2) In the event of the ship referred to in paragraph (1) of the present Article being abandoned, or in the event of a report from such ship being incomplete or unobtainable, the owner, charterer, manager or operator of the ship, or their agents shall, to the fullest extent possible assume the obligations placed upon the Master under the provisions of this Protocol.

Article II

Methods of Reporting

(1) Each report shall be made by radio whenever possible, but in any case by the fastest channels available at the time the report is made. Reports made by radio shall be given the highest possible priority.

(2) Reports shall be directed to the appropriate officer or agency specified in paragraph (2)(a) of Article 8 of the Convention.

Article III

When to make Reports

The report shall be made whenever an incident involves:

(a) a discharge other than as permitted under the present Convention; or

(b) a discharge permitted under the present Convention by virtue of the fact that:

  (i) it is for the purpose of securing the safety of a ship or saving life at sea; or

  (ii) it results from damage to the ship or its equipment; or

(c) a discharge of a harmful substance for the purpose of combating a specific pollution incident or for purposes of legitimate scientific research into pollution abatement or control; or

(d) the probability of a discharge referred to in sub-paragraphs (a), (b) or (c) of this Article.

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Article IV

Contents of Report

(1) Each report shall contain in general:

(a) the identity of the ship;

(b) the time and date of the occurrence of the incident;

(c) the geographic position of the ship when the incident occurred;

(d) the wind and sea conditions prevailing at the time of the incident; and

(e) relevant details respecting the condition of the ship.

(2) Each report shall contain, in particular:

(a) a clear indication or description of the harmful substances involved, including, if possible, the correct technical names of such substances (trade names should not be used in place of the correct technical names);

(b) a statement or estimate of the quantities, concentrations and likely conditions of harmful substances discharged or likely to be discharged into the sea;

(c) where relevant, a description of the packaging and identifying marks; and

(d) if possible the name of the consignor, consignee or manufacturer.

(3) Each report shall clearly indicate whether the harmful substance discharged, or likely to be discharged is oil, a noxious liquid substance, a noxious solid substance or a noxious gaseous substance and whether such substance was or is carried in bulk or contained in packaged form, freight containers, portable tanks, or road and rail tank wagons.

(4) Each report shall be supplemented as necessary by any other relevant information requested by a recipient of the report or which the person sending the report deems appropriate.

Article V

Supplementary Report

Any person who is obliged under the provisions of this Protocol to send a report shall, when possible:

(a) supplement the initial report, as necessary, with information concerning further developments; and

(b) comply as fully as possible with requests from affected States for additional information concerning the incident.

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PROTOCOL II

ARBITRATION
(in accordance with Article 10 of the Convention)

Article I

Arbitration procedure, unless the Parties to the dispute decide otherwise, shall be in accordance with the rules set out in this Protocol.

Article II

(1) An Arbitration Tribunal shall be established upon the request of one Party to the Convention addressed to another in application of Article 10 of the present Convention. The request for arbitration shall consist of a statement of the case together with any supporting documents.

(2) The requesting Party shall inform the Secretary-General of the Organization of the fact that it has applied for the establishment of a Tribunal, of the names of the Parties to the dispute, and of the Articles of the Convention or Regulations over which there is in its opinion disagreement concerning their interpretation or application. The Secretary-General shall transmit this information to all Parties.

Article III

The Tribunal shall consist of three members: one Arbitrator nominated by each Party to the dispute and a third Arbitrator who shall be nominated by agreement between the two first named, and shall act as its Chairman.

Article IV

(1) If, at the end of a period of sixty days from the nomination of the second Arbitrator, the Chairman of the Tribunal shall not have been nominated, the Secretary-General of the Organization upon request of either Party shall within a further period of sixty days proceed to such nomination, selecting him from a list of qualified persons previously drawn up by the Council of the Organization.

(2) If, within a period of sixty days from the date of the receipt of the request, one of the Parties shall not have nominated the member of the Tribunal for whose designation it is responsible, the other Party may directly inform the Secretary-General of the Organization who shall nominate the Chairman of the Tribunal within a period of sixty days, selecting him from the list prescribed in paragraph (1) of the present Article.

(3) The Chairman of the Tribunal shall, upon nomination, request the Party which has not provided an Arbitrator, to do so in the same manner and under the same conditions. If the Party does not make the required nomination, the Chairman of the Tribunal shall request the Secretary-General of the Organization to make the nomination in the form and conditions prescribed in the preceding paragraph.

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(4) The Chairman of the Tribunal, if nominated under the provisions of the present Article, shall not be or have been a national of one of the Parties concerned, except with the consent of the other Party.

(5) In the case of the decease or default of an Arbitrator for whose nomination one of the Parties is responsible, the said Party shall nominate a replacement within a period of sixty days from the date of decease or default. Should the said Party not make the nomination, the arbitration shall proceed under the remaining Arbitrators. In case of the decease or default of the Chairman of the Tribunal, a replacement shall be nominated in accordance with the provisions of Article III above, or in the absence of agreement between the members of the Tribunal within a period of sixty days of the decease or default, according to the provisions of the present Article.

Article V

The Tribunal may hear and determine counter-claims arising directly out of the subject matter of the dispute.

Article VI

Each Party shall be responsible for the remuneration of its Arbitrator and connected costs and for the costs entailed by the preparation of its own case. The remuneration of the Chairman of the Tribunal and of all general expenses incurred by the Arbitration shall be borne equally by the Parties. The Tribunal shall keep a record of all its expenses and shall furnish a final statement thereof.

Article VII

Any Party to the Convention which has an interest of a legal nature and which may be affected by the decision in the case may, after giving written notice to the Parties which have originally initiated the procedure, join in the arbitration procedure with the consent of the Tribunal.

Article VIII

Any Arbitration Tribunal established under the provisions of the present Protocol shall decide its own rules of procedure.

Article IX

(1) Decisions of the Tribunal both as to its procedure and its place of meeting and as to any question laid before it, shall be taken by majority votes of its members; the absence or abstention of one of the members of the Tribunal for whose nomination the Parties were responsible, shall not constitute an impediment to the Tribunal reaching a decision. In cases of equal voting, the vote of the Chairman shall be decisive.

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(2) The Parties shall facilitate the work of the Tribunal and in particular, in accordance with their legislation, and using all means at their disposal:

(a) provide the Tribunal with the necessary documents and information;

(b) enable the Tribunal to enter their territory, to hear witnesses or experts, and to visit the scene.

(3) Absence or default of one Party shall not constitute an impediment to the procedure.

Article X

(1) The Tribunal shall render its award within a period of five months from the time it is established unless it decides, in the case of necessity, to extend the time limit for a further period not exceeding three months. The award of the Tribunal shall be accompanied by a statement of reasons. It shall be final and without appeal and shall be communicated to the Secretary-General of the Organization. The Parties shall immediately comply with the award.

(2) Any controversy which may arise between the Parties as regards interpretation or execution of the award may be submitted by either Party for judgment to the Tribunal which made the award, or, if it is not available to another Tribunal constituted for this purpose, in the same manner as the original Tribunal.

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ANNEX I

REGULATIONS FOR THE PREVENTION OF POLLUTION BY OIL

CHAPTER I — GENERAL

Regulation 1

Definitions

For the purposes of this Annex:

(1) "Oil" means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products (other than petrochemicals which are subject to the provisions of Annex II of the present Convention) and, without limiting the generality of the foregoing, includes the substances listed in Appendix I to this Annex.

(2) "Oily mixture" means a mixture with any oil content.

(3) "Oil fuel" means any oil used as fuel in connexion with the propulsion and auxiliary machinery of the ship in which such oil is carried.

(4) "Oil tanker" means a ship constructed or adapted primarily to carry oil in bulk in its cargo spaces and includes combination carriers and any "chemical tanker" as defined in Annex II of the present Convention when it is carrying a cargo or part cargo of oil in bulk.

(5) "Combination carrier" means a ship designed to carry either oil or solid cargoes in bulk.

(6) "New ship" means a ship:

(a) for which the building contract is placed after 31 December 1975; or

(b) in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction after 30 June 1976; or

(c) the delivery of which is after 31 December 1979; or

(d) which has undergone a major conversion:

(i) for which the contract is placed after 31 December 1975; or

(ii) in the absence of a contract, the construction work of which is begun after 30 June 1976; or

(iii) which is completed after 31 December 1979.

(7) "Existing ship" means a ship which is not a new ship.

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(8) "Major conversion" means a conversion of an existing ship:

(a) which substantially alters the dimensions or carrying capacity of the ship; or

(b) which changes the type of the ship; or

(c) the intent of which in the opinion of the Administration is substantially to prolong its life; or

(d) which otherwise so alters the ship that if it were a new ship, it would become subject to relevant provisions of the present Convention not applicable to it as an existing ship.

(9) "Nearest land". The term "from the nearest land" means from the baseline from which the territorial sea of the territory in question is established in accordance with international law, except that, for the purposes of the present Convention "from the nearest land" off the north eastern coast of Australia shall mean from a line drawn from a point on the coast of Australia in

latitude 11°00′ South, longitude 142°08′ East to a point in latitude 10°35′ South,
longitude 141°55′ East — thence to a point latitude 10°00′ South,
longitude 142°00′ East, thence to a point latitude 9°10′ South,
longitude 143°52′ East, thence to a point latitude 9°00′ South,
longitude 144°30′ East, thence to a point latitude 13°00′ South,
longitude 144°00′ East, thence to a point latitude 15°00′ South,
longitude 146°00′ East, thence to a point latitude 18°00′ South,
longitude 147°00′ East, thence to a point latitude 21°00′ South,
longitude 153°00′ East, thence to a point on the coast of Australia in latitude 24°42′ South, longitude 153°15′ East.

(10) "Special area" means a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by oil is required. Special areas shall include those listed in Regulation 10 of this Annex.

(11) "Instantaneous rate of discharge of oil content" means the rate of discharge of oil in litres per hour at any instant divided by the speed of the ship in knots at the same instant.

(12) "Tank" means an enclosed space which is formed by the permanent structure of a ship and which is designed for the carriage of liquid in bulk.

(13) "Wing tank" means any tank adjacent to the side shell plating.

(14) "Centre tank" means any tank inboard of a longitudinal bulkhead.

(15) "Slop tank" means a tank specifically designated for the collection of tank drainings, tank washings and other oily mixtures.

(16) "Clean ballast" means the ballast in a tank which since oil was last carried therein, has been so cleaned that effluent therefrom if it were discharged from a ship which is stationary into clean calm water on a clear day would not produce visible traces of oil on the surface of the water or on adjoining shorelines or cause

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a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shore lines. If the ballast is discharged through an oil discharge monitoring and control system approved by the Administration, evidence based on such a system to the effect that the oil content of the effluent did not exceed 15 parts per million shall be determinative that the ballast was clean, notwithstanding the presence of visible traces.

(17) "Segregated ballast" means the ballast water introduced into a tank which is completely separated from the cargo oil and oil fuel system and which is permanently allocated to the carriage of ballast or to the carriage of ballast or cargoes other than oil or noxious substances as variously defined in the Annexes of the present Convention.

(18) "Length" (L) means 96 per cent of the total length on a waterline at 85 per cent of the least moulded depth measured from the top of the keel, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In ships designed with a rake of keel the waterline on which this length is measured shall be parallel to the designed waterline. The length (L) shall be measured in metres.

(19) "Forward and after perpendiculars" shall be taken at the forward and after ends of the length (L). The forward perpendicular shall coincide with the foreside of the stem on the waterline on which the length is measured.

(20) "Amidships" is at the middle of the length (L).

(21) "Breadth" (B) means the maximum breadth of the ship, measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material. The breadth (B) shall be measured in metres.

(22) "Deadweight" (DW) means the difference in metric tons between the displacement of a ship in water of a specific gravity of 1.025 at the load waterline corresponding to the assigned summer freeboard and the lightweight of the ship.

(23) "Lightweight" means the displacement of a ship in metric tons without cargo, oil fuel, lubricating oil, ballast water, fresh water and feedwater in tanks, consumable stores, passengers and their effects.

(24) "Permeability" of a space means the ratio of the volume within that space which is assumed to be occupied by water to the total volume of that space.

(25) "Volumes" and "areas" in a ship shall be calculated in all cases to moulded lines.

Regulation 2

Application

(1) Unless expressly provided otherwise, the provisions of this Annex shall apply to all ships.

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(2) In ships other than oil tankers fitted with cargo spaces which are constructed and utilized to carry oil in bulk of an aggregate capacity of 200 cubic metres or more, the requirements of Regulations 9, 10, 14, 15(1), (2) and (3), 18, 20 and 24(4) of this Annex for oil tankers shall also apply to the construction and operation of those spaces, except that where such aggregate capacity is less than 1,000 cubic metres the requirements of Regulation 15(4) of this Annex may apply in lieu of Regulation 15(1), (2) and (3).

(3) Where a cargo subject to the provisions of Annex II of the present Convention is carried in a cargo space of an oil tanker, the appropriate requirements of Annex II of the present Convention shall also apply.

(4) (a) Any hydrofoil, air-cushion vehicle and other new type of vessel (near-surface craft, submarine craft, etc.) whose constructional features are such as to render the application of any of the provisions of Chapters II and III of this Annex relating to construction and equipment unreasonable or impracticable may be exempted by the Administration from such provisions, provided that the construction and equipment of that ship provides equivalent protection against pollution by oil, having regard to the service for which it is intended.

(b) Particulars of any such exemption granted by the Administration shall be indicated in the Certificate referred to in Regulation 5 of this Annex.

(c) The Administration which allows any such exemption shall, as soon as possible, but not more than ninety days thereafter, communicate to the Organization particulars of same and the reasons therefor, which the Organization shall circulate to the Parties to the Convention for their information and appropriate action, if any.

Regulation 3

Equivalents

(1) The Administration may allow any fitting, material, appliance or apparatus to be fitted in a ship as an alternative to that required by this Annex if such fitting, material, appliance or apparatus is at least as effective as that required by this Annex. This authority of the Administration shall not extend to substitution of operational methods to effect the control of discharge of oil as equivalent to those design and construction features which are prescribed by Regulations in this Annex.

(2) The Administration which allows a fitting, material, appliance or apparatus, as an alternative to that required by this Annex shall communicate to the Organization for circulation to the Parties to the Convention particulars thereof, for their information and appropriate action, if any.

Regulation 4

Surveys

(1) Every oil tanker of 150 tons gross tonnage and above, and every other ship of 400 tons gross tonnage and above shall be subject to the surveys specified below:

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(a) An initial survey before the ship is put in service or before the Certificate required under Regulation 5 of this Annex is issued for the first time, which shall include a complete survey of its structure, equipment, fittings, arrangements and material in so far as the ship is covered by this Annex. This survey shall be such as to ensure that the structure, equipment, fittings, arrangements and material fully comply with the applicable requirements of this Annex.

(b) Periodical surveys at intervals specified by the Administration, but not exceeding five years, which shall be such as to ensure that the structure, equipment, fittings, arrangements and material fully comply with the applicable requirements of this Annex. However, where the duration of the International Oil Pollution Prevention Certificate (1973) is extended as specified in Regulation 8(3) or (4) of this Annex, the interval of the periodical survey may be extended correspondingly.

(c) Intermediate surveys at intervals specified by the Administration but not exceeding thirty months, which shall be such as to ensure that the equipment and associated pump and piping systems, including oil discharge monitoring and control systems, oily-water separating equipment and oil filtering systems, fully comply with the applicable requirements of this Annex and are in good working order. Such intermediate surveys shall be endorsed on the International Oil Pollution Prevention Certificate (1973) issued under Regulation 5 of this Annex.

(2) The Administration shall establish appropriate measures for ships which are not subject to the provisions of paragraph (1) of this Regulation in order to ensure that the applicable provisions of this Annex are complied with.

(3) Surveys of the ship as regards enforcement of the provisions of this Annex shall be carried out by officers of the Administration. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it. In every case the Administration concerned fully guarantees the completeness and efficiency of the surveys.

(4) After any survey of the ship under this Regulation has been completed, no significant change shall be made in the structure, equipment, fittings, arrangements or material covered by the survey without the sanction of the Administration, except the direct replacement of such equipment or fittings.

Regulation 5

Issue of Certificate

(1) An International Oil Pollution Prevention Certificate (1973) shall be issued, after survey in accordance with the provisions of Regulation 4 of this Annex, to any oil tanker of 150 tons gross tonnage and above and any other ships of 400 tons gross tonnage and above which are engaged in voyages to ports or off-shore terminals under the jurisdiction of other Parties to the Convention. In the case of existing ships this requirement shall apply twelve months after the date of entry into force of the present Convention.

(2) Such Certificate shall be issued either by the Administration or by any persons or organization duly authorized by it. In every case the Administration assumes full responsibility for the Certificate.

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Regulation 6

Issue of a Certificate by another Government

(1) The Government of a Party to the Convention may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the provisions of this Annex are complied with, shall issue or authorize the issue of an International Oil Pollution Prevention Certificate (1973) to the ship in accordance with this Annex.

(2) A copy of the Certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

(3) A Certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as the Certificate issued under Regulation 5 of this Annex.

(4) No International Oil Pollution Prevention Certificate (1973) shall be issued to a ship which is entitled to fly the flag of a State which is not a Party.

Regulation 7

Form of Certificate

The International Oil Pollution Prevention Certificate (1973) shall be drawn up in an official language of the issuing country in the form corresponding to the model given in Appendix II to this Annex. If the language used is neither English nor French, the text shall include a translation into one of these languages.

Regulation 8

Duration of Certificate

(1) An International Oil Pollution Prevention Certificate (1973) shall be issued for a period specified by the Administration, which shall not exceed five years from the date of issue, except as provided in paragraphs (2), (3) and (4) of this Regulation.

(2) If a ship at the time when the Certificate expires is not in a port or off-shore terminal under the jurisdiction of the Party to the Convention whose flag the ship is entitled to fly, the Certificate may be extended by the Administration, but such extension shall be granted only for the purpose of allowing the ship to complete its voyage to the State whose flag the ship is entitled to fly or in which it is to be surveyed and then only in cases where it appears proper and reasonable to do so.

(3) No Certificate shall be thus extended for a period longer than five months and a ship to which such extension is granted shall not on its arrival in the State whose flag it is entitled to fly or the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port or State without having obtained a new Certificate.

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(4) A Certificate which has not been extended under the provisions of paragraph (2) of this Regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it.

(5) A Certificate shall cease to be valid if significant alterations have taken place in the construction, equipment, fittings, arrangements, or material required without the sanction of the Administration, except the direct replacement of such equipment or fittings, or if intermediate surveys as specified by the Administration under Regulation 4(1)(c) of this Annex are not carried out.

(6) A Certificate issued to a ship shall cease to be valid upon transfer of such a ship to the flag of another State, except as provided in paragraph (7) of this Regulation.

(7) Upon transfer of a ship to the flag of another Party, the Certificate shall remain in force for a period not exceeding five months provided that it would not have expired before the end of that period, or until the Administration issues a replacement Certificate, whichever is earlier. As soon as possible after the transfer has taken place the Government of the Party whose flag the ship was formerly entitled to fly shall transmit to the Administration a copy of the Certificate carried by the ship before the transfer and, if available, a copy of the relevant survey report.

CHAPTER II REQUIREMENTS FOR CONTROL OF OPERATIONAL POLLUTION

Regulation 9

Control of Discharge of Oil

(1) Subject to the provisions of Regulations 10 and 11 of this Annex and paragraph (2) of this Regulation, any discharge into the sea of oil or oily mixtures from ships to which this Annex applies shall be prohibited except when all the following conditions are satisfied:

(a) for an oil tanker, except as provided for in sub-paragraph (b) of this paragraph:

(i) the tanker is not within a special area;

(ii) the tanker is more than 50 nautical miles from the nearest land;

(iii) the tanker is proceeding en route;

(iv) the instantaneous rate of discharge of oil content does not exceed 60 litres per nautical mile;

(v) the total quantity of oil discharged into the sea does not exceed for existing tankers 1/15,000 of the total quantity of the particular cargo of which the residue formed a part, and for new tankers 1/30,000 of the total quantity of the particular cargo of which the residue formed a part; and

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(vi) the tanker has in operation, except as provided for in Regulation 15(3) of this Annex, an oil discharge monitoring and control system and a slop tank arrangement as required by Regulation 15 of this Annex;

(b) from a ship of 400 tons gross tonnage and above other than an oil tanker and from machinery space bilges excluding cargo pump room bilges of an oil tanker unless mixed with oil cargo residue,

(i) the ship is not within a special area;

(ii) the ship is more than 12 nautical miles from the nearest land;

(iii) the ship is proceeding en route;

(iv) the oil content of the effluent is less than 100 parts per million; and

(v) the ship has in operation an oil discharge monitoring and control system, oily-water separating equipment, oil filtering system or other installation as required by Regulation 16 of this Annex.

(2) In the case of a ship of less than 400 tons gross tonnage other than an oil tanker whilst outside the special area, the Administration shall ensure that it is equipped as far as practicable and reasonable with installations to ensure the storage of oil residues on board and their discharge to reception facilities or into the sea in compliance with the requirements of paragraph (1)(b) of this Regulation.

(3) Whenever visible traces of oil are observed on or below the surface of the water in the immediate vicinity of a ship or its wake, Governments of Parties to the Convention should, to the extent they are reasonably able to do so, promptly investigate the facts bearing on the issue of whether there has been a violation of the provisions of this Regulation or Regulation 10 of this Annex. The investigation should include, in particular, the wind and sea conditions, the track and speed of the ship, other possible sources of the visible traces in the vicinity, and any relevant oil discharge records.

(4) The provisions of paragraph (1) of this Regulation shall not apply to the discharge of clean or segregated ballast. The provisions of sub-paragraph (1)(b) of this Regulation shall not apply to the discharge of oily mixture which without dilution has an oil content not exceeding 15 parts per million.

(5) No discharge into the sea shall contain chemicals or other substances in quantities or concentrations which are hazardous to the marine environment or chemicals or other substances introduced for the purpose of circumventing the conditions of discharge specified in this Regulation.

(6) The oil residues which cannot be discharged into the sea in compliance with paragraphs (1), (2) and (4) of this Regulation shall be retained on board or discharged to reception facilities.

Regulation 10

Methods for the Prevention of Oil Pollution from Ships while operating in Special Areas

(1) For the purposes of this Annex the special areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area and the "Gulfs area" which are defined as follows:

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(a) The Mediterranean Sea area means the Mediterranean Sea proper including the gulfs and seas therein with the boundary between the Mediterranean and the Black Sea constituted by the 41° N parallel and bounded to the west by the Straits of Gibraltar at the meridian of 5° 36′ W.

(b) The Baltic Sea area means the Baltic Sea proper with the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57° 44.8′ N.

(c) The Black Sea area means the Black Sea proper with the boundary between the Mediterranean and the Black Sea constituted by the parallel 41° N.

(d) The Red Sea area means the Red Sea proper including the Gulfs of Suez and Aqaba bounded at the south by the rhumb line between Ras si Ane (12° 8.5′ N, 43° 19.6′ E) and Husn Murad (12° 40.4′ N, 43° 30.2′ E).

(e) The Gulfs area means the sea area located north west of the rhumb line between Ras al Hadd (22° 30′ N, 59° 48′ E) and Ras Al Fasteh (25° 04′ N, 61° 25′ E).

(2) (a) Subject to the provisions of Regulation 11 of this Annex, any discharge into the sea of oil or oily mixture from any oil tanker and any ship of 400 tons gross tonnage and above other than an oil tanker shall be prohibited, while in a special area.

(b) Such ships while in a special area shall retain on board all oil drainage and sludge, dirty ballast and tank washing waters and discharge them only to reception facilities.

(3) (a) Subject to the provisions of Regulation 11 of this Annex, any discharge into the sea of oil or oily mixture from a ship of less than 400 tons gross tonnage, other than an oil tanker, shall be prohibited while in a special area, except when the oil content of the effluent without dilution does not exceed 15 parts per million or alternatively when all of the following conditions are satisfied:

(i) the ship is proceeding en route;

(ii) the oil content of the effluent is less than 100 parts per million; and

(iii) the discharge is made as far as practicable from the land, but in no case less than 12 nautical miles from the nearest land.

(b) No discharge into the sea shall contain chemicals or other substances in quantities or concentrations which are hazardous to the marine environment or chemicals or other substances introduced for the purpose of circumventing the conditions of discharge specified in this Regulation.

(c) The oil residues which cannot be discharged into the sea in compliance with sub-paragraph (a) of this paragraph shall be retained on board or discharged to reception facilities.

(4) The provisions of this Regulation shall not apply to the discharge of clean or segregated ballast.

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(5) Nothing in this Regulation shall prohibit a ship on a voyage only part of which is in a special area from discharging outside the special area in accordance with Regulation 9 of this Annex.

(6) Whenever visible traces of oil are observed on or below the surface of the water in the immediate vicinity of a ship or its wake, the Governments of Parties to the Convention should, to the extent they are reasonably able to do so, promptly investigate the facts bearing on the issue of whether there has been a violation of the provisions of this Regulation or Regulation 9 of this Annex. The investigation should include, in particular, the wind and sea conditions, the track and speed of the ship, other possible sources of the visible traces in the vicinity, and any relevant oil discharge records.

(7) Reception facilities within special areas

(a) Mediterranean Sea, Black Sea and Baltic Sea areas:

(i) The Government of each Party to the Convention, the coastline of which borders on any given special area undertakes to ensure that not later than 1 January 1977 all oil loading terminals and repair ports within the special area are provided with facilities adequate for the reception and treatment of all the dirty ballast and tank washing water from oil tankers. In addition all ports within the special area shall be provided with adequate reception facilities for other residues and oily mixtures from all ships. Such facilities shall have adequate capacity to meet the needs of the ships using them without causing undue delay.

(ii) The Government of each Party having under its jurisdiction entrances to seawater courses with low depth contour which might require a reduction of draught by the discharge of ballast undertakes to ensure the provision of the facilities referred to in sub-paragraph (a)(i) of this paragraph but with the proviso that ships required to discharge slops or dirty ballast could be subject to some delay.

(iii) During the period between the entry into force of the present Convention (if earlier than 1 January 1977) and 1 January 1977 ships while navigating in the special areas shall comply with the requirements of Regulation 9 of this Annex. However, the Governments of Parties the coastlines of which border any of the special areas under this sub-paragraph may establish a date earlier than 1 January 1977, but after the date of entry into force of the present Convention, from which the requirements of this Regulation in respect of the special areas in question shall take effect:

(1) if all the reception facilities required have been provided by the date so established; and

(2) provided that the Parties concerned notify the Organization of the date so established at least six months in advance, for circulation to other Parties.

(iv) After 1 January 1977, or the date established in accordance with sub-paragraph (a)(iii) of this paragraph if earlier, each Party shall

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notify the Organization for transmission to the Contracting Governments concerned of all cases where the facilities are alleged to be inadequate.

(b) Red Sea area and Gulfs area:

(i) The Government of each Party the coastline of which borders on the special areas undertakes to ensure that as soon as possible all oil loading terminals and repair ports within these special areas are provided with facilities adequate for the reception and treatment of all the dirty ballast and tank washing water from tankers. In addition all ports within the special area shall be provided with adequate reception facilities for other residues and oily mixtures from all ships. Such facilities shall have adequate capacity to meet the needs of the ships using them without causing undue delay.

(ii) The Government of each Party having under its jurisdiction entrances to seawater courses with low depth contour which might require a reduction of draught by the discharge of ballast shall undertake to ensure the provision of the facilities referred to in sub-paragraph (b)(i) of this paragraph but with the proviso that ships required to discharge slops or dirty ballast could be subject to some delay.

(iii) Each Party concerned shall notify the Organization of the measures taken pursuant to provisions of sub-paragraph (b)(i) and (ii) of this paragraph. Upon receipt of sufficient notifications the Organization shall establish a date from which the requirements of this Regulation in respect of the area in question shall take effect. The Organization shall notify all Parties of the date so established no less than twelve months in advance of that date.

(iv) During the period between the entry into force of the present Convention and the date so established, ships while navigating in the special area shall comply with the requirements of Regulation 9 of this Annex.

(v) After such date oil tankers loading in ports in these special areas where such facilities are not yet available shall also fully comply with the requirements of this Regulation. However, oil tankers entering these special areas for the purpose of loading shall make every effort to enter the area with only clean ballast on board.

(vi) After the date on which the requirements for the special area in question take effect, each Party shall notify the Organization for transmission to the Parties concerned of all cases where the facilities are alleged to be inadequate.

(vii) At least the reception facilities as prescribed in Regulation 12 of this Annex shall be provided by 1 January 1977 or one year after the date of entry into force of the present Convention, whichever occurs later.

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Regulation 11

Exceptions

Regulations 9 and 10 of this Annex shall not apply to:

(a) the discharge into the sea of oil or oily mixture necessary for the purpose of securing the safety of a ship or saving life at sea; or

(b) the discharge into the sea of oil or oily mixture resulting from damage to a ship or its equipment:

(i) provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the discharge for the purpose of preventing or minimizing the discharge; and

(ii) except if the owner or the Master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result; or

(c) the discharge into the sea of substances containing oil, approved by the Administration, when being used for the purpose of combating specific pollution incidents in order to minimize the damage from pollution. Any such discharge shall be subject to the approval of any Government in whose jurisdiction it is contemplated the discharge will occur.

Regulation 12

Reception Facilities

(1) Subject to the provisions of Regulation 10 of this Annex, the Government of each Party undertakes to ensure the provision at oil loading terminals, repair ports, and in other ports in which ships have oily residues to discharge, of facilities for the reception of such residues and oily mixtures as remain from oil tankers and other ships adequate to meet the needs of the ships using them without causing undue delay to ships.

(2) Reception facilities in accordance with paragraph (1) of this Regulation shall be provided in:

(a) all ports and terminals in which crude oil is loaded into oil tankers where such tankers have immediately prior to arrival completed a ballast voyage of not more than 72 hours or not more than 1,200 nautical miles;

(b) all ports and terminals in which oil other than crude oil in bulk is loaded at an average quantity of more than 1,000 metric tons per day;

(c) all ports having ship repair yards or tank cleaning facilities;

(d) all ports and terminals which handle ships provided with the sludge tank(s) required by Regulation 17 of this Annex;

(e) all ports in respect of oily bilge waters and other residues, which cannot be discharged in accordance with Regulation 9 of this Annex; and

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(f) all loading ports for bulk cargoes in respect of oil residues from combination carriers which cannot be discharged in accordance with Regulation 9 of this Annex.

(3) The capacity for the reception facilities shall be as follows:

(a) Crude oil loading terminals shall have sufficient reception facilities to receive oil and oily mixtures which cannot be discharged in accordance with the provisions of Regulation 9(1)(a) of this Annex from all oil tankers on voyages as described in paragraph (2)(a) of this Regulation.

(b) Loading ports and terminals referred to in paragraph (2)(b) of this Regulation shall have sufficient reception facilities to receive oil and oily mixtures which cannot be discharged in accordance with the provisions of Regulation 9(1)(a) of this Annex from oil tankers which load oil other than crude oil in bulk.

(c) All ports having ship repair yards or tank cleaning facilities shall have sufficient reception facilities to receive all residues and oily mixtures which remain on board for disposal from ships prior to entering such yards or facilities.

(d) All facilities provided in ports and terminals under paragraph (2)(d) of this Regulation shall be sufficient to receive all residues retained according to Regulation 17 of this Annex from all ships that may reasonably be expected to call at such ports and terminals.

(e) All facilities provided in ports and terminals under this Regulation shall be sufficient to receive oily bilge waters and other residues which cannot be discharged in accordance with Regulation 9 of this Annex.

(f) The facilities provided in loading ports for bulk cargoes shall take into account the special problems of combination carriers as appropriate.

(4) The reception facilities prescribed in paragraphs (2) and (3) of this Regulation shall be made available no later than one year from the date of entry into force of the present Convention or by 1 January 1977, whichever occurs later.

(5) Each Party shall notify the Organization for transmission to the Parties concerned of all cases where the facilities provided under this Regulation are alleged to be inadequate.

Regulation 13

Segregated Ballast Oil Tankers

(1) Every new oil tanker of 70,000 tons deadweight and above shall be provided with segregated ballast tanks and shall comply with the requirements of this Regulation.

(2) The capacity of the segregated ballast tanks shall be so determined that the ship may operate safely on ballast voyages without recourse to the use of oil tanks for water ballast except as provided for in paragraph (3) of this Regulation. In all cases, however, the capacity of segregated ballast tanks shall be at least such that in

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any ballast condition at any part of the voyage, including the conditions consisting of lightweight plus segregated ballast only, the ship's draughts and trim can meet each of the following requirements:

(a) the moulded draught amidships (dm) in metres (without taking into account any ship's deformation) shall not be less than:

$$dm = 2.0 + 0.02L,$$

(b) the draughts at the forward and after perpendiculars shall correspond to those determined by the draught amidships (dm), as specified in sub paragraph (a) of this paragraph, in association with the trim by the stern of not greater than 0.015L; and

(c) in any case the draught at the after perpendicular shall not be less than that which is necessary to obtain full immersion of the propeller(s).

(3) In no case shall ballast water be carried in oil tanks except in weather conditions so severe that, in the opinion of the Master, it is necessary to carry additional ballast water in oil tanks for the safety of the ship. Such additional ballast water shall be processed and discharged in compliance with Regulation 9 and in accordance with the requirements of Regulation 15 of this Annex, and entry shall be made in the Oil Record Book referred to in Regulation 20 of this Annex.

(4) Any oil tanker which is not required to be provided with segregated ballast tanks in accordance with paragraph (1) of this Regulation may, however, be qualified as a segregated ballast tanker, provided that in the case of an oil tanker of 150 metres in length and above it fully complies with the requirements of paragraphs (2) and (3) of this Regulation and in the case of an oil tanker of less than 150 metres in length the segregated ballast conditions shall be to the satisfaction of the Administration.

Regulation 14

Segregation of Oil and Water Ballast

(1) Except as provided in paragraph (2) of this Regulation, in new ships of 4,000 tons gross tonnage and above other than oil tankers, and in new oil tankers of 150 tons gross tonnage and above, no ballast water shall be carried in any oil fuel tank.

(2) Where abnormal conditions or the need to carry large quantities of oil fuel render it necessary to carry ballast water which is not a clean ballast in any oil fuel tank, such ballast water shall be discharged to reception facilities or into the sea in compliance with Regulation 9 using the equipment specified in Regulation 16(2) of this Annex, and an entry shall be made in the Oil Record Book to this effect.

(3) All other ships shall comply with the requirements of paragraph (1) of this Regulation as far as reasonable and practicable.

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Regulation 15

Retention of Oil on Board

(1) Subject to the provisions of paragraphs (5) and (6) of this Regulation, oil tankers of 150 tons gross tonnage and above shall be provided with arrangements in accordance with the requirements of paragraphs (2) and (3) of this Regulation, provided that in the case of existing tankers the requirements for oil discharge monitoring and control systems and slop tank arrangements shall apply three years after the date of entry into force of the present Convention.

(2) (a) Adequate means shall be provided for cleaning the cargo tanks and transferring the dirty ballast residue and tank washings from the cargo tanks into a slop tank approved by the Administration. In existing oil tankers, any cargo tank may be designated as a slop tank.

(b) In this system arrangements shall be provided to transfer the oily waste into a slop tank or combination of slop tanks in such a way that any effluent discharged into the sea will be such as to comply with the provisions of Regulation 9 of this Annex.

(c) The arrangements of the slop tank or combination of slop tanks shall have a capacity necessary to retain the slops generated by tank washing, oil residues and dirty ballast residues but the total shall be not less than 3 per cent of the oil carrying capacity of the ship, except that, where segregated ballast tanks are provided in accordance with Regulation 13 of this Annex, or where arrangements such as eductors involving the use of water additional to the washing water are not fitted, the Administration may accept 2 per cent. New oil tankers over 70,000 tons deadweight shall be provided with at least two slop tanks.

(d) Slop tanks shall be so designed particularly in respect of the position of inlets, outlets, baffles or weirs where fitted, so as to avoid excessive turbulence and entrainment of oil or emulsion with the water.

(3) (a) An oil discharge monitoring and control system approved by the Administration shall be fitted. In considering the design of the oil content meter to be incorporated in the system, the Administration shall have regard to the specification recommended by the Organization.* The system shall be fitted with a recording device to provide a continuous record of the discharge in litres per nautical mile and total quantity discharged, or the oil content and rate of discharge. This record shall be identifiable as to time and date and shall be kept for at least three years. The oil discharge monitor and control system shall come into operation when there is any discharge of effluent into the sea and shall be such as will ensure that any discharge of oily mixture is automatically stopped when the instantaneous rate of discharge of oil exceeds that permitted by Regulation 9(1)(a) of this Annex. Any failure of this monitoring and control system shall stop the discharge

* Reference is made to the Recommendation on International Performance Specifications for Oily-Water Separating Equipment and Oil Content Meters adopted by the Organization by Resolution A.233(VII).

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and be noted in the Oil Record Book. A manually operated alternative method shall be provided and may be used in the event of such failure, but the defective unit shall be made operable before the oil tanker commences its next ballast voyage unless it is proceeding to a repair port. Existing oil tankers shall comply with all of the provisions specified above except that the stopping of the discharge may be performed manually and the rate of discharge may be estimated from the pump characteristic.

(b) Effective oil/water interface detectors approved by the Administration shall be provided for a rapid and accurate determination of the oil/water interface in slop tanks and shall be available for use in other tanks where the separation of oil and water is effected and from which it is intended to discharge effluent direct to the sea.

(c) Instructions as to the operation of the system shall be in accordance with an operational manual approved by the Administration. They shall cover manual as well as automatic operations and shall be intended to ensure that at no time shall oil be discharged except in compliance with the conditions specified in Regulation 9 of this Annex.*

(4) The requirements of paragraphs (1), (2) and (3) of this Regulation shall not apply to oil tankers of less than 150 tons gross tonnage, for which the control of discharge of oil under Regulation 9 of this Annex shall be effected by the retention of oil on board with subsequent discharge of all contaminated washings to reception facilities. The total quantity of oil and water used for washing and returned to a storage tank shall be recorded in the Oil Record Book. This total quantity shall be discharged to reception facilities unless adequate arrangements are made to ensure that any effluent which is allowed to be discharged into the sea is effectively monitored to ensure that the provisions of Regulation 9 of this Annex are complied with.

(5) The Administration may waive the requirements of paragraphs (1), (2) and (3) of this Regulation for any oil tanker which engages exclusively on voyages both of 72 hours or less in duration and within 50 miles from the nearest land, provided that the oil tanker is not required to hold and does not hold an International Oil Pollution Prevention Certificate (1973). Any such waiver shall be subject to the requirement that the oil tanker shall retain on board all oily mixtures for subsequent discharge to reception facilities and to the determination by the Administration that facilities available to receive such oily mixtures are adequate.

(6) Where in the view of the Organization equipment required by Regulation 9(1)(a)(vi) of this Annex and specified in sub-paragraph (3)(a) of this Regulation is not obtainable for the monitoring of discharge of light refined products (white oils), the Administration may waive compliance with such requirement, provided that discharge shall be permitted only in compliance with procedures established by the Organization which shall satisfy the conditions of Regulation 9(1)(a) of this Annex except the obligation to have an oil discharge monitoring and control system in operation. The Organization shall review the availability of equipment at intervals not exceeding twelve months.

* Reference is made to "Clean Seas Guide for Oil Tankers", published by the International Chamber of Shipping and the Oil Companies International Marine Forum.

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(5) The requirements of paragraphs (1), (2) and (3) of this Regulation shall not apply to oil tankers carrying asphalt, for which the control of discharge of asphalt under Regulation 9 of this Annex shall be effected by the retention of asphalt residues on board with discharge of all contaminated washings to reception facilities.

Regulation 16

Oil Discharge Monitoring and Control System and Oily-Water Separating Equipment

(1) Any ship of 400 tons gross tonnage and above shall be fitted with an oily-water separating equipment or filtering system complying with the provisions of paragraph (6) of this Regulation. Any such ship which carries large quantities of oil fuel shall comply with paragraph 2 of this Regulation or paragraph (1) of Regulation 14.

(2) Any ship of 10,000 tons gross tonnage and above shall be fitted:

(a) in addition to the requirements of paragraph (1) of this Regulation with an oil discharge monitoring and control system complying with paragraph (5) of this Regulation; or

(b) as an alternative to the requirements of paragraph (1) and subparagraph (2)(a) of this Regulation, with an oily-water separating equipment complying with paragraph (6) of this Regulation and an effective filtering system, complying with paragraph (7) of this Regulation.

(3) The Administration shall ensure that ships of less than 400 tons gross tonnage are equipped, as far as practicable, to retain on board oil or oily mixtures or discharge them in accordance with the requirements of Regulation 9(1)(b) of this Annex.

(4) For existing ships the requirements of paragraphs (1), (2) and (3) of this Regulation shall apply three years after the date of entry into force of the present Convention.

(5) An oil discharge monitoring and control system shall be of a design approved by the Administration. In considering the design of the oil content meter to be incorporated into the system, the Administration shall have regard to the specification recommended by the Organization.* The system shall be fitted with a recording device to provide a continuous record of the oil content in parts per million. This record shall be identifiable as to time and date and shall be kept for at least three years. The monitoring and control system shall come into operation when there is any discharge of effluent into the sea and shall be such as will ensure that any discharge of oily mixture is automatically stopped when the oil content of effluent exceeds that permitted by Regulation 9(1)(b) of this Annex. Any failure of this monitoring and control system shall stop the discharge and be noted in the

* Reference is made to the Recommendation on International Performance Specifications for Oily-Water Separating Equipment and Oil Content Meters adopted by the Organization by Resolution A.233(VII).

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Oil Record Book. The defective unit shall be made operable before the ship commences its next voyage unless it is proceeding to a repair port. Existing ships shall comply with all of the provisions specified above except that the stopping of the discharge may be performed manually.

(6) Oily-water separating equipment or an oil filtering system shall be of a design approved by the Administration and shall be such as will ensure that any oily mixture discharged into the sea after passing through the separator or filtering systems shall have an oil content of not more than 100 parts per million. In considering the design of such equipment, the Administration shall have regard to the specification recommended by the Organization.*

(7) The oil filtering system referred to in paragraph (2)(b) of this Regulation shall be of a design approved by the Administration and shall be such that it will accept the discharge from the separating system and produce an effluent the oil content of which does not exceed 15 parts per million. It shall be provided with alarm arrangements to indicate when this level cannot be maintained.

Regulation 17

Tanks for Oil Residues (Sludge)

(1) Every ship of 400 tons gross tonnage and above shall be provided with a tank or tanks of adequate capacity, having regard to the type of machinery and length of voyage, to receive the oily residues (sludges) which cannot be dealt with otherwise in accordance with the requirements of this Annex, such as those resulting from the purification of fuel and lubricating oils and oil leakages in the machinery spaces.

(2) In new ships, such tanks shall be designed and constructed so as to facilitate their cleaning and the discharge of residues to reception facilities. Existing ships shall comply with this requirement as far as is reasonable and practicable.

Regulation 18

Pumping, Piping and Discharge Arrangements of Oil Tankers

(1) In every oil tanker, a discharge manifold for connexion to reception facilities for the discharge of dirty ballast water or oil contaminated water shall be located on the open deck on both sides of the ship.

(2) In every oil tanker, pipelines for the discharge to the sea of effluent which may be permitted under Regulation 9 of this Annex shall be led to the open deck or to the ship's side above the waterline in the deepest ballast condition. Different piping arrangements to permit operation in the manner permitted in sub-paragraphs (4)(a) and (b) of this Regulation may be accepted.

* Reference is made to the Recommendation on International Performance Specifications for Oily-Water Separating Equipment and Oil Content Meters adopted by the Organization by Resolution A.233(VII).

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(3) In new oil tankers means shall be provided for stopping the discharge of effluent into the sea from a position on upper deck or above located so that the manifold in use referred to in paragraph (1) of this Regulation and the effluent from the pipelines referred to in paragraph (2) of this Regulation may be visually observed. Means for stopping the discharge need not be provided at the observation position if a positive communication system such as telephone or radio system is provided between the observation position and the discharge control position.

(4) All discharges shall take place above the waterline except as follows:

(a) Segregated ballast and clean ballast may be discharged below the waterline in ports or at offshore terminals.

(b) Existing ships which, without modification, are not capable of discharging segregated ballast above the waterline may discharge segregated ballast below the waterline provided that an examination of the tank immediately before the discharge has established that no contamination with oil has taken place.

Regulation 19

Standard Discharge Connection

To enable pipes of reception facilities to be connected with the ship's discharge pipeline for residues from machinery bilges, both lines shall be fitted with a standard discharge connection in accordance with the following table:

STANDARD DIMENSIONS OF FLANGES FOR DISCHARGE CONNECTIONS

Description	Dimension
Outside diameter	215 mm
Inner diameter	According to pipe outside diameter
Bolt circle diameter	183 mm
Slots in flange	6 holes 22 mm in diameter equidistantly placed on a bolt circle of the above diameter, slotted to the flange periphery. The slot width to be 22 mm
Flange thickness	20 mm
Bolts and nuts: quantity, diameter	6, each of 20 mm in diameter and of suitable length
The flange is designed to accept pipes up to a maximum internal diameter of 125 mm and shall be of steel or other equivalent material having a flat face. This flange, together with a gasket of oilproof material, shall be suitable for a service pressure of 6 kg/cm^2.	

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Regulation 20

Oil Record Book

(1) Every oil tanker of 150 tons gross tonnage and above and every ship of 400 tons gross tonnage and above other than an oil tanker shall be provided with an Oil Record Book, whether as part of the ship's official log book or otherwise, in the form specified in Appendix III to this Annex.

(2) The Oil Record Book shall be completed on each occasion, on a tank-to-tank basis, whenever any of the following operations take place in the ship:

(a) For oil tankers

(i) loading of oil cargo;

(ii) internal transfer of oil cargo during voyage;

(iii) opening or closing before and after loading and unloading operations of valves or similar devices which inter-connect cargo tanks;

(iv) opening or closing of means of communication between cargo piping and seawater ballast piping;

(v) opening or closing of ships' side valves before, during and after loading and unloading operations;

(vi) unloading of oil cargo;

(vii) ballasting of cargo tanks;

(viii) cleaning of cargo tanks;

(ix) discharge of ballast except from segregated ballast tanks;

(x) discharge of water from slop tanks;

(xi) disposal of residues;

(xii) discharge overboard of bilge water which has accumulated in machinery spaces whilst in port, and the routine discharge at sea of bilge water which has accumulated in machinery spaces.

(b) For ships other than oil tankers

(i) ballasting or cleaning of fuel oil tanks or oil cargo spaces;

(ii) discharge of ballast or cleaning water from tanks referred to under (i) of this sub-paragraph;

(iii) disposal of residues;

(iv) discharge overboard of bilge water which has accumulated in machinery spaces whilst in port, and the routine discharge at sea of bilge water which has accumulated in machinery spaces.

(3) In the event of such discharge of oil or oily mixture as is referred to in Regulation 11 of this Annex or in the event of accidental or other exceptional discharge of oil not excepted by that Regulation, a statement shall be made in the Oil Record Book of the circumstances of, and the reasons for, the discharge.

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(4) Each operation described in paragraph (2) of this Regulation shall be fully recorded without delay in the Oil Record Book so that all the entries in the book appropriate to that operation are completed. Each section of the book shall be signed by the officer or officers in charge of the operations concerned and shall be countersigned by the Master of the ship. The entries in the Oil Record Book shall be in an official language of the State whose flag the ship is entitled to fly, and, for ships holding an International Oil Pollution Prevention Certificate (1973), in English or French. The entries in an official national language of the State whose flag the ship is entitled to fly shall prevail in case of a dispute or discrepancy.

(5) The Oil Record Book shall be kept in such a place as to be readily available for inspection at all reasonable times and, except in the case of unmanned ships under tow, shall be kept on board the ship. It shall be preserved for a period of three years after the last entry has been made.

(6) The competent authority of the Government of a Party to the Convention may inspect the Oil Record Book on board any ship to which this Annex applies while the ship is in its port or offshore terminals and may make a copy of any entry in that book and may require the Master of the ship to certify that the copy is a true copy of such entry. Any copy so made which has been certified by the Master of the ship as a true copy of an entry in the ship's Oil Record Book shall be made admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of an Oil Record Book and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

Regulation 21

Special Requirements for Drilling Rigs and other Platforms

Fixed and floating drilling rigs when engaged in the exploration, exploitation and associated offshore processing of sea-bed mineral resources and other platforms shall comply with the requirements of this Annex applicable to ships of 400 tons gross tonnage and above other than oil tankers, except that:

(a) they shall be equipped as far as practicable with the installations required in Regulations 16 and 17 of this Annex;

(b) they shall keep a record of all operations involving oil or oily mixture discharges, in a form approved by the Administration; and

(c) in any special area and subject to the provisions of Regulation 11 of this Annex, the discharge into the sea of oil or oily mixture shall be prohibited except when the oil content of the discharge without dilution does not exceed 15 parts per million.

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CHAPTER III – REQUIREMENTS FOR MINIMIZING OIL POLLUTION FROM OIL TANKERS DUE TO SIDE AND BOTTOM DAMAGES

Regulation 22

Damage Assumptions

(1) For the purpose of calculating hypothetical oil outflow from oil tankers, three dimensions of the extent of damage of a parallelepiped on the side and bottom of the ship are assumed as follows. In the case of bottom damages two conditions are set forth to be applied individually to the stated portions of the oil tanker.

(a) *Side damage*

(i)	Longitudinal extent (ℓ_c):	$\frac{1}{3}L^{\frac{2}{3}}$ or 14.5 metres, whichever is less
(ii)	Transverse extent (t_c): (inboard from the ship's side at right angles to the centre-line at the level corresponding to the assigned summer free-board)	$\frac{B}{5}$ or 11.5 metres, whichever is less
(iii)	Vertical extent (v_c):	from the base line upwards without limit

(b) *Bottom damage*

		For 0.3L from the forward perpendicular of the ship	Any other part of the ship
(i)	Longitudinal extent (ℓ_s):	$\frac{L}{10}$	$\frac{L}{10}$ or 5 metres, whichever is less
(ii)	Transverse extent (t_s):	$\frac{B}{6}$ or 10 metres, whichever is less but not less than 5 metres	5 metres
(iii)	Vertical extent from the base line (v_s):	$\frac{B}{15}$ or 6 metres, whichever is less	

(2) Wherever the symbols given in this Regulation appear in this Chapter, they have the meaning as defined in this Regulation.

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Regulation 23

Hypothetical Outflow of Oil

(1) The hypothetical outflow of oil in the case of side damage (O_c) and bottom damage (O_s) shall be calculated by the following formulae with respect to compartments breached by damage to all conceivable locations along the length of the ship to the extent as defined in Regulation 22 of this Annex.

(a) for side damages:

$$O_c = \Sigma W_i + \Sigma K_j C_i \qquad (I)$$

(b) for bottom damages:

$$O_s = \tfrac{1}{3}(\Sigma Z_i W_i + \Sigma Z_i C_i) \qquad (II)$$

where: W_i – volume of a wing tank in cubic metres assumed to be breached by the damage as specified in Regulation 22 of this Annex; W_i for a segregated ballast tank may be taken equal to zero.

C_i = volume of a centre tank in cubic metres assumed to be breached by the damage as specified in Regulation 22 of this Annex; C_i for a segregated ballast tank may be taken equal to zero.

$K_i = 1 - \frac{b_i}{t_c}$ when b_i is equal to or greater than t_c, K_i shall be taken equal to zero.

$Z_i = 1 - \frac{h_i}{v_s}$ when h_i is equal to or greater than v_s, Z_i shall be taken equal to zero.

b_i = width of wing tank in metres under consideration measured inboard from the ship's side at right angles to the centreline at the level corresponding to the assigned summer freeboard,

h_i = minimum depth of the double bottom in metres under consideration; where no double bottom is fitted h_i shall be taken equal to zero.

Whenever symbols given in this paragraph appear in this Chapter, they have the meaning as defined in this Regulation.

(2) If a void space or segregated ballast tank of a length less than ℓ_c as defined in Regulation 22 of this Annex is located between wing oil tanks, O_c in formula (I) may be calculated on the basis of volume W_j being the actual volume of one such tank (where they are of equal capacity) or the smaller of the two tanks (if they differ in capacity) adjacent to such space, multiplied by S_i as defined below and taking for all other wing tanks involved in such a collision the value of the actual full volume.

$$S_i = 1 - \frac{\ell_i}{\ell_c}$$

where ℓ_i = length in metres of void space or segregated ballast tank under consideration.

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(3) (a) Credit shall only be given in respect of double bottom tanks which are either empty or carrying clean water when cargo is carried in the tanks above.

(b) Where the double bottom does not extend for the full length and width of the tank involved, the double bottom is considered non-existent and the volume of the tanks above the area of the bottom damage shall be included in formula (II) even if the tank is not considered breached because of the installation of such a partial double bottom.

(c) Suction wells may be neglected in the determination of the value h_i provided such wells are not excessive in area and extend below the tank for a minimum distance and in no case more than half the height of the double bottom. If the depth of such a well exceeds half the height of the double bottom, h_i shall be taken equal to the double bottom height minus the well height.

Piping serving such wells if installed within the double bottom shall be fitted with valves or other closing arrangements located at the point of connexion to the tank served to prevent oil outflow in the event of damage to the piping. Such piping shall be installed as high from the bottom shell as possible. These valves shall be kept closed at sea at any time when the tank contains oil cargo, except that they may be opened only for cargo transfer needed for the purpose of trimming of the ship.

(4) In the case where bottom damage simultaneously involves four centre tanks, the value of O_s may be calculated according to the formula

$$O_s = \tfrac{1}{4}(\Sigma Z_i W_i + \Sigma Z_i C_i) \qquad \text{(III)}$$

(5) An Administration may credit as reducing oil outflow in case of bottom damage, an installed cargo transfer system having an emergency high suction in each cargo oil tank, capable of transferring from a breached tank or tanks to segregated ballast tanks or to available cargo tankage if it can be assured that such tanks will have sufficient ullage. Credit for such a system would be governed by ability to transfer in two hours of operation oil equal to one half of the largest of the breached tanks involved and by availability of equivalent receiving capacity in ballast or cargo tanks. The credit shall be confined to permitting calculation of O_s according to formula (III). The pipes for such suctions shall be installed at least at a height not less than the vertical extent of the bottom damage v_s. The Administration shall supply the Organization with the information concerning the arrangements accepted by it, for circulation to other Parties to the Convention.

Regulation 24

Limitation of Size and Arrangement of Cargo Tanks

(1) Every new oil tanker shall comply with the provision of this Regulation. Every existing oil tanker shall be required, within two years after the date of entry into force of the present Convention, to comply with the provisions of this Regulation if such a tanker falls into either of the following categories:

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(a) a tanker, the delivery of which is after 1 January 1977; or

(b) a tanker to which both the following conditions apply:

(i) delivery is not later than 1 January 1977; and

(ii) the building contract is placed after 1 January 1974, or in cases where no building contract has previously been placed, the keel is laid or the tanker is at a similar stage of construction after 30 June 1974.

(2) Cargo tanks of oil tankers shall be of such size and arrangements that the hypothetical outflow O_c or O_s calculated in accordance with the provisions of Regulation 23 of this Annex anywhere in the length of the ship does not exceed 30,000 cubic metres or $400\sqrt[3]{DW}$, whichever is the greater, but subject to a maximum of 40,000 cubic metres.

(3) The volume of any one wing cargo oil tank of an oil tanker shall not exceed seventy-five per cent of the limits of the hypothetical oil outflow referred to in paragraph (2) of this Regulation. The volume of any one centre cargo oil tank shall not exceed 50,000 cubic metres. However, in segregated ballast oil tankers as defined in Regulation 13 of this Annex, the permitted volume of a wing cargo oil tank situated between two segregated ballast tanks, each exceeding ℓ_c in length, may be increased to the maximum limit of hypothetical oil outflow provided that the width of the wing tanks exceeds t_c.

(4) The length of each cargo tank shall not exceed 10 metres or one of the following values, whichever is the greater:

(a) where no longitudinal bulkhead is provided:

0.1L

(b) where a longitudinal bulkhead is provided at the centreline only:

0.15L

(c) where two or more longitudinal bulkheads are provided:

(i) for wing tanks:

0.2L

(ii) for centre tanks:

(1) if $\frac{b_i}{B}$ is equal to or greater than $\frac{1}{5}$:

0.2L

(2) if $\frac{b_i}{B}$ is less than $\frac{1}{5}$:

– where no centreline longitudinal bulkhead is provided:

$(0.5\frac{b_i}{B} + 0.1)\text{L}$

– where a centreline longitudinal bulkhead is provided:

$(0.25\frac{b_i}{B} + 0.15)\text{L}$

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(5) In order not to exceed the volume limits established by paragraphs (2), (3) and (4) of this Regulation and irrespective of the accepted type of cargo transfer system installed, when such system inter-connects two or more cargo tanks, valves or other similar closing devices shall be provided for separating the tanks from each other. These valves or devices shall be closed when the tanker is at sea.

(6) Lines of piping which run through cargo tanks in a position less than t_c from the ship's side or less than v_c from the ship's bottom shall be fitted with valves or similar closing devices at the point at which they open into any cargo tank. These valves shall be kept closed at sea at any time when the tanks contain cargo oil, except that they may be opened only for cargo transfer needed for the purpose of trimming of the ship.

Regulation 25

Subdivision and Stability

(1) Every new oil tanker shall comply with the subdivision and damage stability criteria as specified in paragraph (3) of this Regulation, after the assumed side or bottom damage as specified in paragraph (2) of this Regulation, for any operating draught reflecting actual partial or full load conditions consistent with trim and strength of the ship as well as specific gravities of the cargo. Such damage shall be applied to all conceivable locations along the length of the ship as follows:

(a) in tankers of more than 225 metres in length, anywhere in the ship's length;

(b) in tankers of more than 150 metres, but not exceeding 225 metres in length, anywhere in the ship's length except involving either after or forward bulkhead bounding the machinery space located aft. The machinery space shall be treated as a single floodable compartment;

(c) in tankers not exceeding 150 metres in length, anywhere in the ship's length between adjacent transverse bulkheads with the exception of the machinery space. For tankers of 100 metres or less in length where all requirements of paragraph (3) of this Regulation cannot be fulfilled without materially impairing the operational qualities of the ship, Administrations may allow relaxations from these requirements.

Ballast conditions where the tanker is not carrying oil in cargo tanks excluding any oil residues, shall not be considered.

(2) The following provisions regarding the extent and the character of the assumed damage shall apply:

(a) The extent of side or bottom damage shall be as specified in Regulation 22 of this Annex, except that the longitudinal extent of bottom damage within 0.3L from the forward perpendicular shall be the same as for side damage, as specified in Regulation 22(1)(a)(i) of this Annex. If any damage of lesser extent results in a more severe condition such damage shall be assumed.

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(b) Where the damage involving transverse bulkheads is envisaged as specified in sub-paragraphs (1)(a) and (b) of this Regulation, transverse watertight bulkheads shall be spaced at least at a distance equal to the longitudinal extent of assumed damage specified in sub-paragraph (a) of this paragraph in order to be considered effective. Where transverse bulkheads are spaced at a lesser distance, one or more of these bulkheads within such extent of damage shall be assumed as non-existent for the purpose of determining flooded compartments.

(c) Where the damage between adjacent transverse watertight bulkheads is envisaged as specified in sub-paragraph (1)(c) of this Regulation, no main transverse bulkhead or a transverse bulkhead bounding side tanks or double bottom tanks shall be assumed damaged, unless:

(i) the spacing of the adjacent bulkheads is less than the longitudinal extent of assumed damage specified in sub-paragraph (a) of this paragraph; or

(ii) there is a step or a recess in a transverse bulkhead of more than 3.05 metres in length, located within the extent of penetration of assumed damage. The step formed by the after peak bulkhead and after peak tank top shall not be regarded as a step for the purpose of this Regulation.

(d) If pipes, ducts or tunnels are situated within the assumed extent of damage, arrangements shall be made so that progressive flooding cannot thereby extend to compartments other than those assumed to be floodable for each case of damage.

(3) Oil tankers shall be regarded as complying with the damage stability criteria if the following requirements are met:

(a) The final waterline, taking into account sinkage, heel and trim, shall be below the lower edge of any opening through which progressive flooding may take place. Such openings shall include air pipes and those which are closed by means of weathertight doors or hatch covers and may exclude those openings closed by means of watertight manhole covers and flush scuttles, small watertight cargo tank hatch covers which maintain the high integrity of the deck, remotely operated watertight sliding doors, and side scuttles of the non-opening type.

(b) In the final stage of flooding, the angle of heel due to unsymmetrical flooding shall not exceed 25 degrees, provided that this angle may be increased up to 30 degrees if no deck edge immersion occurs.

(c) The stability in the final stage of flooding shall be investigated and may be regarded as sufficient if the righting lever curve has at least a range of 20 degrees beyond the position of equilibrium in association with a maximum residual righting lever of at least 0.1 metre. The Administration shall give consideration to the potential hazard presented by protected or unprotected openings which may become temporarily immersed within the range of residual stability.

(d) The Administration shall be satisfied that the stability is sufficient during intermediate stages of flooding.

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(4) The requirements of paragraph (1) of this Regulation shall be confirmed by calculations which take into consideration the design characteristics of the ship, the arrangements, configuration and contents of the damaged compartments and the distribution, specific gravities and the free surface effect of liquids. The calculations shall be based on the following:

(a) Account shall be taken of any empty or partially filled tank, the specific gravity of cargoes carried, as well as any outflow of liquids from damaged compartments.

(b) The permeabilities are assumed as follows:

Spaces	*Permeability*
Appropriated to stores	0.60
Occupied by accommodation	0.95
Occupied by machinery	0.85
Voids	0.95
Intended for consumable liquids	0 or 0.95*
Intended for other liquids	0 to 0.95**

* Whichever results in the more severe requirements.

** The permeability of partially filled compartments shall be consistent with the amount of liquid carried.

(c) The buoyancy of any superstructure directly above the side damage shall be disregarded. The unflooded parts of superstructures beyond the extent of damage, however, may be taken into consideration provided that they are separated from the damaged space by watertight bulkheads and the requirements of sub-paragraph (3)(a) of this Regulation in respect of these intact spaces are complied with. Hinged watertight doors may be acceptable in watertight bulkheads in the superstructure.

(d) The free surface effect shall be calculated at an angle of heel of 5 degrees for each individual compartment. The Administration may require or allow the free surface corrections to be calculated at an angle of heel greater than 5 degrees for partially filled tanks.

(e) In calculating the effect of free surfaces of consumable liquids it shall be assumed that, for each type of liquid at least one transverse pair or a single centreline tank has a free surface and the tank or combination of tanks to be taken into account shall be those where the effect of free surfaces is the greatest.

(5) The Master of every oil tanker and the person in charge of a non-self-propelled oil tanker to which this Annex applies shall be supplied in an approved form with:

(a) information relative to loading and distribution of cargo necessary to ensure compliance with the provisions of this Regulation; and

(b) data on the ability of the ship to comply with damage stability criteria as determined by this Regulation, including the effect of relaxations that may have been allowed under sub-paragraph (1)(c) of this Regulation.

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Appendix I

LIST OF OILS[a]

Asphalt solutions

Blending Stocks

Roofers Flux

Straight Run Residue

Oils

Clarified

Crude Oil

Mixtures containing crude oil

Diesel Oil

Fuel Oil No.4

Fuel Oil No.5

Fuel Oil No.6

Residual Fuel Oil

Road Oil

Transformer Oil

Aromatic Oil (excluding vegetable oil)

Lubricating Oils and Blending Stocks

Mineral Oil

Motor Oil

Penetrating Oil

Spindle Oil

Turbine Oil

Distillates

Straight Run

Flashed Feed Stocks

Gas Oil

Cracked

Gasoline Blending Stocks

Alkylates – fuel

Reformates

Polymer –fuel

Gasolines

Casinghead (natural)

Automotive

Aviation

Straight Run

Fuel Oil No.1 (Kerosene)

Fuel Oil No.1-D

Fuel Oil No.2

Fuel Oil No.2-D

Jet Fuels

JP-1 (Kerosene)

JP-3

JP-4

JP-5 (Kerosene, Heavy)

Turbo Fuel

Kerosene

Mineral Spirit

Naphtha

Solvent

Petroleum

Heartcut Distillate Oil

[a] The list of oils shall not necessarily be considered as comprehensive.

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Appendix II

FORM OF CERTIFICATE

INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE (1973)

Issued under the Provisions of the International Convention for the Prevention of Pollution from Ships, 1973, under the Authority of the Government of

.....
(full designation of the country)

by .....
(full designation of the competent person or organization authorized under the provisions of the International Convention for the Prevention of Pollution from Ships, 1973)

Name of Ship	Distinctive Number or Letter	Port of Registry	Gross Tonnage

Type of ship:

Oil tanker, including combination carrier*

Asphalt carrier*

Ship other than an oil tanker with cargo tanks coming under Regulation 2(2) of Annex I of the Convention*

Ship other than any of the above*

New/existing ship*

Date of building or major conversion contract .....

Date on which keel was laid or ship was at a similar stage of construction or on which major conversion was commenced .....

Date of delivery or completion of major conversion. .....

* Delete as appropriate.

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PART A ALL SHIPS

The ship is equipped with:

for ships of 400 tons gross tonnage and above:

(a) oily-water separating equipment* (capable of producing the effluent with an oil content not exceeding 100 parts per million) or

(b) an oil filtering system* (capable of producing the effluent with an oil content not exceeding 100 parts per million)

for ships of 10,000 tons gross tonnage and above:

(c) an oil discharge monitoring and control system* (additional to (a) or (b) above) or

(d) oily-water separating equipment and an oil filtering system* (capable of producing the effluent with an oil content not exceeding 15 parts per million) in lieu of (a) or (b) above.

Particulars of requirements from which exemption is granted under Regulation 2(2) and 2(4)(a) of Annex I of the Convention:

. . . . . .

. . . . . .

Remarks:

* Delete as appropriate.

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PART B OIL TANKER[1] [2]

Deadweight ..... metric tons. Length of ship ..... metres.

It is certified that this ship is:

(a) required to be constructed according to and complies with[3]

(b) not required to be constructed according to[3]

(c) not required to be constructed according to, but complies with[3]

the requirements of Regulation 2[4] of Annex I of the Convention.

The capacity of segregated ballast tanks is ..... cubic metres and complies with the requirements of Regulation 13 of Annex I of the Convention.

The segregated ballast is distributed as follows:

Tank	Quantity	Tank	Quantity

1 This Part should be completed for oil tankers including combination carriers and asphalt carriers, and those entries which are applicable should be completed for ships other than oil tankers which are constructed and utilized to carry oil in bulk of an aggregate capacity of 200 cubic metres or above.

2 This page need not be reproduced on a Certificate issued to any ship other than those referred to in footnote 1.

3 Delete as appropriate.

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THIS IS TO CERTIFY:

That the ship has been surveyed in accordance with Regulation 4 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, concerning the prevention of pollution by oil; and

That the survey shows that the structure, equipment, fittings, arrangement and material of the ship and the condition thereof are in all respects satisfactory and that the ship complies with the applicable requirements of Annex I of the Convention.

This Certificate is valid until . . . . . .
subject to intermediate survey(s) at intervals of . . . . . .

Issued at . . . . . .
(place of issue of Certificate)

. . . . . 19 . . . . . .
(Signature of duly authorized official issuing the Certificate)

(Seal or stamp of the issuing Authority, as appropriate)

Endorsement for existing ships[4]

This is to certify that this ship has been so equipped as to comply with the requirements of the International Convention for the Prevention of Pollution from Ships, 1973 as relating to existing ships three years from the date of entry into force of the Convention.

Signed . . . . . .
(Signature of duly authorized official)

Place of endorsement . . . . . .

Date of endorsement . . . . . .

(Seal or stamp of the Authority, as appropriate)

[4] This entry need not be reproduced on a Certificate other than the first Certificate issued to any ship.

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Intermediate survey

This is to certify that at an intermediate survey required by Regulation 4(1)(c) of Annex I of the Convention, this ship and the condition thereof are found to comply with the relevant provisions of the Convention.

Signed .....
(Signature of duly authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Signed .....
(Signature of duly authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Under the provisions of Regulation 8(2) and (4) of Annex I of the Convention the validity of this Certificate is extended until

.....

Signed .....
(Signature of duly authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

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Appendix III

FORM OF OIL RECORD BOOK

OIL RECORD BOOK

I — FOR OIL TANKERS[1]

Name of ship .....

Total cargo carrying capacity of ship in cubic metres .....

Voyage from .....(date)..... to.....(date) .....

(a) Loading of oil cargo

1. Date and place of loading			
2. Types of oil loaded			
3. Identity of tank(s) loaded			
4. Closing of applicable cargo tank valves and applicable line cut-off valves on completion of loading[2]			

The undersigned certifies that in addition to the above, all sea valves, overboard discharge valves, cargo tank and pipeline connections and inter-connections, were secured on completion of loading oil cargo.

Date of entry ..... Officer in charge .....

Master .....

[1] This Part should be completed for oil tankers including combination carriers and asphalt carriers, and those entries which are applicable shall be completed for ships other than oil tankers which are constructed and utilized to carry oil in bulk of an aggregate capacity of 200 cubic metres or above. This Part need not be reproduced on an Oil Record Book issued to any ship other than those referred to above.

[2] Applicable valves and similar devices are those referred to in Regulations 20(2)(a)(iii), 23 and 24 of Annex I of the Convention.

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(b) Internal transfer of oil cargo during voyage

5. Date of internal transfer					
6. Identity of tank(s)	(i)	From			
	(ii)	To			
7. Was(were) tank(s) in 6(i) emptied?					

The undersigned certifies that in addition to the above, all sea valves, overboard discharge valves, cargo tank and pipeline connections and inter-connections, were secured on completion of internal transfer of oil cargo.

Date of entry ..... Officer in charge .....

Master .....

(c) Unloading of oil cargo

8. Date and place of unloading			
9. Identity of tank(s) unloaded			
10. Was(were) tank(s) emptied?			
11. Opening of applicable cargo tank valves and applicable line cut-off valves prior to cargo unloading[2]			
12. Closing of applicable cargo tank valves and applicable line cut-off valves on completion of unloading[2]			

The undersigned certifies that in addition to the above, all sea valves, overboard discharge valves, cargo tank and pipeline connections and inter-connections, were secured on completion of unloading of oil cargo.

Date of entry ..... Officer in charge .....

Master .....

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(b) Ballasting of cargo tanks

13. Identity of tank(s) ballasted			
14. Date and position of ship at start of ballasting			
15. If valves connecting cargo lines and segregated ballast lines were used give time, date and position of ship when valves were (a) opened, and (b) closed			

The undersigned certifies that in addition to the above all sea valves, overboard discharge valves, cargo tank and pipeline connections and inter-connections, were secured on completion of ballasting.

Date of entry ..... Officer in charge .....

Master .....

(c) Cleaning of cargo tanks

16. Identity of tank(s) cleaned			
17. Date and duration of cleaning			
18. Methods of cleaning[3]			

Date of entry ..... Officer in charge .....

Master .....

[3] Hand hosing, machine washing and/or chemical cleaning. Where chemically cleaned, the chemical concerned and the amount used should be stated.

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(f) Discharge of dirty ballast

19. Identity of tank(s)			
20. Date and position of ship at start of discharge to sea			
21. Date and position of ship at finish of discharge to sea			
22. Ship's speed(s) during discharge			
23. Quantity discharged to sea			
24. Quantity of polluted water transferred to slop tank(s) (identify slop tank(s))			
25. Date and port of discharge into shore reception facilities (if applicable)			
26. Was any part of the discharge conducted during darkness, if so, for how long?			
27. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?			
28. Was any oil observed on the surface of the water in the locality of the discharge?			

Date of entry . . . . . Officer in charge . . . . . .

Master. . . . . .

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(g) Discharge of water from slop tanks

29. Identity of slop tank(s)			
30. Time of settling from last entry of residues, or			
31. Time of settling from last discharge			
32. Date, time and position of ship at start of discharge			
33. Sounding of total contents at start of discharge			
34. Sounding of oil/water interface at start of discharge			
35. Bulk quantity discharged and rate of discharge			
36. Final quantity discharged and rate of discharge			
37. Date, time and position of ship at end of discharge			
38. Ship's speed(s) during discharge			
39. Sounding of oil/water interface at end of discharge			
40. Was any part of the discharge conducted during darkness, if so, for how long?			
41. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?			
42. Was any oil observed on the surface of the water in the locality of the discharge?			

Date of entry ..... Officer in charge .....

Master .....

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(h) Disposal of residues

43. Identity of tank(s)			
44. Quantity disposed from each tank			
45. Method of disposal of residue: (a) Reception facilities (b) Mixed with cargo (c) Transferred to another (other) tank(s) (identify tank(s)) (d) Other method (state which)			
46. Date and port of disposal of residue			

Date of entry . . . . . Officer in charge . . . . . .

Master. . . . . .

(i) Discharge of clean ballast contained in cargo tanks

47. Date and position of ship at commencement of discharge of clean ballast			
48. Identity of tank(s) discharged			
49. Was(were) the tank(s) empty on completion?			
50. Position of vessel on completion if different from 47			
51. Was any part of the discharge conducted during darkness, if so, for how long?			
52. Was a regular check kept on the effluent and the surface of the water in the locality of the discharge?			
53. Was any oil observed on the surface of the water in the locality of the discharge?			

Date of entry . . . . . Officer in charge . . . . . .

Master. . . . . .

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(j) Discharge overboard of bilge water containing oil which has accumulated in machinery spaces whilst in port[4]

54. Port			
55. Duration of stay			
56. Quantity disposed			
57. Date and place of disposal			
58. Method of disposal (state whether a separator was used)			

Date of entry . . . . . Officer in charge . . . . . .

Master . . . . . .

(k) Accidental or other exceptional discharges of oil

59. Date and time of occurrence			
60. Place or position of ship at time of occurrence			
61. Approximate quantity and type of oil			
62. Circumstances of discharge or escape, the reasons therefor and general remarks			

Date of entry . . . . . Officer in charge . . . . . .

Master . . . . . .

4 Where the pump starts automatically and discharges through a separator at all times it will be sufficient to enter each day "Automatic discharge from bilges through a separator".

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(l) Has the oil monitoring and control system been out of operation at any time when discharging overboard? If so, give time and date of failure and time and date of restoration and confirm that this was due to equipment failure and state reason if known .....

.....

.....

Date of entry ..... Officer in charge .....

Master .....

(m) Additional operational procedures and general remarks .....

.....

.....

.....

For oil tankers of less than 150 tons gross tonnage operating in accordance with Regulation 15(4) of Annex I of the Convention, an appropriate oil record book should be developed by the Administration.

For asphalt carriers, a separate oil record book may be developed by the Administration utilizing sections (a), (b), (c), (e), (h), (j), (k) and (m) of this form of oil record book.

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II FOR SHIPS OTHER THAN OIL TANKERS

Name of ship .....

Operations from .....(date), to .....(date)

(a) Ballasting or cleaning of oil fuel tanks

1. Identity of tank(s) ballasted			
2. Whether cleaned since they last contained oil and, if not, type of oil previously carried			
3. Date and position of ship at start of cleaning			
4. Date and position of ship at start of ballasting			

Date of entry ..... Officer in charge .....

Master .....

(b) Discharge of dirty ballast or cleaning water from tanks referred to under section (a)

5. Identity of tank(s)			
6. Date and position of ship at start of discharge			
7. Date and position of ship at finish of discharge			
8. Ship's speed(s) during discharge			
9. Method of discharge (state whether to reception facility or through installed equipment)			
10. Quantity discharged			

Date of entry ..... Officer in charge .....

Master .....

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(c) Disposal of residues

11. Quantity of residue retained on board			
12. Methods of disposal of residue: (a) reception facilities (b) mixed with next bunkering (c) transferred to another (other) tank(s) (d) other method (state which)			
13. Date and port of disposal of residue			

Date of entry ..... Officer in charge .....

Master .....

(d) Discharge overboard of bilge water containing oil which has accumulated in machinery spaces whilst in port[5]

14. Port			
15. Duration of stay			
16. Quantity discharged			
17. Date and place of discharge			
18. Method of discharge: (a) through oily-water separating equipment; (b) through oil filtering system; (c) through oily-water separating equipment and an oil filtering system; (d) to reception facilities			

Date of entry ..... Officer in charge .....

Master .....

[5] Where the pump starts automatically and discharges through a separator at all times it will be sufficient to enter each day "Automatic discharge from bilges through a separator".

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(e) Accidental or other exceptional discharges of oil

19. Date and time of occurrence			
20. Place or position of ship at time of occurrence			
21. Approximate quantity and type of oil			
22. Circumstances of discharge or escape, the reasons therefor and general remarks			

Date of entry ..... Officer in charge .....

Master .....

(f) Has the required oil monitoring and control system been out of operation at any time when discharging overboard? If so, state time and date of failure and time and date of restoration, and confirm that this was due to equipment failure, and state reason if known

Date of entry ..... Officer in charge .....

Master .....

(g) New ships of 4,000 tons gross tonnage and above: has dirty ballast been carried in oil fuel tanks?

Yes/No .....

If so, state which tanks were so ballasted and method of discharge of the dirty ballast .....

.....

.....

Date of entry ..... Officer in charge .....

Master .....

(h) Additional operational procedures and general remarks .....

.....

.....

.....

Date of entry ..... Officer in charge .....

Master .....

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ANNEX II

REGULATIONS FOR THE CONTROL OF POLLUTION BY NOXIOUS LIQUID SUBSTANCES IN BULK

Regulation 1

Definitions

For the purposes of this Annex:

(1) "Chemical tanker" means a ship constructed or adapted primarily to carry a cargo of noxious liquid substances in bulk and includes an "oil tanker" as defined in Annex I of the present Convention when carrying a cargo or part cargo of noxious liquid substances in bulk.

(2) "Clean ballast" means ballast carried in a tank which, since it was last used to carry a cargo containing a substance in Category A, B, C or D has been thoroughly cleaned and the residues resulting therefrom have been discharged and the tank emptied in accordance with the appropriate requirements of this Annex.

(3) "Segregated ballast" means ballast water introduced into a tank permanently allocated to the carriage of ballast or to the carriage of ballast or cargoes other than oil or noxious liquid substances as variously defined in the Annexes of the present Convention, and which is completely separated from the cargo and oil fuel system.

(4) "Nearest land" is as defined in Regulation 1(9) of Annex I of the present Convention.

(5) "Liquid substances" are those having a vapour pressure not exceeding 2.8 kp/cm^2 at a temperature of 37.8°C.

(6) "Noxious liquid substance" means any substance designated in Appendix II to this Annex or provisionally assessed under the provisions of Regulation 3(4) as falling into Category A, B, C or D.

(7) "Special area" means a sea area where for recognized technical reasons in relation to its oceanographic and ecological condition and to its peculiar transportation traffic the adoption of special mandatory methods for the prevention of sea pollution by noxious liquid substances is required.

Special areas shall be:

(a) The Baltic Sea Area, and

(b) The Black Sea Area.

(8) "Baltic Sea Area" is as defined in Regulation 10(1)(b) of Annex I of the present Convention.

(9) "Black Sea Area" is as defined in Regulation 10(1)(c) of Annex I of the present Convention.

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Regulation 2

Application

(1) Unless expressly provided otherwise the provisions of this Annex shall apply to all ships carrying noxious liquid substances in bulk.

(2) Where a cargo subject to the provisions of Annex I of the present Convention is carried in a cargo space of a chemical tanker, the appropriate requirements of Annex I of the present Convention shall also apply.

(3) Regulation 13 of this Annex shall apply only to ships carrying substances which are categorized for discharge control purposes in Category A, B or C.

Regulation 3

Categorization and Listing of Noxious Liquid Substances

(1) For the purpose of the Regulations of this Annex, except Regulation 13, noxious liquid substances shall be divided into four categories as follows:

(a) Category A – Noxious liquid substances which if discharged into the sea from tank cleaning or deballasting operations would present a major hazard to either marine resources or human health or cause serious harm to amenities or other legitimate uses of the sea and therefore justify the application of stringent anti-pollution measures.

(b) Category B – Noxious liquid substances which if discharged into the sea from tank cleaning or deballasting operations would present a hazard to either marine resources or human health or cause harm to amenities or other legitimate uses of the sea and therefore justify the application of special anti-pollution measures.

(c) Category C – Noxious liquid substances which if discharged into the sea from tank cleaning or deballasting operations would present a minor hazard to either marine resources or human health or cause minor harm to amenities or other legitimate uses of the sea and therefore require special operational conditions.

(d) Category D – Noxious liquid substances which if discharged into the sea from tank cleaning or deballasting operations would present a recognizable hazard to either marine resources or human health or cause minimal harm to amenities or other legitimate uses of the sea and therefore require some attention in operational conditions.

(2) Guidelines for use in the categorization of noxious liquid substances are given in Appendix I to this Annex.

(3) The list of noxious liquid substances carried in bulk and presently categorized which are subject to the provisions of this Annex is set out in Appendix II to this Annex.

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(4) Where it is proposed to carry a liquid substance in bulk which has not been categorized under paragraph (1) of this Regulation or evaluated as referred to in Regulation 4(1) of this Annex, the Governments of Parties to the Convention involved in the proposed operation shall establish and agree on a provisional assessment for the proposed operation on the basis of the guidelines referred to in paragraph (2) of this Regulation. Until full agreement between the Governments involved has been reached, the substance shall be carried under the most severe conditions proposed. As soon as possible, but not later than ninety days after its first carriage, the Administration concerned shall notify the Organization and provide details of the substance and the provisional assessment for prompt circulation to all Parties for their information and consideration. The Government of each Party shall have a period of ninety days in which to forward its comments to the Organization, with a view to the assessment of the substance.

Regulation 4

Other Liquid Substances

(1) The substances listed in Appendix III to this Annex have been evaluated and found to fall outside the Categories A, B, C and D, as defined in Regulation 3(1) of this Annex because they are presently considered to present no harm to human health, marine resources, amenities or other legitimate uses of the sea, when discharged into the sea from tank cleaning or deballasting operations.

(2) The discharge of bilge or ballast water or other residues or mixtures containing only substances listed in Appendix III to this Annex shall not be subject to any requirement of this Annex.

(3) The discharge into the sea of clean ballast or segregated ballast shall not be subject to any requirement of this Annex.

Regulation 5

Discharge of Noxious Liquid Substances

Categories A, B and C Substances outside Special Areas and Category D Substances in all Areas

Subject to the provisions of Regulation 6 of this Annex,

(1) The discharge into the sea of substances in Category A as defined in Regulation 3(1)(a) of this Annex or of those provisionally assessed as such or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited. If tanks containing such substances or mixtures are to be washed, the resulting residues shall be discharged to a reception facility until the concentration of the substance in the effluent to such facility is at or below the residual concentration prescribed for that substance in column III of Appendix II to this Annex and until the tank is empty. Provided that the residue then remaining in the tank is subsequently diluted by the addition of a volume of water of not less than 5 per cent of the total volume of the tank, it may be discharged into the sea when all the following conditions are also satisfied:

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(a) the ship is proceeding en route at a speed of at least 7 knots in the case of self-propelled ships or at least 4 knots in the case of ships which are not self-propelled;

(b) the discharge is made below the waterline, taking into account the location of the seawater intakes; and

(c) the discharge is made at a distance of not less than 12 nautical miles from the nearest land and in a depth of water of not less than 25 metres.

(2) The discharge into the sea of substances in Category B as defined in Regulation 3(1)(b) of this Annex or of those provisionally assessed as such, or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited except when all the following conditions are satisfied:

(a) the ship is proceeding en route at a speed of at least 7 knots in the case of self-propelled ships or at least 4 knots in the case of ships which are not self-propelled;

(b) the procedures and arrangements for discharge are approved by the Administration. Such procedures and arrangements shall be based upon standards developed by the Organization and shall ensure that the concentration and rate of discharge of the effluent is such that the concentration of the substance in the wake astern of the ship does not exceed 1 part per million;

(c) the maximum quantity of cargo discharged from each tank and its associated piping system does not exceed the maximum quantity approved in accordance with the procedures referred to in subparagraph (b) of this paragraph, which shall in no case exceed the greater of 1 cubic metre or 1/3,000 of the tank capacity in cubic metres;

(d) the discharge is made below the waterline, taking into account the location of the seawater intakes; and

(e) the discharge is made at a distance of not less than 12 nautical miles from the nearest land and in a depth of water of not less than 25 metres.

(3) The discharge into the sea of substances in Category C as defined in Regulation 3(1)(c) of this Annex or of those provisionally assessed as such, or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited except when all the following conditions are satisfied:

(a) the ship is proceeding en route at a speed of at least 7 knots in the case of self-propelled ships or at least 4 knots in the case of ships which are not self-propelled;

(b) the procedures and arrangements for discharge are approved by the Administration. Such procedures and arrangements shall be based upon standards developed by the Organization and shall ensure that the concentration and rate of discharge of the effluent is such that the concentration of the substance in the wake astern of the ship does not exceed 10 parts per million;

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(c) the maximum quantity of cargo discharged from each tank and its associated piping system does not exceed the maximum quantity approved in accordance with the procedures referred to in sub-paragraph (b) of this paragraph, which shall in no case exceed the greater of 3 cubic metres or 1/1,000 of the tank capacity in cubic metres;

(d) the discharge is made below the waterline, taking into account the location of the seawater intakes; and

(e) the discharge is made at a distance of not less than 12 nautical miles from the nearest land and in a depth of water of not less than 25 metres.

(4) The discharge into the sea of substances in Category D as defined in Regulation 3(1)(d) of this Annex, or of those provisionally assessed as such, or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited except when all the following conditions are satisfied:

(a) the ship is proceeding en route at a speed of at least 7 knots in the case of self-propelled ships or at least 4 knots in the case of ships which are not self-propelled;

(b) such mixtures are of a concentration not greater than one part of the substance in ten parts of water; and

(c) the discharge is made at a distance of not less than 12 nautical miles from the nearest land.

(5) Ventilation procedures approved by the Administration may be used to remove cargo residues from a tank. Such procedures shall be based upon standards developed by the Organization. If subsequent washing of the tank is necessary, the discharge into the sea of the resulting tank washings shall be made in accordance with paragraph (1), (2), (3) or (4) of this Regulation, whichever is applicable.

(6) The discharge into the sea of substances which have not been categorized, provisionally assessed, or evaluated as referred to in Regulation 4(1) of this Annex, or of ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited.

Categories A, B and C Substances within Special Areas

Subject to the provisions of Regulation 6 of this Annex,

(7) The discharge into the sea of substances in Category A as defined in Regulation 3(1)(a) of this Annex or of those provisionally assessed as such, or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited. If tanks containing such substances or mixtures are to be washed the resulting residues shall be discharged to a reception facility which the States bordering the special area shall provide in accordance with Regulation 7 of this Annex, until the concentration of the substance in the effluent to such facility is at or below the residual concentration prescribed for that substance in column IV of Appendix II to this Annex and until the tank is empty. Provided that the residue then remaining in the tank is subsequently diluted by the addition of a volume of water of not less than 5 per cent of the total volume of the tank, it may be discharged into the sea when all the following conditions are also satisfied:

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(a) the ship is proceeding en route at a speed of at least 7 knots in the case of self-propelled ships or at least 4 knots in the case of ships which are not self propelled;

(b) the discharge is made below the waterline, taking into account the location of the seawater intakes; and

(c) the discharge is made at a distance of not less than 12 nautical miles from the nearest land and in a depth of water of not less than 25 metres.

(8) The discharge into the sea of substances in Category B as defined in Regulation 3(1)(b) of this Annex or of those provisionally assessed as such, or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited except when all the following conditions are satisfied:

(a) the tank has been washed after unloading with a volume of water of not less than 0.5 per cent of the total volume of the tank, and the resulting residues have been discharged to a reception facility until the tank is empty;

(b) the ship is proceeding en route at a speed of at least 7 knots in the case of self-propelled ships or at least 4 knots in the case of ships which are not self-propelled;

(c) the procedures and arrangements for discharge and washings are approved by the Administration. Such procedures and arrangements shall be based upon standards developed by the Organization and shall ensure that the concentration and rate of discharge of the effluent is such that the concentration of the substance in the wake astern of the ship does not exceed 1 part per million;

(d) the discharge is made below the waterline, taking into account the location of the seawater intakes; and

(e) the discharge is made at a distance of not less than 12 nautical miles from the nearest land and in a depth of water of not less than 25 metres.

(9) The discharge into the sea of substances in Category C as defined in Regulation 3(1)(c) of this Annex or of those provisionally assessed as such, or ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited except when all the following conditions are satisfied:

(a) the ship is proceeding en route at a speed of at least 7 knots in the case of self-propelled ships or at least 4 knots in the case of ships which are not self-propelled;

(b) the procedures and arrangements for discharge are approved by the Administration. Such procedures and arrangements shall be based upon standards developed by the Organization and shall ensure that the concentration and rate of discharge of the effluent is such that the concentration of the substance in the wake astern of the ship does not exceed 1 part per million;

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(c) the maximum quantity of cargo discharged from each tank and its associated piping system does not exceed the maximum quantity approved in accordance with the procedures referred to in sub-paragraph (a) of this paragraph which shall in no case exceed the greater of 1 cubic metre or 1/3,000 of the tank capacity in cubic metres;

(d) the discharge is made below the waterline, taking into account the location of the seawater intakes; and

(e) the discharge is made at a distance of not less than 12 nautical miles from the nearest land and in a depth of water of not less than 25 metres.

(10) Ventilation procedures approved by the Administration may be used to remove cargo residues from a tank. Such procedures shall be based upon standards developed by the Organization. If subsequent washing of the tank is necessary, the discharge into the sea of the resulting tank washings shall be made in accordance with paragraph (7), (8) or (9) of this Regulation, whichever is applicable.

(11) The discharge into the sea of substances which have not been categorized, provisionally assessed or evaluated as referred to in Regulation 4(1) of this Annex, or of ballast water, tank washings, or other residues or mixtures containing such substances shall be prohibited.

(12) Nothing in this Regulation shall prohibit a ship from retaining on board the residues from a Category B or C cargo and discharging such residues into the sea outside a special area in accordance with paragraph (2) or (3) of this Regulation, respectively.

(13) (a) The Governments of Parties to the Convention, the coastlines of which border on any given special area, shall collectively agree and establish a date by which time the requirement of Regulation 7(1) of this Annex will be fulfilled and from which the requirements of paragraphs (7), (8), (9) and (10) of this Regulation in respect of that area shall take effect and notify the Organization of the date so established at least six months in advance of that date. The Organization shall then promptly notify all Parties of that date.

(b) If the date of entry into force of the present Convention is earlier than the date established in accordance with sub-paragraph (a) of this paragraph, the requirements of paragraphs (1), (2) and (3) of this Regulation shall apply during the interim period.

Regulation 6

Exceptions

Regulation 5 of this Annex shall not apply to:

(a) the discharge into the sea of noxious liquid substances or mixtures containing such substances necessary for the purpose of securing the safety of a ship or saving life at sea; or

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(b) the discharge into the sea of noxious liquid substances or mixtures containing such substances resulting from damage to a ship or its equipment:

(i) provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the discharge for the purpose of preventing or minimizing the discharge; and

(ii) except if the owner or the Master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result; or

(c) the discharge into the sea of noxious liquid substances or mixtures containing such substances, approved by the Administration, when being used for the purpose of combating specific pollution incidents in order to minimize the damage from pollution. Any such discharge shall be subject to the approval of any Government in whose jurisdiction it is contemplated the discharge will occur.

Regulation 7

Reception Facilities

(1) The Government of each Party to the Convention undertakes to ensure the provision of reception facilities according to the needs of ships using its ports, terminals or repair ports as follows:

(a) cargo loading and unloading ports and terminals shall have facilities adequate for reception without undue delay to ships of such residues and mixtures containing noxious liquid substances as would remain for disposal from ships carrying them as a consequence of the application of this Annex; and

(b) ship repair ports undertaking repairs to chemical tankers shall have facilities adequate for the reception of residues and mixtures containing noxious liquid substances.

(2) The Government of each Party shall determine the types of facilities provided for the purpose of paragraph (1) of this Regulation at each cargo loading and unloading port, terminal and ship repair port in its territories and notify the Organization thereof.

(3) Each Party shall notify the Organization, for transmission to the Parties concerned, of any case where facilities required under paragraph (1) of this Regulation are alleged to be inadequate.

Regulation 8

Measures of Control

(1) The Government of each Party to the Convention shall appoint or authorize surveyors for the purpose of implementing this Regulation.

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Category A Substances in all Areas

(2) (a) If a tank is partially unloaded or unloaded but not cleaned, an appropriate entry shall be made in the Cargo Record Book.

(b) Until that tank is cleaned every subsequent pumping or transfer operation carried out in connexion with that tank shall also be entered in the Cargo Record Book.

(3) If the tank is to be washed:

(a) the effluent from the tank washing operation shall be discharged from the ship to a reception facility at least until the concentration of the substance in the discharge, as indicated by analyses of samples of the effluent taken by the surveyor, has fallen to the residual concentration specified for that substance in Appendix II to this Annex. When the required residual concentration has been achieved, remaining tank washings shall continue to be discharged to the reception facility until the tank is empty. Appropriate entries of these operations shall be made in the Cargo Record Book and certified by the surveyor; and

(b) after diluting the residue then remaining in the tank with at least 5 per cent of the tank capacity of water, this mixture may be discharged into the sea in accordance with the provisions of sub-paragraphs (1)(a), (b) and (c) or 7(a), (b) and (c), whichever is applicable, of Regulation 5 of this Annex. Appropriate entries of these operations shall be made in the Cargo Record Book.

(4) Where the Government of the receiving Party is satisfied that it is impracticable to measure the concentration of the substance in the effluent without causing undue delay to the ship, that Party may accept an alternative procedure as being equivalent to sub-paragraph (3)(a) provided that:

(a) a precleaning procedure for that tank and that substance, based on standards developed by the Organization, is approved by the Administration and that Party is satisfied that such procedure will fulfil the requirements of paragraph (1) or (7), whichever is applicable, of Regulation 5 of this Annex with respect to the attainment of the prescribed residual concentrations;

(b) a surveyor duly authorized by that Party shall certify in the Cargo Record Book that:

(i) the tank, its pump and piping system have been emptied, and that the quantity of cargo remaining in the tank is at or below the quantity on which the approved precleaning procedure referred to in sub-paragraph (ii) of this paragraph has been based;

(ii) precleaning has been carried out in accordance with the precleaning procedure approved by the Administration for that tank and that substance; and

(iii) the tank washings resulting from such precleaning have been discharged to a reception facility and the tank is empty;

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(c) the discharge into the sea of any remaining residues shall be in accordance with the provisions of paragraph (2)(b) of this Regulation and an appropriate entry is made in the Cargo Record Book.

Category B Substances outside Special Areas and Category C Substances in all Areas

(5) Subject to such surveillance and approval by the authorized or appointed surveyor as may be deemed necessary by the Government of the Party, the Master of a ship shall, with respect to a Category B substance outside special areas or a Category C substance in all areas, ensure compliance with the following:

(a) If a tank is partially unloaded or unloaded but not cleaned, an appropriate entry shall be made in the Cargo Record Book.

(b) If the tank is to be cleaned at sea:

(i) the cargo piping system serving that tank shall be drained and an appropriate entry made in the Cargo Record Book;

(ii) the quantity of substance remaining in the tank shall not exceed the maximum quantity which may be discharged into the sea for that substance under Regulation 5(2)(c) of this Annex outside special areas in the case of Category B substances, or under Regulations 5(3)(c) and 5(9)(c) outside and within special areas respectively in the case of Category C substances. An appropriate entry shall be made in the Cargo Record Book;

(iii) where it is intended to discharge the quantity of substance remaining into the sea the approved procedures shall be complied with, and the necessary dilution of the substance satisfactory for such a discharge shall be achieved. An appropriate entry shall be made in the Cargo Record Book; or

(iv) where the tank washings are not discharged into the sea, if any internal transfer of tank washings takes place from that tank an appropriate entry shall be made in the Cargo Record Book; and

(v) any subsequent discharge into the sea of such tank washings shall be made in accordance with the requirements of Regulation 5 of this Annex for the appropriate area and Category of substance involved.

(c) If the tank is to be cleaned in port:

(i) the tank washings shall be discharged to a reception facility and an appropriate entry shall be made in the Cargo Record Book; or

(ii) the tank washings shall be retained on board the ship and an appropriate entry shall be made in the Cargo Record Book indicating the location and disposition of the tank washings.

(d) If after unloading a Category C substance within a special area, any residues or tank washings are to be retained on board until the ship is outside the special area, the Master shall so indicate by an appropriate entry in the Cargo Record Book and in this case the procedures set out in Regulation 5(3) of this Annex shall be applicable.

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Category B Substances within Special Areas

(6) Subject to such surveillance and approval by the authorized or appointed surveyor as may be deemed necessary by the Government of the Party, the Master of a ship shall, with respect to a Category B substance within a special area, ensure compliance with the following:

(a) If a tank is partially unloaded or unloaded but not cleaned, an appropriate entry shall be made in the Cargo Record Book.

(b) Until that tank is cleaned every subsequent pumping or transfer operation carried out in connexion with that tank shall also be entered in the Cargo Record Book.

(c) If the tank is to be washed, the effluent from the tank washing operation, which shall contain a volume of water not less than 0.5 per cent of the total volume of the tank, shall be discharged from the ship to a reception facility until the tank, its pump and piping system are empty. An appropriate entry shall be made in the Cargo Record Book.

(d) If the tank is to be further cleaned and emptied at sea, the Master shall:

(i) ensure that the approved procedures referred to in Regulation 5(8)(c) of this Annex are complied with and that the appropriate entries are made in the Cargo Record Book; and

(ii) ensure that any discharge into the sea is made in accordance with the requirements of Regulation 5(8) of this Annex and an appropriate entry is made in the Cargo Record Book.

(e) If after unloading a Category B substance within a special area, any residues or tank washings are to be retained on board until the ship is outside the special area, the Master shall so indicate by an appropriate entry in the Cargo Record Book and in this case the procedures set out in Regulation 5(2) of this Annex shall be applicable.

Category D Substances in all Areas

(7) The Master of a ship shall, with respect to a Category D substance, ensure compliance with the following:

(a) If a tank is partially unloaded or unloaded but not cleaned, an appropriate entry shall be made in the Cargo Record Book.

(b) If the tank is to be cleaned at sea:

(i) the cargo piping system serving that tank shall be drained and an appropriate entry made in the Cargo Record Book;

(ii) where it is intended to discharge the quantity of substance remaining into the sea, the necessary dilution of the substance satisfactory for such a discharge shall be achieved. An appropriate entry shall be made in the Cargo Record Book; or

(iii) where the tank washings are not discharged into the sea, if any internal transfer of tank washings takes place from that tank an appropriate entry shall be made in the Cargo Record Book; and

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(iv) any subsequent discharge into the sea of such tank washings shall be made in accordance with the requirements of Regulation 5(4) of this Annex.

(c) If the tank is to be cleaned in port:

(i) the tank washings shall be discharged to a reception facility and an appropriate entry shall be made in the Cargo Record Book; or

(ii) the tank washings shall be retained on board the ship and an appropriate entry shall be made in the Cargo Record Book indicating the location and disposition of the tank washings.

Discharge from a Slop Tank

(8) Any residues retained on board in a slop tank, including those from pump room bilges, which contain a Category A substance, or within a special area either a Category A or a Category B substance, shall be discharged to a reception facility in accordance with the provisions of Regulation 5(1), (7) or (8) of this Annex, whichever is applicable. An appropriate entry shall be made in the Cargo Record Book.

(9) Any residues retained on board in a slop tank, including those from pump room bilges, which contain a quantity of a Category B substance outside a special area or a Category C substance in all areas in excess of the aggregate of the maximum quantities specified in Regulation 5(2)(c), (3)(c) or (9)(c) of this Annex, whichever is applicable, shall be discharged to a reception facility. An appropriate entry shall be made in the Cargo Record Book.

Regulation 9

Cargo Record Book

(1) Every ship to which this Annex applies shall be provided with a Cargo Record Book, whether as part of the ship's official log book or otherwise, in the form specified in Appendix IV to this Annex.

(2) The Cargo Record Book shall be completed, on a tank-to-tank basis, whenever any of the following operations with respect to a noxious liquid substance take place in the ship:

(i) loading of cargo;

(ii) unloading of cargo;

(iii) transfer of cargo;

(iv) transfer of cargo, cargo residues or mixtures containing cargo to a slop tank;

(v) cleaning of cargo tanks;

(vi) transfer from slop tanks;

(vii) ballasting of cargo tanks;

(viii) transfer of dirty ballast water;

(ix) discharge into the sea in accordance with Regulation 5 of this Annex.

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(3) In the event of any discharge of the kind referred to in Article 7 of the present Convention and Regulation 6 of this Annex of any noxious liquid substance or mixture containing such substance, whether intentional or accidental, an entry shall be made in the Cargo Record Book stating the circumstances of, and the reason for, the discharge.

(4) When a surveyor appointed or authorized by the Government of the Party to the Convention to supervise any operations under this Annex has inspected a ship, then that surveyor shall make an appropriate entry in the Cargo Record Book.

(5) Each operation referred to in paragraphs (2) and (3) of this Regulation shall be fully recorded without delay in the Cargo Record Book so that all the entries in the Book appropriate to that operation are completed. Each entry shall be signed by the officer or officers in charge of the operation concerned and, when the ship is manned, each page shall be signed by the Master of the ship. The entries in the Cargo Record Book shall be in an official language of the State whose flag the ship is entitled to fly, and, for ships holding an International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (1973) in English or French. The entries in an official national language of the State whose flag the ship is entitled to fly shall prevail in case of a dispute or discrepancy.

(6) The Cargo Record Book shall be kept in such a place as to be readily available for inspection and, except in the case of unmanned ships under tow, shall be kept on board the ship. It shall be retained for a period of two years after the last entry has been made.

(7) The competent authority of the Government of a Party may inspect the Cargo Record Book on board any ship to which this Annex applies while the ship is in its port, and may make a copy of any entry in that book and may require the Master of the ship to certify that the copy is a true copy of such entry. Any copy so made which has been certified by the Master of the ship as a true copy of an entry in the ship's Cargo Record Book shall be made admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of a Cargo Record Book and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

Regulation 10

Surveys

(1) Ships which are subject to the provisions of this Annex and which carry noxious liquid substances in bulk shall be surveyed as follows:

(a) An initial survey before a ship is put into service or before the certificate required by Regulation 11 of this Annex is issued for the first time, which shall include a complete inspection of its structure, equipment, fittings, arrangements and material in so far as the ship is covered by this Annex. The survey shall be such as to ensure full compliance with the applicable requirements of this Annex.

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(b) Periodical surveys at intervals specified by the Administration which shall not exceed five years and which shall be such as to ensure that the structure, equipment, fittings, arrangements and material fully comply with the applicable requirements of this Annex. However, where the duration of the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (1973) is extended as specified in Regulation 12(2) or (4) of this Annex, the interval of the periodical survey may be extended correspondingly.

(c) Intermediate surveys at intervals specified by the Administration which shall not exceed thirty months and which shall be such as to ensure that the equipment and associated pump and piping systems, fully comply with the applicable requirements of this Annex and are in good working order. The survey shall be endorsed on the International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (1973) issued under Regulation 11 of this Annex.

(2) Surveys of a ship with respect to the enforcement of the provisions of this Annex shall be carried out by officers of the Administration. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it. In every case the Administration concerned shall fully guarantee the completeness and efficiency of the surveys.

(3) After any survey of a ship under this Regulation has been completed, no significant change shall be made in the structure, equipment, fittings, arrangements or material, covered by the survey without the sanction of the Administration, except the direct replacement of such equipment and fittings for the purpose of repair or maintenance.

Regulation 11

Issue of Certificate

(1) An International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (1973) shall be issued to any ship carrying noxious liquid substances which is engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention after survey of such ship in accordance with the provisions of Regulation 10 of this Annex.

(2) Such Certificate shall be issued either by the Administration or by a person or organization duly authorized by it. In every case the Administration shall assume full responsibility for the Certificate.

(3) (a) The Government of a Party may, at the request of the Administration, cause a ship to be surveyed and if satisfied that the provisions of this Annex are complied with shall issue or authorize the issue of a Certificate to the ship in accordance with this Annex.

(b) A copy of the Certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

(c) A Certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and shall have the same force and receive the same recognition as a certificate issued under paragraph (1) of this Regulation.

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(c) No International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (1973) shall be issued to any ship which is entitled to fly the flag of a State which is not a Party.

(4) The Certificate shall be drawn up in an official language of the issuing country in a form corresponding to the model given in Appendix V to this Annex. If the language used is neither English nor French, the text shall include a translation into one of these languages.

Regulation 12

Duration of Certificate

(1) An International Pollution Prevention Certificate for the Carriage of Noxious Liquid Substances in Bulk (1973) shall be issued for a period specified by the Administration, which shall not exceed five years from the date of issue, except as provided in paragraphs (2) and (4) of this Regulation.

(2) If a ship at the time when the Certificate expires is not in a port or offshore terminal under the jurisdiction of the Party to the Convention whose flag the ship is entitled to fly, the Certificate may be extended by the Administration, but such extension shall be granted only for the purpose of allowing the ship to complete its voyage to the State whose flag the ship is entitled to fly or in which it is to be surveyed and then only in cases where it appears proper and reasonable to do so.

(3) No Certificate shall be thus extended for a period longer than five months and a ship to which such extension is granted shall not on its arrival in the State whose flag it is entitled to fly or the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port or State without having obtained a new Certificate.

(4) A Certificate which has not been extended under the provisions of paragraph (2) of this Regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it.

(5) A Certificate shall cease to be valid if significant alterations have taken place in the structure, equipment, fittings, arrangements and material required by this Annex without the sanction of the Administration, except the direct replacement of such equipment or fitting for the purpose of repair or maintenance or if intermediate surveys as specified by the Administration under Regulation 10(1)(c) of this Annex are not carried out.

(6) A Certificate issued to a ship shall cease to be valid upon transfer of such a ship to the flag of another State, except as provided in paragraph (7) of this Regulation.

(7) Upon transfer of a ship to the flag of another Party, the Certificate shall remain in force for a period not exceeding five months provided that it would not have expired before the end of that period, or until the Administration issues a replacement Certificate, whichever is earlier. As soon as possible after the transfer has taken place the Government of the Party whose flag the ship was formerly entitled to fly shall transmit to the Administration a copy of the Certificate carried by the ship before the transfer and, if available, a copy of the relevant survey report.

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Regulation 13

Requirements for Minimizing accidental Pollution

(1) The design, construction, equipment and operation of ships carrying noxious liquid substances in bulk which are subject to the provisions of this Annex shall be such as to minimize the uncontrolled discharge into the sea of such substances.

(2) Pursuant to the provisions of paragraph (1) of this Regulation, the Government of each Party shall issue, or cause to be issued, detailed requirements on the design, construction, equipment and operation of such ships.

(3) In respect of chemical tankers, the requirements referred to in paragraph (2) of this Regulation shall contain at least all the provisions given in the Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk adopted by the Assembly of the Organization in Resolution A.212(VII) and as may be amended by the Organization, provided that the amendments to that Code are adopted and brought into force in accordance with the provisions of Article 16 of the present Convention for amendment procedures to an Appendix to an Annex.

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Appendix I

GUIDELINES FOR THE CATEGORIZATION OF NOXIOUS LIQUID SUBSTANCES

Category A Substances which are bioaccumulated and liable to produce a hazard to aquatic life or human health; or which are highly toxic to aquatic life (as expressed by a Hazard Rating 4, defined by a TLm less than 1 ppm); and additionally certain substances which are moderately toxic to aquatic life (as expressed by a Hazard Rating 3, defined by a TLm of 1 or more, but less than 10 ppm) when particular weight is given to additional factors in the hazard profile or to special characteristics of the substance.

Category B Substances which are bioaccumulated with a short retention of the order of one week or less; or which are liable to produce tainting of the sea food; or which are moderately toxic to aquatic life (as expressed by a Hazard Rating 3, defined by a TLm of 1 ppm or more, but less than 10 ppm); and additionally certain substances which are slightly toxic to aquatic life (as expressed by a Hazard Rating 2, defined by a TLm of 10 ppm or more, but less than 100 ppm) when particular weight is given to additional factors in the hazard profile or to special characteristics of the substance.

Category C Substances which are slightly toxic to aquatic life (as expressed by a Hazard Rating 2, defined by a TLm of 10 or more, but less than 100 ppm); and additionally certain substances which are practically non-toxic to aquatic life (as expressed by a Hazard Rating 1, defined by a TLm of 100 ppm or more, but less than 1,000 ppm) when particular weight is given to additional factors in the hazard profile or to special characteristics of the substance.

Category D Substances which are practically non-toxic to aquatic life, (as expressed by a Hazard Rating 1, defined by a TLm of 100 ppm or more, but less than 1,000 ppm); or causing deposits blanketing the seafloor with a high biochemical oxygen demand (BOD); or higlly hazardous to human health, with an LD_{50} of less than 5 mg/kg; or produce moderate reduction of amenities because of persistency, smell or poisonous or irritant characteristics, possibly interfering with use of beaches; or moderately hazardous to human health, with an LD_{50} of 5 mg/kg or more, but less than 50 mg/kg and produce slight reduction of amenities.

Other Liquid Substances (for the purposes of Regulation 4 of this Annex)
Substances other than these categorized in Categories A, B, C and D above.

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Appendix II

LIST OF NOXIOUS LIQUID SUBSTANCES CARRIED IN BULK

Substance	UN Number	Pollution Category for operational discharge	Residual concentration (per cent by weight)	
		(Regulation 3 of Annex II)	(Regulation 5(1) of Annex II)	(Regulation 5(7) of Annex II)
	I	II	III *Outside special areas*	IV *Within special areas*
Acetaldehyde	1089	C		
Acetic acid	1842	C		
Acetic anhydride	1715	C		
Acetone	1090	D		
Acetone cyanohydrin	1541	A	0.1	0.05
Acetyl chloride	1717	C		
Acrolein	1092	A	0.1	0.05
Acrylic acid*	-	C		
Acrylonitrile	1093	B		
Adiponitrile	-	D		
Alkylbenzene sulfonate (straight chain)	-	C		
(branched chain)		B		
Allyl alcohol	1098	B		
Allyl chloride	1100	C		
Alum (15% solution)	-	D		
Aminoethylethanolamine (hydroxyethyl-ethylene-diamine)*	-	D		
Ammonia (28% aqueous)	1005	B		
iso-Amyl acetate	1104	C		
n-Amyl acetate	1104	C		
n-Amyl alcohol	-	D		
Aniline	1547	C		

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

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Substance	i	ii	iii	iv
Benzene	1114	C		
Benzyl alcohol	-	D		
Benzyl chloride	1738	B		
n-Butyl acetate	1123	D		
sec-Butyl acetate	1124	D		
n-Butyl acrylate	-	D		
Butyl butyrate*	-	B		
Butylene glycol(s)	-	D		
Butyl methacrylate	-	D		
n-Butyraldehyde	1129	B		
Butyric acid	-	B		
Calcium hydroxide (solution)	-	D		
Camphor oil	1130	B		
Carbon disulphide	1131	A	0.01	0.005
Carbon tetrachloride	1846	B		
Caustic potash (Potassium hydroxide)	1814	C		
Chloroacetic acid	1750	C		
Chloroform	1888	B		
Chlorohydrins (crude)*	-	D		
Chloroprene*	1991	C		
Chlorosulphonic acid	1754	C		
para-Chlorotoluene	-	B		
Citric acid (10%-25%)	-	D		
Creosote	1334	A	0.1	0.05
Cresols	2076	A	0.1	0.05
Cresylic acid	2022	A	0.1	0.05
Crotonaldehyde	1143	B		
Cumene	1918	C		
Cyclohexane	1145	C		
Cyclohexanol	-	D		
Cyclohexanone	1915	D		
Cyclohexylamine*	-	D		
para-Cymene (Isopropyltoluene)*	2046	D		
Decahydronaphthalene	1147	D		
Decane*	-	D		

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

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Substance	I	II	III	IV
Diacetone alcohol*	1148	D		
Dibenzyl ether*	-	C		
Dichlorobenzenes	1591	A	0.1	0.05
Dichloroethyl ether	1916	B		
Dichloropropene - Dichloropropane mixture (D.D. Soil fumigant)	2047	B		
Diethylamine	1154	C		
Diethylbenzene (mixed isomers)	2049	C		
Diethyl ether	1155	D		
Diethylenetriamine*	2079	C		
Diethylene glycol monoethyl ether	-	C		
Diethylketone (3-Pentanone)	1156	D		
Diisobutylene*	2050	D		
Diisobutyl ketone	1157	D		
Diisopropanolamine	-	C		
Diisopropylamine	1158	C		
Diisopropyl ether*	1159	D		
Dimethylamine (40% aqueous)	1160	C		
Dimethylethanolamine (2-Dimethylamino-ethanol)*	2051	C		
Dimethylformamide	-	D		
1,4-Dioxane*	1165	C		
Diphenyl/Diphenyloxide, mixture;*	-	D		
Dodecylbenzene	-	C		
Epichlorohydrin	2023	B		
2-Ethoxyethyl acetate*	1172	D		
Ethyl acetate	1173	D		
Ethyl acrylate	1917	D		
Ethyl amyl ketone*	-	C		
Ethylbenzene	1175	C		
Ethyl cyclohexane	-	D		

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

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Substance	i	ii	iii	iv
Ethylene chlorohydrin (2-Chloro-ethanol)	1135	D		
Ethylene cyanohydrin*	-	D		
Ethylenediamine	1604	C		
Ethylene dibromide	1605	B		
Ethylene dichloride	1184	B		
Ethylene glycol monoethyl ether (Methyl cellosolve)	1171	D		
2-Ethylhexyl acrylate*	-	D		
2-Ethylhexyl alcohol	-	C		
Ethyl lactate*	1192	D		
2-Ethyl 3-propyl-acrolein*	-	B		
Formaldehyde (37–50% solution)	1198	C		
Formic acid	1779	D		
Furfuryl alcohol	-	C		
Heptanoic acid*	-	D		
Hexamethylenediamine*	1783	C		
Hydrochloric acid	1789	D		
Hydrofluoric acid (40% aqueous)	1790	B		
Hydrogen peroxide (greater than 60%)	2015	C		
Isobutyl acrylate	-	D		
Isobutyl alcohol	1212	D		
Isobutyl methacrylate	-	D		
Isobutyraldehyde	2045	C		
Isooctane*	-	D		
Isopentane	-	D		
Isophorone	-	D		
Isopropylamine	1221	C		
Isopropyl cyclohexane	-	D		
Isoprene	1218	D		
Lactic acid	-	D		
Mesityl oxide*	1229	C		
Methyl acetate	1231	D		
Methyl acrylate	1919	C		
Methylamyl alcohol	-	D		

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

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Substance	I	II	III	IV
Methylene chloride	1593	B		
2-Methyl-5-Ethyl-pyridine*	-	B		
Methyl methacrylate	1247	D		
2-Methylpentene*	-	D		
alpha-Methylstyrene*	-	D		
Monochlorobenzene	1134	B		
Monoethanolamine	-	D		
Monoisopropanolamine	-	C		
Monomethyl ethanolamine	-	C		
Mononitrobenzene	-	C		
Monoisopropylamine	-	C		
Morpholine*	2054	C		
Naphthalene (molten)	1334	A	0.1	0.05
Naphthenic acids*	-	A	0.1	0.05
Nitric acid (90%)	2031/ 2032	C		
2-Nitropropane	-	D		
ortho-Nitrotoluene	1664	C		
Nonyl alcohol*	-	C		
Nonylphenol	-	C		
n-Octanol	-	C		
Oleum	1831	C		
Oxalic acid (10–25%)	-	D		
Pentachloroethane	1669	B		
n-Pentane	1265	C		
Perchloroethylene (Tetrachloroethylene)	1897	B		
Phenol	1671	B		
Phosphoric acid	1805	D		
Phosphorus (elemental)	1338	A	0.01	0.005
Phthalic anhydride (molten)	-	C		
beta-Propiolactone*	-	B		
Propionaldehyde	1275	D		
Propionic acid	1848	D		
Propionic anhydride	-	D		
n-Propyl acetate*	1276	C		

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

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Substance	I	II	III	IV
n-Propyl alcohol	1274	D		
n-Propylamine	1277	C		
Pyridine	1282	B		
Silicon tetrachloride	1818	D		
Sodium bichromate (solution)	-	C		
Sodium hydroxide	1824	C		
Sodium pentachlorophenate (solution)	-	A	0.1	0.05
Styrene monomer	2055	C		
Sulphuric acid	1830/ 1831/ 1832	C		
Tallow	-	D		
Tetraethyl lead	1649	A	0.1	0.05
Tetrahydrofuran	2056	D		
Tetrahydronaphthalene	1540	C		
Tetramethylbenzene	-	D		
Tetramethyl lead	1649	A	0.1	0.05
Titanium tetrachloride	1838	D		
Toluene	1294	C		
Toluene diisocyanate*	2078	B		
Trichloroethane	-	C		
Trichloroethylene	1710	B		
Triethanolamine	-	D		
Triethylamine	1296	C		
Trimethylbenzene*	-	C		
Tritolyl phosphate (Tricresyl phosphate)*	-	B		
Turpentine (wood)	1299	B		
Vinyl acetate	1301	C		
Vinylidene chloride*	1303	B		
Xylenes (mixed isomers)	1307	C		

* Asterisk indicates that the substance has been provisionally included in this list and that further data are necessary in order to complete the evaluation of its environmental hazards, particularly in relation to living resources.

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Appendix III

LIST OF OTHER LIQUID SUBSTANCES CARRIED IN BULK

Acetonitrile (Methyl cyanide)
tert-Amyl alcohol
n-Butyl alcohol
Butyrolactone
Calcium chloride (solution)
Castor oil
Citric juices
Coconut oil
Cod liver oil
iso-Decyl alcohol
n-Decyl alcohol
Decyl octyl alcohol
Dibutyl ether
Diethanolamine
Diethylene glycol
Dipentene
Dipropylene glycol
Ethyl alcohol
Ethylene glycol
Fatty alcohols (C_{12}-C_{20})
Glycerine
n-Heptane
Heptene (mixed isomers)
n-Hexane
Ligroin
Methyl alcohol
Methylamyl acetate
Methyl ethyl ketone (2-butanone)
Milk
Molasses
Olive Oil
Polypropylene glycol
iso-Propyl acetate
iso-Propyl alcohol
Propylene glycol
Propylene oxide
Propylene tetramer
Propylene trimer
Sorbitol
Sulphur (liquid)
Tridecanol
Triethylene glycol
Triethylenetetramine
Tripropylene glycol
Water
Wine

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Appendix IV

CARGO RECORD BOOK FOR SHIPS CARRYING NOXIOUS LIQUID SUBSTANCES IN BULK

Name of ship .....

Cargo carrying capacity of each tank in cubic metres .....

Voyage from ..... to .....

(a) **Loading of cargo**

1. Date and place of loading
2. Name and category of cargo(es) loaded
3. Identity of tank(s) loaded

(b) **Transfer of cargo**

4. Date of transfer
5. Identity of tank(s) (i) From (ii) To
6. Was(were) tank(s) in 5(i) emptied?
7. If not, quantity remaining

(c) **Unloading of cargo**

8. Date and place of unloading
9. Identity of tank(s) unloaded
10. Was(were) tank(s) emptied?
11. If not, quantity remaining in tank(s)
12. Is(are) tank(s) to be cleaned?
13. Amount transferred to slop tank
14. Identity of slop tank

(d) **Ballasting of cargo tanks**

15. Identity of tank(s) ballasted
16. Date and position of ship at start of ballasting

..... Signature of Master

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(e) Clearing of cargo tanks

Category A substances

17. Identity of tank(s) cleaned
18. Date and location of cleaning
19. Method(s) of cleaning
20. Location of reception facility used
21. Concentration of effluent when discharge to reception facility stopped
22. Quantity remaining in tank
23. Procedure and amount of water introduced into tank in final cleaning
24. Location, rate of discharge into sea
25. Procedure and equipment used in discharge into the sea

Category B, C and D substances

26. Washing procedure used
27. Quantity of water used
28. Date, location of discharge into sea
29. Procedure and equipment used in discharge into the sea

(f) **Transfer of dirty ballast water**

30. Identity of tank(s)
31. Date and position of ship at start of discharge into sea
32. Date and position of ship at finish of discharge into sea
33. Ship's speed(s) during discharge
34. Quantity discharged into sea
35. Quantity of polluted water transferred to slop tank(s) (identify slop tank(s))
36. Date and port of discharge to shore reception facilities (if applicable)

..... Signature of Master

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(g) Transfer from slop tank/disposal of residue

37. Identity of slop tank(s)

38. Quantity disposed from each tank

39. Method of disposal of residue:

(a) Reception facilities

(b) Mixed with cargo

(c) Transferred to another (other) tank(s) (identify tank(s))

(d) Other method

40. Date and port of disposal of residue

(h) Accidental or other exceptional discharge

41. Date and time of occurrence

42. Place or position of ship at time of occurrence

43. Approximate quantity, name and category of substance

44. Circumstances of discharge or escape and general remarks.

..... Signature of Master

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Appendix V

FORM OF CERTIFICATE

INTERNATIONAL POLLUTION PREVENTION CERTIFICATE FOR THE CARRIAGE OF NOXIOUS LIQUID SUBSTANCES IN BULK (1973)

(*Note:* This Certificate shall be supplemented in the case of a chemical tanker by the certificate required pursuant to the provisions of Regulation 13(3) of Annex II of the Convention)

(Official Seal)

Issued under the provisions of the International Convention for the Prevention of Pollution from Ships, 1973, under the authority of the Government of

.....

(full official designation of the country)

by .....

(full official designation of the competent person or organization authorized under the provisions of the International Convention for the Prevention of Pollution from Ships, 1973)

Name of Ship	Distinctive Number or Letter	Port of Registry	Gross Tonnage

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THIS IS TO CERTIFY:

1. That the ship has been surveyed in accordance with the provisions of Regulation 10 of Annex II of the Convention.

2. That the survey showed that the design, construction and equipment of the ship are such as to minimize the uncontrolled discharge into the sea of noxious liquid substances.

3. That the following arrangements and procedures have been approved by the Administration in connexion with the implementation of Regulation 5 of Annex II of the Convention:

. . . . . .

(Continued on the annexed signed and dated sheet(s))

. . . . . .

This certificate is valid, until . . . . . .
subject to intermediate survey(s) at intervals of . . . . . .

Issued at . . . . . .
(place of issue of Certificate)

. . . . . 19 . . . . . .
(Signature of duly authorized official issuing the Certificate)

(Seal or stamp of the issuing Authority, as appropriate)

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Intermediate surveys

This is to certify that at an intermediate survey required by Regulation 10(1)(c) of Annex II of the Convention, this ship and the condition thereof are found to comply with the relevant provisions of the Convention.

Signed.....
(Signature of duly authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Signed.....
(Signature of duly authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

Under the provisions of Regulation 12(2) and (4) of Annex II of the Convention the validity of this Certificate is extended until

.....

Signed.....
(Signature of duly authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

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ANNEX III

REGULATIONS FOR THE PREVENTION OF POLLUTION BY HARMFUL SUBSTANCES CARRIED BY SEA IN PACKAGED FORMS, OR IN FREIGHT CONTAINERS, PORTABLE TANKS OR ROAD AND RAIL TANK WAGONS

Regulation 1

Application

(1) Unless expressly provided otherwise, the Regulations of this Annex apply to all ships carrying harmful substances in packaged forms, or in freight containers, portable tanks or road and rail tank wagons.

(2) Such carriage of harmful substances is prohibited except in accordance with the provisions of this Annex.

(3) To supplement the provisions of this Annex the Government of each Party to the Convention shall issue, or cause to be issued, detailed requirements on packaging, marking and labelling, documentation, stowage, quantity limitations, exceptions and notification, for preventing or minimizing pollution of the marine environment by harmful substances.

(4) For the purpose of this Annex, empty receptacles, freight containers, portable tanks and road and rail tank wagons which have been used previously for the carriage of harmful substances shall themselves be treated as harmful substances unless adequate precautions have been taken to ensure that they contain no residue that is hazardous to the marine environment.

Regulation 2

Packaging

Packagings, freight containers, portable tanks and road and rail tank wagons shall be adequate to minimize the hazard to the marine environment having regard to their specific contents.

Regulation 3

Marking and Labelling

Packages, whether shipped individually or in units or in freight containers, freight containers, portable tanks or road and rail tank wagons containing a harmful substance, shall be durably marked with the correct technical name (trade names shall not be used as the correct technical name), and further marked with a distinctive label or stencil of label, indicating that the contents are harmful. Such identification shall be supplemented where possible by any other means, for example by the use of the United Nations number.

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Regulation 4

Documentation

(1) In all documents relating to the carriage of harmful substances by sea where such substances are named, the correct technical name of the substances shall be used (trade names shall not be used).

(2) The shipping documents supplied by the shipper shall include a certificate or declaration that the shipment offered for carriage is properly packed, marked and labelled and in proper condition for carriage to minimize the hazard to the marine environment.

(3) Each ship carrying harmful substances shall have a special list or manifest setting forth the harmful substances on board and the location thereof. A detailed stowage plan which sets out the location of all harmful substances on board may be used in place of such special list or manifest. Copies of such documents shall also be retained on shore by the owner of the ship or his representative until the harmful substances are unloaded.

(4) In a case where the ship carries a special list or manifest or a detailed stowage plan, required for the carriage of dangerous goods by the International Convention for the Safety of Life at Sea in force, the documents required for the purpose of this Annex may be combined with those for dangerous goods. Where documents are combined, a clear distinction shall be made between dangerous goods and other harmful substances.

Regulation 5

Stowage

Harmful substances shall be both properly stowed and secured so as to minimize the hazards to the marine environment without impairing the safety of ship and persons on board.

Regulation 6

Quantity Limitations

Certain harmful substances which are very hazardous to the marine environment may, for sound scientific and technical reasons, need to be prohibited for carriage or be limited as to the quantity which may be carried aboard any one ship. In limiting the quantity due consideration shall be given to size, construction and equipment of the ship as well as the packaging and the inherent nature of the substance.

Regulation 7

Exceptions

(1) Discharge by jettisoning of harmful substances carried in packaged forms, freight containers, portable tanks or road and rail tank wagons shall be prohibited except where necessary for the purpose of securing the safety of the ship or saving life at sea.

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(2) Subject to the provisions of the present Convention, appropriate measures based on the physical, chemical and biological properties of harmful substances shall be taken to regulate the washing of leakages overboard provided that compliance with such measures would not impair the safety of the ship and persons on board.

Regulation 8

Notification

With respect to certain harmful substances, as may be designated by the Government of a Party to the Convention, the master or owner of the ship or his representative shall notify the appropriate port authority of the intent to load or unload such substances at least 24 hours prior to such action.

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ANNEX IV

REGULATIONS FOR THE PREVENTION OF POLLUTION BY SEWAGE FROM SHIPS

Regulation 1

Definitions

For the purposes of the present Annex:

(1) "New ship" means a ship:

(a) for which the building contract is placed, or in the absence of a building contract, the keel of which is laid, or which is at a similar stage of construction, on or after the date of entry into force of this Annex; or

(b) the delivery of which is three years or more after the date of entry into force of this Annex.

(2) "Existing ship" means a ship which is not a new ship.

(3) "Sewage" means:

(a) drainage and other wastes from any form of toilets, urinals, and WC scuppers;

(b) drainage from medical premises (dispensary, sick bay, etc.) via wash basins, wash tubs and scuppers located in such premises;

(c) drainage from spaces containing living animals; or

(d) other waste waters when mixed with the drainages defined above.

(4) "Holding tank" means a tank used for the collection and storage of sewage.

(5) "Nearest land". The term "from the nearest land" means from the baseline from which the territorial sea of the territory in question is established in accordance with international law except that, for the purposes of the present Convention "from the nearest land" off the north eastern coast of Australia shall mean from a line drawn from a point on the coast of Australia in

latitude 11° 00′ South, longitude 142°08′ East to a point in
latitude 10°35′ South,
longitude 141°55′ East — thence to a point latitude 10° 00′ South,
longitude 142° 00′ East, thence to a point latitude 9° 10′ South,
longitude 143° 52′ East, thence to a point latitude 9° 00′ South,
longitude 144° 30′ East, thence to a point latitude 13° 00′ South,
longitude 144° 00′ East, thence to a point latitude 15° 00′ South,
longitude 146° 00′ East, thence to a point latitude 18° 00′ South,
longitude 147° 00′ East, thence to a point latitude 21° 00′ South,
longitude 153° 00′ East, thence to a point on the coast of Australia
in latitude 24°42′ South, longitude 153°15′ East.

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Regulation 2

Application

The provisions of this Annex shall apply to:

(a) (i) new ships of 200 tons gross tonnage and above;

(ii) new ships of less than 200 tons gross tonnage which are certified to carry more than 10 persons;

(iii) new ships which do not have a measured gross tonnage and are certified to carry more than 10 persons; and

(b) (i) existing ships of 200 tons gross tonnage and above, 10 years after the date of entry into force of this Annex;

(ii) existing ships of less than 200 tons gross tonnage which are certified to carry more than 10 persons, 10 years after the date of entry into force of this Annex; and

(iii) existing ships which do not have a measured gross tonnage and are certified to carry more than 10 persons, 10 years after the date of entry into force of this Annex.

Regulation 3

Surveys

(1) Every ship which is required to comply with the provisions of this Annex and which is engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention shall be subject to the surveys specified below:

(a) An initial survey before the ship is put in service or before the Certificate required under Regulation 4 of this Annex is issued for the first time, which shall include a survey of the ship which shall be such as to ensure:

(i) when the ship is equipped with a sewage treatment plant the plant shall meet operational requirements based on standards and the test methods developed by the Organization;

(ii) when the ship is fitted with a system to comminute and disinfect the sewage, such a system shall be of a type approved by the Administration;

(iii) when the ship is equipped with a holding tank the capacity of such tank shall be to the satisfaction of the Administration for the retention of all sewage having regard to the operation of the ship, the number of persons on board and other relevant factors. The holding tank shall have a means to indicate visually the amount of its contents; and

(iv) that the ship is equipped with a pipeline leading to the exterior convenient for the discharge of sewage to a reception facility and that such a pipeline is fitted with a standard shore connection in compliance with Regulation 11 of this Annex.

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This survey shall be such as to ensure that the equipment, fittings, arrangements and material fully comply with the applicable requirements of this Annex.

(b) Periodical surveys at intervals specified by the Administration but not exceeding five years which shall be such as to ensure that the equipment, fittings, arrangements and material fully comply with the applicable requirements of this Annex. However, where the duration of the International Sewage Pollution Prevention Certificate (1973) is extended as specified in Regulation 7(2) or (4) of this Annex, the interval of the periodical survey may be extended correspondingly.

(2) The Administration shall establish appropriate measures for ships which are not subject to the provisions of paragraph (1) of this Regulation in order to ensure that the provisions of this Annex are complied with.

(3) Surveys of the ship as regards enforcement of the provisions of this Annex shall be carried out by officers of the Administration. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it. In every case the Administration concerned fully guarantees the completeness and efficiency of the surveys.

(4) After any survey of the ship under this Regulation has been completed, no significant change shall be made in the equipment, fittings, arrangements, or material covered by the survey without the approval of the Administration, except the direct replacement of such equipment or fittings.

Regulation 4

Issue of Certificate

(1) An International Sewage Pollution Prevention Certificate (1973) shall be issued, after survey in accordance with the provisions of Regulation 3 of this Annex, to any ship which is engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention.

(2) Such Certificate shall be issued either by the Administration or by any persons or organization duly authorized by it. In every case the Administration assumes full responsibility for the Certificate.

Regulation 5

Issue of a Certificate by another Government

(1) The Government of a Party to the Convention may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the provisions of this Annex are complied with, shall issue or authorize the issue of an International Sewage Pollution Prevention Certificate (1973) to the ship in accordance with this Annex.

(2) A copy of the Certificate and a copy of the survey report shall be transmitted as early as possible to the Administration requesting the survey.

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(3) A Certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as the Certificate issued under Regulation 4 of this Annex.

(4) No International Sewage Pollution Prevention Certificate (1973) shall be issued to a ship which is entitled to fly the flag of a State, which is not a Party.

Regulation 6

Form of Certificate

The International Sewage Pollution Prevention Certificate (1973) shall be drawn up in an official language of the issuing country in the form corresponding to the model given in the Appendix to this Annex. If the language used is neither English nor French, the text shall include a translation into one of these languages.

Regulation 7

Duration of Certificate

(1) An International Sewage Pollution Prevention Certificate (1973) shall be issued for a period specified by the Administration, which shall not exceed five years from the date of issue, except as provided in paragraphs (2), (3) and (4) of this Regulation.

(2) If a ship at the time when the Certificate expires is not in a port or offshore terminal under the jurisdiction of the Party to the Convention whose flag the ship is entitled to fly, the Certificate may be extended by the Administration, but such extension shall be granted only for the purpose of allowing the ship to complete its voyage to the State whose flag the ship is entitled to fly or in which it is to be surveyed and then only in cases where it appears proper and reasonable to do so.

(3) No Certificate shall be thus extended for a period longer than five months and a ship to which such extension is granted shall not on its arrival in the State whose flag it is entitled to fly or the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port or State without having obtained a new Certificate.

(4) A Certificate which has not been extended under the provisions of paragraph (2) of this Regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it.

(5) A Certificate shall cease to be valid if significant alterations have taken place in the equipment, fittings, arrangement or material required without the approval of the Administration, except the direct replacement of such equipment or fittings.

(6) A Certificate issued to a ship shall cease to be valid upon transfer of such a ship to the flag of another State, except as provided in paragraph (7) of this Regulation.

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(7) Upon transfer of a ship to the flag of another Party, the Certificate shall remain in force for a period not exceeding five months provided that it would not have expired before the end of that period, or until the Administration issues a replacement Certificate, whichever is earlier. As soon as possible after the transfer has taken place the Government of the Party whose flag the ship was formerly entitled to fly shall transmit to the Administration a copy of the Certificate carried by the ship before the transfer and, if available, a copy of the relevant survey report.

Regulation 8

Discharge of Sewage

(1) Subject to the provisions of Regulation 9 of this Annex, the discharge of sewage into the sea is prohibited, except when:

(a) the ship is discharging comminuted and disinfected sewage using a system approved by the Administration in accordance with Regulation 3(1)(a) at a distance of more than four nautical miles from the nearest land, or sewage which is not comminuted or disinfected at a distance of more than 12 nautical miles from the nearest land, provided that in any case, the sewage that has been stored in holding tanks shall not be discharged instantaneously but at a moderate rate when the ship is en route and proceeding at not less than 4 knots; the rate of discharge shall be approved by the Administration based upon standards developed by the Organization; or

(b) the ship has in operation an approved sewage treatment plant which has been certified by the Administration to meet the operational requirements referred to in Regulation 3(1)(a)(i) of this Annex, and

(i) the test results of the plant are laid down in the ship's International Sewage Pollution Prevention Certificate (1973);

(ii) additionally, the effluent shall not produce visible floating solids in, nor cause discolouration of, the surrounding water; or

(c) the ship is situated in the waters under the jurisdiction of a State and is discharging sewage in accordance with such less stringent requirements as may be imposed by such State.

(2) When the sewage is mixed with wastes or waste water having different discharge requirements, the more stringent requirements shall apply.

Regulation 9

Exceptions

Regulation 8 of this Annex shall not apply to:

(a) the discharge of sewage from a ship necessary for the purpose of securing the safety of a ship and those on board or saving life at sea; or

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(b) the discharge of sewage resulting from damage to a ship or its equipment if all reasonable precautions have been taken before and after the occurrence of the damage, for the purpose of preventing or minimizing the discharge.

Regulation 10

Reception Facilities

(1) The Government of each Party to the Convention undertakes to ensure the provision of facilities at ports and terminals for the reception of sewage, without causing undue delay to ships, adequate to meet the needs of the ships using them.

(2) The Government of each Party shall notify the Organization for transmission to the Contracting Governments concerned of all cases where the facilities provided under this Regulation are alleged to be inadequate.

Regulation 11

Standard Discharge Connections

To enable pipes of reception facilities to be connected with the ship's discharge pipeline, both lines shall be fitted with a standard discharge connection in accordance with the following table:

STANDARD DIMENSIONS OF FLANGES FOR DISCHARGE CONNECTIONS

Description	Dimension
Outside diameter	210 mm
Inner diameter	According to pipe outside diameter
Bolt circle diameter	170 mm
Slots in flange	4 holes 18 mm in diameter equidistantly placed on a bolt circle of the above diameter, slotted to the flange periphery. The slot width to be 18 mm
Flange thickness	16 mm
Bolts and nuts: quantity and diameter	4, each of 16 mm in diameter and of suitable length
The flange is designed to accept pipes up to a maximum internal diameter of 100 mm and shall be of steel or other equivalent material having a flat face. This flange, together with a suitable gasket, shall be suitable for a service pressure of 6 kg/cm².	

For ships having a moulded depth of 5 metres and less, the inner diameter of the discharge connection may be 38 millimetres.

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Appendix

FORM OF CERTIFICATE

INTERNATIONAL SEWAGE POLLUTION PREVENTION CERTIFICATE (1973)

Issued under the Provisions of the International Convention for the Prevention of Pollution from Ships, 1973, under the Authority of the Government of

.....
(full designation of the country)

by .....
(full designation of the competent person or organization authorized under the provisions of the International Convention for the Prevention of Pollution from Ships, 1973)

Name of Ship	Distinctive Number or Letter	Port of Registry	Gross Tonnage	Number of persons which the ship is certified to carry

New/existing ship*
Date of building contract .....
Date on which keel was laid or ship was at a similar stage of construction .....
Date of delivery .....

* Delete as appropriate

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THIS IS TO CERTIFY THAT:

(1) The ship is equipped with a sewage treatment plant/comminuter/holding tank* and a discharge pipeline in compliance with Regulation 3(1)(a)(i) to (iv) of Annex IV of the Convention as follows:

*(a) Description of the sewage treatment plant:
Type of sewage treatment plant .....
Name of manufacturer .....
The sewage treatment plant is certified by the Administration to meet the following effluent standards:** .....

*(b) Description of comminuter:
Type of comminuter .....
Name of manufacturer .....
Standard of sewage after disinfection .....

*(c) Description of holding tank equipment:
Total capacity of the holding tank ..... m³
Location .....

(d) A pipeline for the discharge of sewage to a reception facility, fitted with a standard shore connection.

(2) The ship has been surveyed in accordance with Regulation 3 of Annex IV of the International Convention for the Prevention of Pollution from Ships, 1973, concerning the prevention of pollution by sewage and the survey showed that the equipment of the ship and the condition thereof are in all respects satisfactory and the ship complies with the applicable requirements of Annex IV of the Convention.

This Certificate is valid until .....

Issued at .....
(place of issue of Certificate)

..... 19 .. ..
(Signature of official issuing the Certificate)

(Seal or stamp of the Issuing Authority, as appropriate)

Under the provisions of Regulation 7(2) and (4) of Annex IV of the Convention the validity of this Certificate is extended until

.....

Signed.....
(Signature of duly authorized official)

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

* Delete as appropriate
** Parameters should be incorporated

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ANNEX V

REGULATIONS FOR THE PREVENTION OF POLLUTION BY GARBAGE FROM SHIPS

Regulation 1

Definitions

For the purposes of this Annex:

(1) "Garbage" means all kinds of victual, domestic and operational waste excluding fresh fish and parts thereof, generated during the normal operation of the ship and liable to be disposed of continuously or periodically except those substances which are defined or listed in other Annexes to the present Convention.

(2) "Nearest land". The term "from the nearest land" means from the baseline from which the territorial sea of the territory in question is established in accordance with international law except that, for the purposes of the present Convention "from the nearest land" off the north eastern coast of Australia shall mean from a line drawn from a point on the coast of Australia in

latitude 11°00′ South, longitude 142°08′ East to a point in
latitude 10°35′ South,
longitude 141°55′ East, thence to a point latitude 10°00′ South,
longitude 142°00′ East, thence to a point latitude 9°10′ South,
longitude 143°52′ East, thence to a point latitude 9°00′ South,
longitude 144°30′ East, thence to a point latitude 13°00′ South,
longitude 144°00′ East, thence to a point latitude 15°00′ South,
longitude 146°00′ East, thence to a point latitude 18°00′ South,
longitude 147°00′ East, thence to a point latitude 21°00′ South,
longitude 153°00′ East, thence to a point on the coast of Australia
in latitude 24°42′ South, longitude 153°15′ East.

(3) "Special area" means a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by garbage is required. Special areas shall include those listed in Regulation 5 of this Annex.

Regulation 2

Application

The provisions of this Annex shall apply to all ships.

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Regulation 3

Disposal of Garbage outside Special Areas

(1) Subject to the provisions of Regulations 4, 5 and 6 of this Annex:

(a) the disposal into the sea of all plastics, including but not limited to synthetic ropes, synthetic fishing nets and plastic garbage bags is prohibited;

(b) the disposal into the sea of the following garbage shall be made as far as practicable from the nearest land but in any case is prohibited if the distance from the nearest land is less than:

(i) 25 nautical miles for dunnage, lining and packing materials which will float;

(ii) 12 nautical miles for food wastes and all other garbage including paper products, rags, glass, metal, bottles, crockery and similar refuse;

(c) disposal into the sea of garbage specified in sub-paragraph (b)(ii) of this Regulation may be permitted when it has passed through a comminuter or grinder and made as far as practicable from the nearest land but in any case is prohibited if the distance from the nearest land is less than 3 nautical miles. Such comminuted or ground garbage shall be capable of passing through a screen with openings no greater than 25 millimetres.

(2) When the garbage is mixed with other discharges having different disposal or discharge requirements the more stringent requirements shall apply.

Regulation 4

Special Requirements for Disposal of Garbage

(1) Subject to the provisions of paragraph (2) of this Regulation, the disposal of any materials regulated by this Annex is prohibited from fixed or floating platforms engaged in the exploration, exploitation and associated offshore processing of sea-bed mineral resources, and from all other ships when alongside or within 500 metres of such platforms.

(2) The disposal into the sea of food wastes may be permitted when they have been passed through a comminuter or grinder from such fixed or floating platforms located more than 12 nautical miles from land and all other ships when alongside or within 500 metres of such platforms. Such comminuted or ground food wastes shall be capable of passing through a screen with openings no greater than 25 millimetres.

Regulation 5

Disposal of Garbage within Special Areas

(1) For the purposes of this Annex the special areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area and the "Gulfs area" which are defined as follows:

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(a) The Mediterranean Sea area means the Mediterranean Sea proper including the gulfs and seas therein with the boundary between the Mediterranean and the Black Sea constituted by the 41°N parallel and bounded to the west by the Straits of Gibraltar at the meridian of 5°36'W.

(b) The Baltic Sea area means the Baltic Sea proper with the Gulf of Bothnia and the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N.

(c) The Black Sea area means the Black Sea proper with the boundary between the Mediterranean and the Black Sea constituted by the parallel 41°N.

(d) The Red Sea area means the Red Sea proper including the Gulfs of Suez and Aqaba bounded at the south by the rhumb line between Ras si Ane (12° 8.5'N, 43° 19.5'E) and Husn Murad (12° 40.4'N, 43° 30.2'E).

(e) The "Gulfs area" means the sea area located north west of the rhumb line between Ras al Hadd (22° 30'N, 59° 48'E) and Ras al Fasteh (25° 04'N, 61° 25'E).

(2) Subject to the provisions of Regulation 6 of this Annex:

(a) disposal into the sea of the following is prohibited:

(i) all plastics, including but not limited to synthetic ropes, synthetic fishing nets and plastic garbage bags; and

(ii) all other garbage, including paper products, rags, glass, metal, bottles, crockery, dunnage, lining and packing materials;

(b) disposal into the sea of food wastes shall be made as far as practicable from land, but in any case not less than 12 nautical miles from the nearest land.

(3) When the garbage is mixed with other discharges having different disposal or discharge requirements the more stringent requirements shall apply.

(4) Reception facilities within special areas:

(a) The Government of each Party to the Convention, the coastline of which borders a special area undertakes to ensure that as soon as possible in all ports within a special area, adequate reception facilities are provided in accordance with Regulation 7 of this Annex, taking into account the special needs of ships operating in these areas.

(b) The Government of each Party concerned shall notify the Organization of the measures taken pursuant to sub-paragraph (a) of this Regulation. Upon receipt of sufficient notifications the Organization shall establish a date from which the requirements of this Regulation in respect of the area in question shall take effect. The Organization shall notify all Parties of the date so established no less than twelve months in advance of that date.

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(c) After the date so established, ships calling also at ports in these special areas where such facilities are not yet available, shall fully comply with the requirements of this Regulation.

Regulation 6

Exceptions

Regulations 3, 4 and 5 of this Annex shall not apply to:

(a) the disposal of garbage from a ship necessary for the purpose of securing the safety of a ship and those on board or saving life at sea; or

(b) the escape of garbage resulting from damage to a ship or its equipment provided all reasonable precautions have been taken before and after the occurrence of the damage, for the purpose of preventing or minimizing the escape; or

(c) the accidental loss of synthetic fishing nets or synthetic material incidental to the repair of such nets, provided that all reasonable precautions have been taken to prevent such loss.

Regulation 7

Reception Facilities

(1) The Government of each Party to the Convention undertakes to ensure the provision of facilities at ports and terminals for the reception of garbage, without causing undue delay to ships, and according to the needs of the ships using them.

(2) The Government of each Party shall notify the Organization for transmission to the Parties concerned of all cases where the facilities provided under this Regulation are alleged to be inadequate.

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ATTACHMENT 2

PROTOCOL RELATING TO INTERVENTION ON THE HIGH SEAS IN CASES OF MARINE POLLUTION BY SUBSTANCES OTHER THAN OIL, 1973

THE PARTIES TO THE PRESENT PROTOCOL,

BEING PARTIES to the International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, done at Brussels on 29 November 1969,

TAKING INTO ACCOUNT the Resolution on International Co-operation Concerning Pollutants other than Oil adopted by the International Legal Conference on Marine Pollution Damage, 1969,

FURTHER TAKING INTO ACCOUNT that pursuant to the Resolution, the Inter-Governmental Maritime Consultative Organization has intensified its work, in collaboration with all interested international organizations, on all aspects of pollution by substances other than oil,

HAVE AGREED as follows:

ARTICLE I

1. Parties to the present Protocol may take such measures on the high seas as may be necessary to prevent, mitigate or eliminate grave and imminent danger to their coastline or related interests from pollution or threat of pollution by substances other than oil following upon a maritime casualty or acts related to such a casualty, which may reasonably be expected to result in major harmful consequences.

2. "Substances other than oil" as referred to in paragraph 1 shall be:

(a) those substances enumerated in a list which shall be established by an appropriate body designated by the Organization and which shall be annexed to the present Protocol, and

(b) those other substances which are liable to create hazards to human health, to harm living resources and marine life, to damage amenities or to interfere with other legitimate uses of the sea.

3. Whenever an intervening Party takes action with regard to a substance referred to in paragraph 2(b) above that Party shall have the burden of establishing that the substance, under the circumstances present at the time of the intervention, could reasonably pose a grave and imminent danger analogous to that posed by any of the substances enumerated in the list referred to in paragraph 2(a) above.

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ARTICLE II

1. The provisions of paragraph 2 of Article I and of Articles II to VIII of the Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, 1969, and the Annex thereto as they relate to oil, shall be applicable with regard to the substances referred to in Article I of the present Protocol.

2. For the purpose of the present Protocol the list of experts referred to in Articles III(c) and IV of the Convention shall be extended to include experts qualified to give advice in relation to substances other than oil. Nominations to the list may be made by Member States of the Organization and by Parties to the present Protocol.

ARTICLE III

1. The list referred to in paragraph 2(a) of Article I shall be maintained by the appropriate body designated by the Organization.

2. Any amendment to the list proposed by a Party to the present Protocol shall be submitted to the Organization and circulated by it to all Members of the Organization and all Parties to the present Protocol at least three months prior to its consideration by the appropriate body.

3. Parties to the present Protocol whether or not Members of the Organization shall be entitled to participate in the proceedings of the appropriate body.

4. Amendments shall be adopted by a two-thirds majority of only the Parties to the present Protocol present and voting.

5. If adopted in accordance with paragraph 4 above, the amendment shall be communicated by the Organization to all Parties to the present Protocol for acceptance.

6. The amendment shall be deemed to have been accepted at the end of a period of six months after it has been communicated, unless within that period an objection to the amendment has been communicated to the Organization by not less than one-third of the Parties to the present Protocol.

7. An amendment deemed to have been accepted in accordance with paragraph 6 above shall enter into force three months after its acceptance for all Parties to the present Protocol, with the exception of those which before that date have made a declaration of non-acceptance of the said amendment.

ARTICLE IV

1. The present Protocol shall be open for signature by the States which have signed the Convention referred to in Article II or acceded thereto, and by any State invited to be represented at the International Conference on Marine Pollution 1973. The Protocol shall remain open for signature from 15 January 1974 until 31 December 1974 at the Headquarters of the Organization.

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2. Subject to paragraph 4 of this Article, the present Protocol shall be subject to ratification, acceptance or approval by the States which have signed it.

3. Subject to paragraph 4, this Protocol shall be open for accession by States which did not sign it.

4. The present Protocol may be ratified, accepted, approved or acceded to only by States which have ratified, accepted, approved or acceded to the Convention referred to in Article II.

ARTICLE V

1. Ratification, acceptance, approval or accession shall be effected by the deposit of a formal instrument to that effect with the Secretary-General of the Organization.

2. Any instrument of ratification, acceptance, approval or accession deposited after the entry into force of an amendment to the present Protocol with respect to all existing Parties or after the completion of all measures required for the entry into force of the amendment with respect to all existing Parties shall be deemed to apply to the Protocol as modified by the amendment.

ARTICLE VI

1. The present Protocol shall enter into force on the ninetieth day following the date on which fifteen States have deposited instruments of ratification, acceptance, approval or accession with the Secretary-General of the Organization, provided however that the present Protocol shall not enter into force before the Convention referred to in Article II has entered into force.

2. For each State which subsequently ratifies, accepts, approves or accedes to it, the present Protocol shall enter into force on the ninetieth day after the deposit by such State of the appropriate instrument.

ARTICLE VII

1. The present Protocol may be denounced by any Party at any time after the date on which the Protocol enters into force for that Party.

2. Denunciation shall be effected by the deposit of an instrument to that effect with the Secretary-General of the Organization.

3. Denunciation shall take effect one year, or such longer period as may be specified in the instrument of denunciation, after its deposit with the Secretary-General of the Organization.

4. Denunciation of the Convention referred to in Article II by a Party shall be deemed to be a denunciation of the present Protocol by that Party. Such denunciation shall take effect on the same day as the denunciation of the Convention takes effect in accordance with paragraph 3 of Article XII of that Convention.

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ARTICLE VIII

1. A conference for the purpose of revising or amending the present Protocol may be convened by the Organization.

2. The Organization shall convene a conference of Parties to the present Protocol for the purpose of revising or amending it at the request of not less than one third of the Parties.

ARTICLE IX

1. The present Protocol shall be deposited with the Secretary-General of the Organization.

2. The Secretary-General of the Organization shall:

(a) Inform all States which have signed the present Protocol or acceded thereto of:

(i) each new signature or deposit of an instrument together with the date thereof;

(ii) the date of entry into force of the present Protocol;

(iii) the deposit of any instrument of denunciation of the present Protocol together with the date on which the denunciation takes effect;

(iv) any amendments to the present Protocol or its Annex and any objection or declaration of non-acceptance of the said amendment;

(b) transmit certified true copies of the present Protocol to all States which have signed the present Protocol or acceded thereto.

ARTICLE X

As soon as the present Protocol enters into force, a certified true copy thereof shall be transmitted by the Secretary-General of the Organization to the Secretariat of the United Nations for registration and publication in accordance with Article 102 of the Charter of the United Nations.

ARTICLE XI

The present Protocol is established in a single original in the English, French, Russian and Spanish languages, all four texts being equally authentic.

IN WITNESS WHEREOF the undersigned being duly authorized for that purpose have signed the present Protocol.

DONE AT LONDON this second day of November one thousand nine hundred and seventy-three.

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ATTACHMENT 3

Resolution 1

Implementation of the 1969 Amendments to the
International Convention for the Prevention of
Pollution of the Sea by Oil, 1954

THE CONFERENCE,

NOTING its main objectives as set out in Resolution A.237(VII) adopted by the Assembly of the Inter-Governmental Maritime Consultative Organization on 12 October 1971, as being the achievement, by 1975 if possible but certainly by the end of the decade, of the complete elimination of the wilful and intentional pollution of the seas by oil and noxious substances other than oil and the minimization of accidental spills,

NOTING FURTHER Recommendation 85(c) of the United Nations Conference on the Human Environment, 1972, which called upon Governments to participate fully in the present Conference as well as in other efforts with a view to bringing all significant sources of pollution within the marine environment under appropriate controls, including in particular, the complete elimination of deliberate pollution by oil from ships with the goal of achieving this by the middle of the present decade,

RECOGNIZING the importance of the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, as being the first multilateral instrument to be concluded with the prime objective of protecting the environment, and appreciating the significant contribution which that Convention has made in preserving the seas and coastal environment from pollution,

NOTING the Amendments to that Convention, set out in Resolution A.175(VI) adopted by the Assembly of the Organization on 21 October 1969, and considering that the implementation of those Amendments would be a major step towards the complete elimination of oil pollution and would bring about a significant reduction in the total quantity of oil reaching the sea,

BELIEVING that the International Convention for the Prevention of Pollution of the Sea from Ships, 1973, which was concluded by the present Conference will, when implemented, constitute a further important step towards the complete elimination of intentional pollution of the sea by harmful substances from ships,

BEING AWARE that some lapse of time will inevitably occur before the 1973 Convention can enter into force,

URGES Governments which have not yet accepted the 1969 Amendments to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, to do so as a matter of urgency without awaiting the entry into force of the International Convention for the Prevention of Pollution from Ships, 1973.

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Resolution 2

Rapid Entry into Force of the International Convention for the Prevention of Pollution from Ships, 1973 and its Amendments

THE CONFERENCE,

BEING AWARE of the acuteness of the threat to the marine environment caused by pollution from ships,

HAVING DETERMINED to combat this form of pollution on the basis of and in accordance with the International Convention for the Prevention of Pollution from Ships, 1973, as adopted,

TAKING NOTE of paragraph (1) of Article 1 of this Convention by which the Parties to the Convention undertake to give effect to the provisions of the Convention and those Annexes thereto by which they are bound,

NOTES with particular interest Article 16 of the Convention which provides for a procedure accelerating the entry into force of amendments to Protocol I and to the Annexes and Appendices to the Convention,

REALIZES that the effectiveness of that amendment procedure largely depends on there being national procedures for rapid approval of amendments,

URGES States to become Parties to the Convention as soon as possible and to give effect to later amendments thereto with the minimum of delay.

Resolution 3

The Complete Elimination of Oil Pollution from Ships

THE CONFERENCE,

HAVING CONCLUDED the International Convention for the Prevention of Pollution from Ships, 1973,

BEING AWARE of Recommendation 86(e) adopted by the United Nations Conference on the Human Environment, 1972, recommending Governments, within the framework of the 1973 Inter-Governmental Maritime Consultative Organization Conference on Marine Pollution, *inter alia*, to strive towards complete elimination of deliberate pollution by oil from ships, with the goal of achieving this by the middle of the present decade,

NOTING that the Governing Council of the United Nations Environment Programme at its first session has requested the Executive Director to urge the Inter-Governmental Maritime Consultative Organization to set a time-limit for the complete prohibition of intentional oil discharge in the seas,

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CONSIDERING that the Convention and particularly the regulations contained therein on the discharge of oil into the sea will be an important means of curbing pollution by oil from ships,

RECOGNIZING however, that the Convention alone may not be sufficient for a satisfactory protection of the sea from pollution by oil from ships,

RECOMMENDS that Governments and other interested bodies concerned undertake concerted efforts, including the elaboration of additional regulations within the framework of the Organization and the provision of the necessary reception facilities, further to reduce the discharge of oil from ships into the sea with a view to the complete elimination of intentional pollution as soon as possible, but not later than the end of the present decade,

INVITES the Organization to take all possible measures to assist Governments in this task.

Resolution 4

Information on Penalties

THE CONFERENCE,

HAVING CONCLUDED the International Convention for the Prevention of Pollution from Ships, 1973,

NOTING that the penalties which shall be specified under the laws of the Parties to the Convention pursuant to Article 4 of this Convention must be adequate in severity to discourage violation of this Convention and must be equally severe irrespective of where the violation occurs,

CONSIDERING that each Party to this Convention has the sole competence to provide suitable penalties under its own laws,

RECOMMENDS that the Inter-Governmental Maritime Consultative Organization make available to all States Members of the Organization as well as Parties to the Convention information which might be relevant in considering a scale of suitable penalties applicable pursuant to Article 4 of the Convention.

Resolution 5

Intentional Pollution of the Sea and Accidental Spillages

THE CONFERENCE,

NOTING that it was assigned the following two objectives by Resolution A.237(VII), adopted by the Assembly of the Inter-Governmental Maritime Consultative Organization,

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(1) the complete elimination of wilful and intentional pollution of the sea by oil and noxious substances other than oil; and

(2) the minimization of accidental spills;

these objectives to be achieved by 1975, if possible, but certainly by the end of the decade,

RECOGNIZING that it has primarily been as a result of extensive preparatory work within the Organization that the Conference has been able to prepare and open for signature the International Convention for the Prevention of Pollution from Ships, 1973,

BEING AWARE that the said Convention comprehensively covers the problem of intentional pollution by oil, noxious liquid substances in bulk, harmful substances in packaged forms or in freight containers or portable tanks or road and rail tank wagons, sewage and garbage, whereas it deals with the problem of accidental pollution only to a limited extent, bearing in mind that many aspects of this problem are and will continue to be dealt with within the framework of other technical Conventions relating to maritime safety,

BEING ALSO AWARE of the close relationship between ship safety and the prevention of pollution from ships,

RECOGNIZING ALSO that considerable progress has been made by the Organization in furtherance of the second objective, by developing proposed international rules and standards directed towards, or contributing to, the prevention, mitigation and minimization of accidental pollution, including the prevention of accidents to ships, minimization of spillages after accident and mitigation of damage after spillages,

RECOGNIZING FURTHER that a considerable amount of work in this field leading to the formulation of, and amendments to, conventions for which the Organization is depositary, and other instruments relating to ship safety and prevention of pollution, has yet to be accomplished,

RECOMMENDS that the Organization pursue and encourage studies relating to pollution abatement in the marine environment such as:

(a) collection of scientific data on the identification of harmful substances transported by ships and their effect on the marine environment;

(b) collection of ship casualty statistics, particularly on casualties resulting in the pollution of the marine environment;

(c) analysis of such casualty data including the interrelationship of average tanker size and age with incidents and magnitude of pollution casualties,

RECOMMENDS FURTHER that the Organization continue its work with high priority on the development of measures for the minimization of accidental spillages, particularly those relating to:

(a) prevention of accidents to ships including:

(i) safe navigational procedures and traffic separation schemes for the prevention of collisions, strandings and groundings, this to

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include the ultimate development of international performance standards for navigational aids;

(ii) watchkeeping practices in port and at sea and the training and certification of seamen,

(iii) provision of modern navigational and communications equipment,

(iv) the operational procedures during the transfer, loading and unloading of oil and noxious substances;

(v) manoeuvrability and controllability of large ships,

(vi) construction and equipment of ships carrying oil or noxious substances; and

(vii) safe carriage of dangerous goods in packaged forms or in freight containers or portable tanks or road and rail tank wagons,

(b) minimization of the risk of escape of oil and other noxious substances in the event of maritime accidents, including facilitation of transfer of cargo in the event of accidents,

(c) minimization of pollution damage to the marine environment including:

(i) study and development of new techniques and methods for cleaning, recycling and disposing of hazardous substances carried by ships; and

(ii) technical study and development of devices and chemicals used in removing oil and other harmful substances discharged into the sea.

with a view to having appropriate action taken by way of the adoption and implementation at an early date of amendments to existing conventions relating to safety at sea and prevention of pollution or of new conventions, as appropriate.

Resolution 6

Control of Discharge of Oil

THE CONFERENCE,

NOTING that all petroleum-derived oils are regulated under Annex I of the International Convention for the Prevention of Pollution from Ships, 1973,

NOTING FURTHER that the regulation of certain light refined petroleum oils under Annex I of the Convention introduces a new dimension and scope to international control of ship-generated oil pollution,

RECOGNIZING that different types of petroleum-derived oils may behave differently in the marine environment and may have different hazard characteristics, and

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CONSIDERING that the behaviour and effects of all petroleum-derived oils in the marine environment, and in particular the methods and procedures for controlling their discharge from ships, are appropriate matters for further study by the Inter-Governmental Maritime Consultative Organization,

RECOMMENDS that the Organization take appropriate steps, at an early date, to review, on a comprehensive basis, the environmental problems created by the discharge of all petroleum-derived oils into the marine environment, with particular reference to the problems associated with the discharge of light refined oils and with a view to possible improvement of the provisions of Annex I of the Convention.

Resolution 7

Method to Identify the Source of Discharged Oil

THE CONFERENCE,

HAVING IN MIND Regulation 9 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, whereby the discharge of oil or oily mixtures from ships shall be prohibited except when such discharge satisfies specified conditions,

RECOGNIZING the need to ensure that any ship which has discharged oil or oily mixtures in contravention of the said Regulation shall be identified promptly and punished,

RECOGNIZING ALSO that some Governments have promoted work to develop a practical method whereby the discharged oil can be promptly identified as the oil loaded on board a certain ship,

URGES those Governments to continue their efforts and all other Governments to initiate research into this problem, with a view to arriving at an early solution.

Resolution 8

Draught Requirements for Segregated Ballast Tankers

THE CONFERENCE,

NOTING that Regulation 13 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973, in determining the amount of required segregated ballast capacity, specifies a segregated ballast draught as a function of ship length, and that this will be applied to tankers of 150 metres in length and above,

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NOTING FURTHER that this requirement is largely based on experience which pertains in general to large tankers where the amount of ballast taken aboard has been left to the discretion of the Master,

RECOMMENDS that the Inter-Governmental Maritime Consultative Organization take appropriate action to consider these ballast draught requirements, taking full account of further experience with ships of various sizes which have operated safely in their ballast conditions and to examine them with a view to determining whether any improvement is required, with special regard to the need for a more specific requirement for tankers of less than 150 metres in length.

Resolution 9

Tonnage Measurement of Segregated Ballast Oil Tankers

THE CONFERENCE,

NOTING that Regulation 13 of Annex I of the International Convention for the Prevention of Pollution from Ships, 1973 requires segregated ballast for new oil tankers of 70,000 tons deadweight and above,

NOTING ALSO that this requirement may cause new segregated ballast oil tankers to have substantial increases in freeboard and certain principal dimensions, in comparison with existing oil tankers, for equivalent productive cargo deadweights,

NOTING FURTHER that substantially increased principal dimensions without increased deadweight may in some cases increase either gross or net registered tonnage or both, for segregated ballast oil tankers,

RECOMMENDS that the Inter-Governmental Maritime Consultative Organization study the matter of equitable determination of gross and net registered tonnage for segregated ballast oil tankers in comparison with existing oil tankers of equivalent productive cargo deadweight.

Resolution 10

Development of Efficient Oil Content Monitoring Arrangements

THE CONFERENCE,

NOTING that the Regulations contained in Annex I of the International Convention for the Prevention of Pollution from Ships, 1973 rely for their control and enforcement in a number of instances on an oil discharge monitoring system and, in particular, that Regulation 15 of that Annex requires that an oil tanker designed for retention of oil on board shall be fitted with such a system to control the quality of any effluent discharged into the sea,

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NOTING ALSO that Regulation 1(16) of that Annex provides for ballast to be considered as clean ballast if oil content monitoring arrangements establish that the oil content of the effluent from such a tank does not exceed 15 parts per million,

NOTING FURTHER the Recommendation on International Performance Specifications for Oily Water Separating Equipment and Oil Content Meters adopted by the Assembly of the Inter Governmental Maritime Consultative Organization by Resolution A.233(VII),

RECOGNIZING that further progress in the development of such monitors is an urgent requirement,

RECOMMENDS that the Organization should promote studies with a view to developing more sensitive, accurate and reliable oil content measuring instruments to cope with the full range of the oils covered by that Annex.

Resolution 11

Limitation of Size and Arrangement of Cargo Tanks in Oil Tankers

THE CONFERENCE,

NOTING with satisfaction that most tankers ordered since 1 January 1972 comply with the provisions regarding the limitation of the size and the arrangement of cargo tanks as laid down in the 1971 Amendments to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954, contained in Resolution A.246(VII) adopted by the Assembly of the Inter-Governmental Maritime Consultative Organization, although those Amendments have not yet entered into force,

NOTING FURTHER that Resolution A.247(VII) of the Assembly of the Organization invites Governments to put into effect these requirements as soon as possible,

EMPHASIZING the desirability of the entry into force of the 1971 Amendments at the earliest possible date and in any case not later than the date of entry into force of the International Convention for the Prevention of Pollution from Ships, 1973,

BEING AWARE that some lapse of time will inevitably occur before the 1973 Convention can enter into force,

URGES all Governments to accept the Amendments to the 1954 Convention contained in Resolution A.246(VII) of the Assembly of the Organization as soon as possible.

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Resolution 12

Development of Scientific Information on Water Quality Criteria

THE CONFERENCE,

RECOGNIZING that the capacity of the sea to assimilate pollutants and render them harmless is limited and that its ability to regenerate natural resources is also limited,

BELIEVING that the adequacy of measures taken to prevent pollution of the sea by substances that are liable to create hazard to human health, to harm marine life, to damage amenities or to interfere with other legitimate uses of the sea needs to be kept under review,

BELIEVING ALSO that there is a need to organize all interested competent organizations in establishing methods whereby the needs of the marine environment relative to water quality can be established, to identify the sources of pollution and continually assess the various methods of controlling marine pollution for the development of new or more effective control measures where appropriate,

RECOMMENDS that the Inter-Governmental Maritime Consultative Organization should co-operate with other organizations and in particular with the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) to achieve these aims whereby a first step might be to examine the method and procedure necessary to establish water quality criteria for the protection of the marine environment.

Resolution 13

Procedures and Arrangements for the Discharge of Noxious Liquid Substances into the Sea

THE CONFERENCE,

HAVING CONCLUDED, in pursuance of its main objectives, the International Convention for the Prevention of Pollution from Ships, 1973, which, *inter alia*, contains in Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk,

NOTING, in particular, Regulation 5 of Annex II by which the discharge into the sea of noxious liquid substances of Categories A, B, C and D or of ballast water, tank washings or other residues or mixtures containing such substances is prohibited, except in compliance with specified conditions including procedures and arrangements which shall be approved by the Administration to ensure that the criteria specified for each Category will be met,

DESIRING to facilitate international trade by ensuring, as far as possible, the uniform implementation of Annex II,

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RECOMMENDS that the Inter-Governmental Maritime Consultative Organization should ensure, with a view to providing a uniform basis for the guidance of the Parties to the Convention in approving such procedures and arrangements, that the necessary studies are undertaken with highest priority, in order to develop the standards referred to in Regulations 5 and 8 of Annex II,

RECOMMENDS FURTHER that the Organization should subsequently review the form of the Cargo Record Book contained in Appendix IV of Annex II of the Convention, taking into account the standards for procedures and arrangements previously developed.

Resolution 14

Recommendation on Hazard Evaluation of Noxious Liquid Substances

THE CONFERENCE,

HAVING CONCLUDED, in pursuance of its main objectives, the International Convention for the Prevention of Pollution from Ships, 1973, which, *inter alia*, contains in Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk,

NOTING Resolution 17 by which the Conference recommended the development of appropriate provisions relating to the control of pollution by noxious solid substances carried in bulk,

NOTING, in particular, Regulations 3 and 4 of Annex II and its Appendices II and III by which liquid substances are categorized in accordance with their environmental hazards when released into the sea through the normal operation of ships,

NOTING ALSO with appreciation that the Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) had developed a rationale and had made hazard evaluations of some 400 substances which provided a sound scientific basis for their categorization,

DESIRING to facilitate international trade by avoiding, as far as possible, the necessity for Parties to the Convention to enter into consultation on substances not listed in Appendices II and III to Annex II,

NOTING FURTHER, however, that there are substances which require further data in order to complete the evaluation of their environmental hazards, particularly in relation to living resources,

BEING AWARE of the need to keep these Appendices up to date,

RECOMMENDS that the Inter-Governmental Maritime Consultative Organization should as a matter of urgency take appropriate steps:

(a) to review the criteria used to define Category D substances;

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(b) to evaluate the hazard of those substances for which further data were found necessary as well as new substances proposed to be carried in accordance with the rationale developed by GESAMP; and

(c) to increase all the lists to cover all the substances known to be carried,

INVITES Governments to pursue and encourage studies on environmental hazards of such substances and provide the Organization, as specified in the Annex to this Resolution, with as much information as is available.

ANNEX TO RESOLUTION 14

Information on a New Substance to be Transported by Ships for the Evaluation of its Environmental Hazards

1. Correct technical name: .....

(Secondary or alternative name(s)) .....

Note: The information listed below would enable a complete assessment to be made but a provisional assessment may be based on as much relevant information as is currently available to the Governments involved.

2. Chemical formula: .....

3. Physical properties:

(a) Boiling point: .....°C

(b) Melting point: .....°C

(c) Specific gravity: .....

(d) Vapour pressure: ..... kp/cm^2 at 37.8°C

(e) Solubility in water: .....mg/l at 20°C

(f) Viscosity: .....

(g) Odour (qualitative description): .....

(h) Colour: .....

4. Chemical and biochemical properties:

(a) Chemical stability (oxidation, reduction, UV light): .....

(b) Reactivity with sea water: .....
.....

(c) Biodegradability: .....

(d) Chemical oxygen demand (COD)/5-day Biochemical oxygen demand (BOD)5 ..... mg/l (20°C)

(e) Biotransformation (where known): .....

(f) Polymerizability under exposure to the atmosphere and sunlight: .....

(g) Lipid solubility: .....

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5. Bioaccumulation by marine organisms (cf. GESAMP IV/19/Supp.1, paragraphs 23-26):

   (a) Rate and level of uptake and retention of substances:

   .....

   (b) Tainting effect: .....

   (c) Colour and other appearance changes: .....

6. Other damage to marine living resources (cf. GESAMP IV/19/Supp.1, paragraphs 27-30) Toxicity (TLm_{96}): ..... ppm.

   .....

7. Hazard to human health (cf. GESAMP IV/19/Supp.1, paragraphs 31-34, 37):

   (a) By oral intake: ..... mg/kg (LD_{50})

   (b) By skin contact and inhalation: .....

8. Effect on amenities (cf. GESAMP IV/19/Supp.1, paragraphs 38-42):

   .....

9. Additional remarks (briefly describe test conditions for items 5, 6 and 7 above).

Note: Approved standard method should be used where possible.

Resolution 15

Recommendation Concerning the Convention Provisions Relating to the Carriage of Noxious Liquid Substances in Bulk

THE CONFERENCE,

NOTING the Regulations relating to the design, construction, equipment and procedures for ships carrying noxious liquid substances in bulk contained in Annex II of the International Convention for the Prevention of Pollution from Ships, 1973, in particular Regulation 13(2) of that Annex by which Parties to the Convention are obliged to issue, or to cause to be issued, detailed requirements on the design, construction, equipment and procedures for such ships in order to ensure compliance with Regulation 2(1) of that Annex,

NOTING ALSO Regulation 13(3) of that Annex which requires that for chemical tankers the detailed requirements shall contain at least all the provisions given in the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk ("Bulk Chemical Code") adopted by the Assembly of the Inter-Governmental Maritime Consultative Organization in Resolution A.212(VII),

NOTING FURTHER that the Organization has prepared an approach to modification of the Bulk Chemical Code to include marine pollution prevention measures,

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DESIRING the formulation of appropriate provisions for the carriage of noxious liquid substances in bulk in ships that are not self-propelled and in ships other than chemical tankers,

RECOMMENDS that the Organization:

(a) amends the Bulk Chemical Code as early as possible in order to include requirements necessary from the marine pollution prevention point of view and also to ensure consistency with the provisions of the Convention, in particular the definition of a new and existing ship in paragraph 1.7 of the Code;

(b) keeps the Code under constant review with regard to prevention of marine pollution, taking into account both experience and future development of technology; and

(c) develops with priority Codes for the carriage of noxious liquid substances in bulk in ships that are not self-propelled and in ships other than chemical tankers.

Resolution 16

Recommendation Concerning the Prevention of Pollution by Liquefied or Compressed Gases Carried in Bulk

THE CONFERENCE,

NOTING that the International Convention for the Prevention of Pollution from Ships, 1973, contains in Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk which are framed to eliminate or minimize intentional or accidental pollution by such substances,

RECOGNIZING a potential hazard to the environment in general which is also involved in the carriage of some liquefied or compressed gases in bulk by ships,

NOTING ALSO that the Inter-Governmental Maritime Consultative Organization has under preparation a Code for the Construction and Equipment of Ships Carrying Dangerous Liquefied or Compressed Gases in Bulk ("Gas Carrier Code"),

RECOMMENDS that:

(a) the Organization should use all its endeavours to bring the Gas Carrier Code to the earliest possible completion; and

(b) Parties to the Convention, following the finalization of the Gas Carrier Code, should issue or cause to be issued such national requirements as may be necessary to minimize any harmful effect of transporting liquefied or compressed gases in bulk on the environment.

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Resolution 17

Recommendation Concerning the Prevention of Pollution by Noxious Solid Substances Carried in Bulk

THE CONFERENCE,

NOTING that the International Convention for the Prevention of Pollution from Ships, 1973, contains in Annex II Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk which are framed to eliminate or minimize intentional or accidental pollution by such substances,

RECOGNIZING a potential hazard to the marine environment which is also involved in the carriage of noxious solid substances in bulk by ships,

RECOGNIZING ALSO a possible need to formulate appropriate provisions for inclusion in the International Convention for the Prevention of Pollution from Ships, 1973,

NOTING however that the present state of knowledge in this field has not advanced sufficiently to enable the Conference to formulate such provisions,

RECOMMENDS that:

(a) the Inter-Governmental Maritime Consultative Organization pursue and encourage studies on the impact that the carriage of noxious solid substances in bulk by ships may have upon the marine environment and on the measures for minimizing the threat to the marine environment which arises from the carriage of such substances; and

(b) the results of such studies be directed towards the development of the appropriate provisions relating to the control of pollution by noxious solid substances carried in bulk for inclusion in the 1973 Convention,

INVITES Governments:

(a) to forward reports of incidents involving noxious solid substances carried in bulk by ships to the Organization pending development of the regulations of the 1973 Convention; and

(b) to issue, or cause to be issued, such national requirements as may be necessary to minimize any harmful effect of transporting noxious solid substances in bulk on the environment.

Resolution 18

Research into the Effect of Discharge of Ballast Water Containing Bacteria of Epidemic Diseases

THE CONFERENCE,

NOTING that ballast water taken in waters which may contain bacteria of epidemic diseases may, when discharged into the sea in another location, cause a danger of spreading of the epidemic diseases to other countries,

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REQUESTS the World Health Organization, in collaboration with the Inter-Governmental Maritime Consultative Organization, to initiate studies on that problem on the basis of any evidence and of proposals which may be submitted by any Government,

Resolution 19

Recommendation Concerning the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Forms or in Freight Containers, Portable Tanks or Road and Rail Tank Wagons

THE CONFERENCE,

NOTING the Regulations set forth in Annex III of the International Convention for the Prevention of Pollution from Ships, 1973, relating to the carriage of harmful substances by sea in packaged forms, or in freight containers, portable tanks, or road and rail tank wagons, in particular Regulation 1(3) of that Annex by which Parties to the Convention are obliged to issue, or cause to be issued, detailed instructions on packaging, marking and labelling, documentation, stowage, quantity limitations, exceptions and notification for preventing or minimizing pollution of the marine environment,

NOTING ALSO the Regulations relating to the safe carriage of dangerous goods by sea as set out in Chapter VII of the International Convention for the Safety of Life at Sea, 1960, in particular Regulation 1(d) of that Chapter by which Contracting Governments are obliged to issue, or cause to be issued, detailed instructions for the safe packing and stowage of specific dangerous goods or categories of dangerous goods which shall include any precautions necessary in relation to other cargo,

NOTING FURTHER the International Maritime Dangerous Goods Code which was prepared in implementation of Recommendation 56 of the International Conference on Safety of Life at Sea, 1960, and has been recommended by the Inter-Governmental Maritime Consultative Organization as a uniform basis upon which Governments should formulate the national regulations envisaged in Chapter VII of the 1960 Safety Convention,

RECOGNIZING that provisions concerning harmful substances as defined in Article 2(2) of the 1973 Convention must be specified and be complementary to those which have been adopted for the carriage of dangerous goods by sea,

RECOMMENDS that:

(a) the Organization pursue and encourage studies on the impact that the carriage by sea of such harmful substances in packaged forms, or in freight containers, portable tanks, or road and rail tank wagons, may have upon the marine environment;

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(b) the results of such studies be directed towards the revision of the scope of the International Maritime Dangerous Goods Code, taking into account:

(i) substances that are harmful to the marine environment whether or not they are classed as dangerous goods;

(ii) the minimization of the threat to the marine environment that arises from the carriage by sea of the substances that will be enumerated in that Code; and

(iii) safety in maritime transport;

(c) in such revision particular account be taken of:

(i) packaging,

(ii) marking and labelling,

(iii) documentation,

(iv) stowage,

(v) quantity limitations,

(vi) exceptions, and

(vii) notification,

(d) Governments consider adoption of the format of the International Maritime Dangerous Goods Code for the systematic development of regulations and standards for the carriage by sea of harmful substances that represent a threat to the marine environment so as to ensure compatibility between safety requirements and provisions relating to pollution abatement;

(e) such particulars as referred to in this paragraph form the basis for the further development of the provisions of the Regulations contained in Annex III of the 1973 Convention; and

(f) Parties to the 1973 Convention make arrangements to cater for the possible need to recover or otherwise deal with harmful substances which are lost or may be lost into the sea from ships.

Resolution 20

Provision of Standards and Test Methods
Concerning Discharge of Sewage

THE CONFERENCE,

NOTING that Annex IV of the International Convention for the Prevention of Pollution from Ships, 1973, contains certain requirements concerning the discharge of sewage into the sea from ships which should be based on standards and test methods to be developed by the Inter-Governmental Maritime Consultative Organization,

URGES the Organization to take action to develop such standards and test methods as soon as possible.

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Resolution 21

Provision of Reception Facilities for the Discharge of Sewage and Disposal of Garbage

THE CONFERENCE,

NOTING that Annexes IV and V of the International Convention for the Prevention of Pollution from Ships, 1973, provide that the discharge of sewage and disposal of garbage into the sea from ships shall be prohibited except when specified conditions are satisfied,

RECOGNIZING the need for adequate reception facilities to make possible the application of these requirements for the discharge of sewage and disposal of garbage,

RECOGNIZING FURTHER that the effective implementation of Annexes IV and V of the Convention is dependent upon the availability of such reception facilities on a world-wide basis,

URGES Governments to take appropriate action to ensure the provision, as early as possible, of adequate facilities for the reception of sewage and garbage from ships, adequate to meet the needs of the ships using them without causing undue delay.

Resolution 22

Promotion of Technical Co-operation

THE CONFERENCE,

RECOGNIZING that the complete elimination of pollution in the marine environment by ships requires broad international co-operation and technical and scientific resources,

RECOGNIZING FURTHER that Parties to the International Convention for the Prevention of Pollution from Ships, 1973, will be asked to undertake full responsibility and make arrangements for detecting, monitoring and preventing or mitigating pollution by ships,

BELIEVING that the promotion of technical co-operation on an inter-governmental level will hasten the implementation of the Convention by States not already possessing the necessary or adequate technical and scientific expertise,

URGES Governments to promote, in consultation with the Inter-Governmental Maritime Consultative Organization and other international bodies, and with assistance and co-ordination by the Executive Director of the United Nations Environment Programme, support for those States which request technical assistance for:

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(a) the training of scientific and technical personnel;

(b) the supply of necessary equipment and facilities for monitoring;

(c) the facilitation of other measures and arrangements to prevent or mitigate pollution of the marine environment by ships; and

(d) the encouragement of research,

URGES FURTHER Governments to initiate action in connexion with the above without awaiting the entry into force of the Convention.

Resolution 23

Nature and Extent of States' Rights over the Sea

THE CONFERENCE,

BEARING IN MIND that a United Nations Conference on the Law of the Sea is to be convened pursuant to Resolution 2750 C (XXV) of the General Assembly of the United Nations,

TAKING INTO ACCOUNT the specialized character of the present Conference,

CONSIDERING that the International Convention for the Prevention of Pollution from Ships, 1973, establishes technical requirements relating to the operation, design and equipment of ships with regard to the prevention of marine pollution, and that, wherever necessary, these international standards should be progressively amended and further improved within the framework of that Convention,

MINDFUL of paragraph (2) of Article 9 of the Convention,

NOTING that the Convention deals mainly with technical questions such as operation, equipment and design of ships,

BEING CONVINCED that the appropriate forum to deal with the question of the nature and extent of States' rights over the sea is the above-mentioned Conference on the Law of the Sea,

DECLARES that the decision of the present Conference reflects a clear intention to leave that question to the above-mentioned Conference on the Law of the Sea,

DECLARES FURTHER that the rights exercised by a State within its jurisdiction in accordance with the Convention do not preclude the existence of other rights of that State under international law.

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Resolution 24

Co-ordination of Activities on the Prevention and Control of Marine Pollution

THE CONFERENCE,

NOTING that the International Convention for the Prevention of Pollution from Ships, 1973, has conferred upon the Inter-Governmental Maritime Consultative Organization and its Secretary-General, important functions to be performed under the Convention,

RECOGNIZING the need for effective co-ordination of activities carried out by different international organizations concerned with the prevention and control of marine pollution,

RECOMMENDS that the Organization, where necessary, consult with and seek assistance from other international organizations and expert bodies concerned within the United Nations system in order to achieve the objectives of the present Convention.

Resolution 25

Transmission of the International Convention for the Prevention of Pollution from Ships, 1973 to the United Nations Conference on the Law of the Sea

THE CONFERENCE,

BEARING IN MIND that a United Nations Conference on the Law of the Sea will be convened pursuant to Resolution 2750 C (XXV) of the General Assembly of the United Nations,

NOTING that, in accordance with the foregoing Resolution, international law concerning marine pollution forms a part of the Law of the Sea,

REQUESTS the Secretary-General of the Inter-Governmental Maritime Consultative Organization to forward the International Convention for the Prevention of Pollution from Ships, 1973, to the United Nations Conference on the Law of the Sea, so that this Convention can be taken into account in the broader context of that Conference.

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Resolution 26

Establishment of the List of Substances annexed to the Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil

THE CONFERENCE,

NOTING that the Protocol relating to Intervention on the High Seas in Cases of Marine Pollution by Substances other than Oil, 1973, provides in its Articles I and III that the list of substances to be annexed to the Protocol shall be established and maintained by an appropriate body designated by the Inter-Governmental Maritime Consultative Organization,

NOTING FURTHER that the Protocol provides that Parties to the Protocol whether or not Members of the Organization shall be entitled to participate in the proceedings of the appropriate body when it considers matters relating to the list,

RECOGNIZING that the early establishment of this list will encourage acceptance of the Protocol by Governments and thereby promote the speedy entry into force of the Protocol,

REQUESTS the Organization to designate at the earliest practicable opportunity the appropriate body in accordance with the provisions of Articles I and III of the Protocol and to provide this body with the necessary facilities for its work,

REQUESTS that appropriate body to proceed with all speed and establish the list not later than 30 November 1974, which list shall be adopted by a two-thirds majority of those present and voting in that body,

RECOMMENDS that in establishing and maintaining the list of substances the appropriate body should consult and co-operate with competent international organizations,

REQUESTS the Secretary-General of the Organization, as soon as the list has been established, to annex copies thereof to the authentic texts of the Protocol,

REQUESTS FURTHER the Secretary-General of the Organization to communicate this list to Governments without delay.

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Certified true copy of the English text of the Final Act of the International Conference on Marine Pollution, done at London on 2 November 1973, the original of which is deposited with the Inter-Governmental Maritime Consultative Organization.

For the Secretary-General of the Inter-Governmental Maritime Consultative Organization

London,

14.12.2008

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AMENDMENTS TO THE TECHNICAL CODE ON CONTROL OF EMISSION OF NITROGEN OXIDES FROM MARINE DIESEL ENGINES

(NO, Technical Code 2008)

(Resolution MEPC.177(58))

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RESOLUTION MEPC.177(58)

Adopted on 10 October 2008

AMENDMENTS TO THE TECHNICAL CODE ON CONTROL OF EMISSION OF NITROGEN OXIDES FROM MARINE DIESEL ENGINES

(NO_x Technical Code 2008)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (herein after referred to as the "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI, entitled Regulations for the Prevention of Air Pollution from Ships (hereinafter referred to as "Annex VI"), is added to the 1973 Convention,

NOTING FURTHER regulation 13 of MARPOL Annex VI, which makes the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NO_x Technical Code) mandatory under that Annex,

HAVING CONSIDERED the draft amendments to the NO_x Technical Code,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to the NO_x Technical Code, as set out at Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 January 2010, unless prior to that date, not less than one-third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 July 2010 upon their acceptance in accordance with paragraph 2 above;

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4 REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex;

6 INVITES the Parties to MARPOL Annex VI and other Member Governments to bring the amendments to the NO_x Technical Code to the attention of shipowners, ship operators, shipbuilders, marine diesel engine manufacturers and any other interested groups.

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NO_x Technical Code 2008

Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines

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Introduction

NO_x Technical Code 2008

On 26 September 1997, the Conference of Parties to the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) adopted, by Conference resolution 2, the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NO_x Technical Code). Following the entry into force, on 19 May 2005, of MARPOL Annex VI – Regulations for the Prevention of Air Pollution from Ships, each marine diesel engine to which regulation 13 of that Annex applies must comply with the provisions of this Code. MEPC 53 in July 2005 agreed to the revision of MARPOL Annex VI and the NO_x Technical Code. That review was concluded at MEPC 58 in October 2008 and this version of the NO_x Technical Code, hereunder referred to as the Code, is an outcome of that process.

As general background information, the precursors to the formation of nitrogen oxides during the combustion process are nitrogen and oxygen. Together these compounds comprise 99% of the engine intake air. Oxygen will be consumed during the combustion process, with the amount of excess oxygen available being a function of the air/fuel ratio under which the engine is operating. The nitrogen remains largely unreacted in the combustion process; however, a small percentage will be oxidized to form various oxides of nitrogen. The nitrogen oxides (NO_x) that can be formed include nitric oxide (NO) and nitrogen dioxide (NO_2), while the amounts are primarily a function of flame or combustion temperature and, if present, the amount of organic nitrogen available from the fuel. NO_x formation is also a function of the time the nitrogen and the excess oxygen are exposed to the high temperatures associated with the diesel engine's combustion process. In other words, the higher the combustion temperature (e.g., high-peak pressure, high-compression ratio, high rate of fuel delivery, etc.), the greater the amount of NO_x formation. A slow-speed diesel engine, in general, tends to have more NO_x formation than a high-speed engine. NO_x has an adverse effect on the environment, causing acidification, formation of tropospheric ozone and nutrient enrichment, and contributes to adverse health effects globally.

The purpose of this Code is to provide mandatory procedures for the testing, survey and certification of marine diesel engines that will enable engine manufacturers, shipowners and Administrations to ensure that all applicable marine diesel engines comply with the relevant limiting emission values of NO_x as specified within regulation 13 of Annex VI. The difficulties of establishing, with precision, the actual weighted average NO_x emission of marine diesel engines in service on ships have been recognized in formulating a simple, practical set of requirements in which the means to ensure compliance with the allowable NO_x emissions are defined.

Administrations are encouraged to assess the emissions performance of marine propulsion and auxiliary diesel engines on a test bed where accurate tests can be carried out under properly controlled conditions. Establishing compliance with regulation 13 of Annex VI at this initial stage is an essential feature of this Code. Subsequent testing on board the ship may inevitably be limited in scope and accuracy, and its purpose shall be to infer or deduce the emission

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performance and to confirm that engines are installed, operated and maintained in accordance with the manufacturer's specifications and that any adjustments or modifications do not detract from the emissions performance established by initial testing and certification by the manufacturer.

Abbreviations, subscripts and symbols

Tables 1, 2, 3 and 4 below summarize the abbreviations, subscripts and symbols used throughout this Code, including specifications for the analytical instruments in appendix III, calibration requirements for the analytic instruments contained in appendix IV, the formulae for calculation of gas mass flow as contained in chapter 5 and appendix VI of this Code and the symbols used in respect of data for onboard verification surveys in chapter 6.

.1 Table 1: symbols used to represent the chemical components of diesel engine gas emissions and calibration and span gases addressed throughout this Code;

.2 Table 2: abbreviations for the analysers used in the measurement of gas emissions from diesel engines as specified in appendix III of this Code;

.3 Table 3: symbols and subscripts of terms and variables used in chapter 5, chapter 6, appendix IV and appendix VI of this Code; and

.4 Table 4: symbols for fuel composition used in chapter 5 and chapter 6 and appendix VI of this Code.

Table 1
Symbols and abbreviations for the chemical components

Symbol	Definition
CH_4	Methane
C_3H_8	Propane
CO	Carbon monoxide
CO_2	Carbon dioxide
HC	Hydrocarbons
H_2O	Water
NO	Nitric oxide
NO_2	Nitrogen dioxide
NO_x	Nitrogen oxides
O_2	Oxygen

Table 2
Abbreviations for Analysers for measurement of diesel engine gaseous emissions
(refer to appendix III of this Code)

CLD	Chemiluminescent detector
ECS	Electrochemical sensor
HCLD	Heated chemiluminescent detector
HFID	Heated flame ionization detector
NDIR	Non-dispersive infrared analyser
PMD	Paramagnetic detector
ZRDO	Zirconium dioxide sensor

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Table 3
Symbols and subscripts for terms and variables
(refer to chapter 5, chapter 6, appendix IV and appendix VI of this Code)

Symbol	Term	Unit
A/F_{st}	Stoichiometric air to fuel ratio	1
c_x	Concentration in the exhaust (with suffix of the component nominating, d=dry or w=wet)	ppm/% (V/V)
E_{EC02}	CO_2 quench of NO_x analyser	%
E_{EH2O}	Water quench of NO_x analyser	%
E_{conv}	Efficiency of NO_x converter	%
E_{O2}	Oxygen analyser correction factor	1
λ	Excess air factor: kg dry air/(kg fuel · A/F_{st})	1
f_a	Test condition parameter	1
f_c	Carbon factor	1
f_{fd}	Fuel-specific factor for exhaust flow calculation on dry basis	1
f_{fw}	Fuel-specific factor for exhaust flow calculation on wet basis	1
H_a	Absolute humidity of the intake air (g water / kg dry air)	g/kg
H_{SC}	Humidity of the charge air	g/kg
i	Subscript denoting an individual mode	1
k_{hd}	Humidity correction factor for NO_x for diesel engines	1
k_{wa}	Dry to wet correction factor for the intake air	1
k_{we}	Dry to wet correction factor for the raw exhaust gas	1
n_s	Engine speed	min^{-1}
n_{turb}	Turbocharger speed	min^{-1}
$\%O_2I$	HC analyser percentage oxygen interference	%
p_a	Saturation vapour pressure of the engine intake air determined using a temperature value for the intake air measured at the same physical location as the measurements for p_b and R_a	kPa
p_b	Total barometric pressure	kPa
p_c	Charge air pressure	kPa
p_r	Water vapour pressure after cooling bath of the analysis system	kPa
p_s	Dry atmospheric pressure calculated by the following formula: $p_s = p_b - R_a \cdot p_a /100$	kPa
p_{SC}	Saturation vapour pressure of the charge air	kPa
P	Uncorrected brake power	kW
P_{aux}	Declared total power absorbed by auxiliaries fitted for the test and not required by ISO 14396	kW
P_m	Maximum measured or declared power at the test engine speed under test conditions	kW

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Symbol	Term	Unit
q_{mair}	Intake air mass flow rate on dry basis	kg/h
q_{mawet}	Intake air mass flow rate on wet basis	kg/h
q_{mew}	Exhaust gas mass flow rate on wet basis	kg/h
q_{mf}	Fuel mass flow rate	kg/h
q_{mgas}	Emission mass flow rate of individual gas	g/h
R_a	Relative humidity of the intake air	%
r_h	Hydrocarbon response factor	1
ρ	Density	kg/m^3
s	Fuel rack position	
T_a	Intake air temperature determined at the engine intake	K
T_{coolin}	Charge air cooler, coolant inlet temperature	°C
$T_{coolout}$	Charge air cooler, coolant outlet temperature	°C
T_{Exh}	Exhaust gas temperature	°C
T_{Fuel}	Fuel oil temperature	°C
T_{Sea}	Seawater temperature	°C
T_{SC}	Charge air temperature	K
T_{SCRef}	Charge air reference temperature	K
u	Ratio of exhaust component and exhaust gas densities	1
W_F	Weighting factor	1

Table 4
Symbols for fuel composition

Symbol	Definition	Unit
w_{ALF}	H content of fuel	% m/m
w_{BET}	C content of fuel	% m/m
w_{EPS}	S content of fuel	% m/m
w_{DEL}	N content of fuel	% m/m
w_{GAM}	O content of fuel	% m/m
α	molar ratio (H/C)	1

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Chapter 1

General

1.1 Purpose

1.1.1 The purpose of this Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines, hereunder referred to as the Code, is to specify the requirements for the testing, survey and certification of marine diesel engines to ensure they comply with the nitrogen oxides (NO_x) emission limits of regulation 13 of Annex VI. All references to regulations within this Code refer to Annex VI.

1.2 Application

1.2.1 This Code applies to all marine diesel engines with a power output of more than 130 kW that are installed, or are designed and intended for installation, on board any ship subject to Annex VI and to which regulation 13 applies. Regarding the requirements for survey and certification under regulation 5, this Code addresses only those requirements applicable to an engine's compliance with the applicable NO_x emission limit.

1.2.2 For the purpose of the application of this Code, Administrations are entitled to delegate all functions required of an Administration by this Code to an organization authorized to act on behalf of the Administration. In every case, the Administration assumes full responsibility for the survey and certificate.

1.2.3 For the purpose of this Code, an engine shall be considered to be operated in compliance with the applicable NO_x limit of regulation 13 if it can be demonstrated that the weighted NO_x emissions from the engine are within those limits at the initial certification, annual, intermediate and renewal surveys and such other surveys as are required.

1.3 Definitions

1.3.1 *Nitrogen Oxide (NO_x) emissions* means the total emission of nitrogen oxides, calculated as the total weighted emission of NO_2 and determined using the relevant test cycles and measurement methods as specified in this Code.

1.3.2 *Substantial modification* of a marine diesel engine means:

.1 For engines installed on ships constructed on or after 1 January 2000, *substantial modification* means any modification to an engine that could potentially cause the engine to exceed the applicable emission limit set out in regulation 13. Routine replacement of engine components by parts specified in the technical file that do not alter emission characteristics shall not be considered a "substantial modification" regardless of whether one part or many parts are replaced.

.2 For engines installed on ships constructed before 1 January 2000, *substantial modification* means any modification made to an engine that increases its existing emission characteristics established by the simplified measurement method as described in 6.3 in excess of the allowances set out in 6.3.11. These changes include, but are not limited to, changes in its operations or in its technical parameters (e.g., changing camshafts, fuel injection systems, air systems, combustion chamber configuration, or timing calibration of the engine). The

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installation of a certified approved method pursuant to regulation 13.7.1.1 or certification pursuant to regulation 13.7.1.2 is not considered to be a substantial modification for the purpose of the application of regulation 13.2 of the Annex.

1.3.3 *Components* are those interchangeable parts that influence the NO_x emissions performance, identified by their design/parts number.

1.3.4 *Setting* means adjustment of an adjustable feature influencing the NO_x emissions performance of an engine.

1.3.5 *Operating values* are engine data, such as cylinder peak pressure, exhaust gas temperature, etc., from the engine log that are related to the NO_x emission performance. These data are load-dependent.

1.3.6 The *EIAPP Certificate* is the Engine International Air Pollution Prevention Certificate which relates to NO_x emissions.

1.3.7 The *IAPP Certificate* is the International Air Pollution Prevention Certificate.

1.3.8 *Administration* has the same meaning as article 2, subparagraph (5) of MARPOL 73.

1.3.9 *Onboard NO_x verification procedures* mean a procedure, which may include an equipment requirement, to be used on board at initial certification survey or at the renewal, annual or intermediate surveys, as required, to verify compliance with any of the requirements of this Code, as specified by the applicant for engine certification and approved by the Administration.

1.3.10 *Marine diesel engine* means any reciprocating internal combustion engine operating on liquid or dual fuel, to which regulation 13 applies, including booster/compound systems if applied.

Where an engine is intended to be operated normally in the gas mode, i.e. with the main fuel gas and only a small amount of liquid pilot fuel, the requirements of regulation 13 have to be met only for this operation mode. Operation on pure liquid fuel resulting from restricted gas supply in cases of failures shall be exempted for the voyage to the next appropriate port for the repair of the failure.

1.3.11 *Rated power* means the maximum continuous rated power output as specified on the nameplate and in the technical file of the marine diesel engine to which regulation 13 and this Code apply.

1.3.12 *Rated speed* is the crankshaft revolutions per minute at which the rated power occurs as specified on the nameplate and in the technical file of the marine diesel engine.

1.3.13 *Brake power* is the observed power measured at the crankshaft or its equivalent, the engine being equipped only with the standard auxiliaries necessary for its operation on the test bed.

1.3.14 *Onboard conditions* mean that an engine is:

.1 installed on board and coupled with the actual equipment that is driven by the engine, and

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.2 under operation to perform the purpose of the equipment.

1.3.15 A *technical file* is a record containing all details of parameters, including components and settings of an engine, that may influence the NO_x emission of the engine, in accordance with 2.4 of this Code.

1.3.16 A *record book of engine parameters* is the document used in connection with the engine parameter check method for recording all parameter changes, including components and engine settings that may influence NO_x emission of the engine.

1.3.17 An *approved method* is a method for a particular engine, or a range of engines, which, when applied to the engine, will ensure that the engine complies with the applicable NO_x limit as detailed in regulation 13.7.

1.3.18 An *existing engine* is an engine that is subject to regulation 13.7.

1.3.19 An *approved method file* is a document which describes an approved method and its means of survey.

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Chapter 2

Surveys and certification

2.1 General

2.1.1 Each marine diesel engine specified in 1.2, except as otherwise permitted by this Code, shall be subject to the following surveys:

.1 A pre-certification survey that shall be such as to ensure that the engine, as designed and equipped, complies with the applicable NO_x emission limit contained in regulation 13. If this survey confirms compliance, the Administration shall issue an Engine International Air Pollution Prevention (EIAPP) Certificate.

.2 An initial certification survey that shall be conducted on board a ship after the engine is installed but before it is placed in service. This survey shall be such as to ensure that the engine, as installed on board the ship, including any modifications and/or adjustments since the pre-certification, if applicable, complies with the applicable NO_x emission limit contained in regulation 13. This survey, as part of the ship's initial survey, may lead to either the issuance of a ship's initial International Air Pollution Prevention (IAPP) Certificate or an amendment of a ship's valid IAPP Certificate reflecting the installation of a new engine.

.3 Renewal, annual and intermediate surveys, that shall be conducted as part of a ship's surveys required by regulation 5, to ensure the engine continues to comply fully with the provisions of this Code.

.4 An initial engine certification survey that shall be conducted on board a ship every time a major conversion, as defined in regulation 13, is made to an engine to ensure that the engine complies with the applicable NO_x emission limit contained in regulation 13. This will result in the issue, if applicable, of an EIAPP Certificate and the amendment of the IAPP Certificate.

2.1.2 To comply with the various survey and certification requirements described in 2.1.1, there are methods included in this Code from which the engine manufacturer, shipbuilder or shipowner, as applicable, can choose to measure, calculate, test or verify an engine for its NO_x emissions, as follows:

.1 test-bed testing for the pre-certification survey in accordance with chapter 5;

.2 onboard testing for an engine not pre-certificated for a combined pre certification and initial certification survey in accordance with the full test-bed requirements of chapter 5;

.3 onboard engine parameter check method, using the component data, engine settings and engine performance data as specified in the technical file, for confirmation of compliance at initial, renewal, annual and intermediate surveys for pre-certified engines or engines that have undergone modifications or adjustments to NO_x critical components, settings and operating values, since they were last surveyed, in accordance with 6.2;

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.4 onboard simplified measurement method for confirmation of compliance at renewal, annual and intermediate surveys or confirmation of pre-certified engines for initial certification surveys, in accordance with 6.3 when required; or

.5 onboard direct measurement and monitoring method for confirmation of compliance at renewal, annual and intermediate surveys only, in accordance with 6.4.

2.2 Procedures for pre-certification of an engine

2.2.1 Prior to installation on board, every marine diesel engine (individual engine), except as allowed by 2.2.2 and 2.2.4, shall:

.1 be adjusted to meet the applicable NO_x emission limit,

.2 have its NO_x emissions measured on a test bed in accordance with the procedures specified in chapter 5 of this Code, and

.3 be pre-certified by the Administration, as documented by issuance of an EIAPP Certificate.

2.2.2 For the pre-certification of serially manufactured engines, depending on the approval of the Administration, the engine family or the engine group concept may be applied (see chapter 4). In such a case, the testing specified in 2.2.1.2 is required only for the parent engine(s) of an engine family or engine group.

2.2.3 The method of obtaining pre-certification for an engine is for the Administration to:

.1 certify a test of the engine on a test bed;

.2 verify that all engines tested, including, if applicable, those to be delivered within an engine family or engine group, meet the applicable NO_x limit; and

.3 if applicable, verify that the selected parent engine(s) is representative of an engine family or engine group.

2.2.4 There are engines that, due to their size, construction and delivery schedule, cannot be pre-certified on a test bed. In such cases, the engine manufacturer, shipowner or shipbuilder shall make application to the Administration requesting an onboard test (see 2.1.2.2). The applicant must demonstrate to the Administration that the onboard test fully meets all of the requirements of a test-bed procedure as specified in chapter 5 of this Code. Such a survey may be accepted for an individual engine or for an engine group represented by the parent engine only, but it shall not be accepted for an engine family certification. In no case shall an allowance be granted for possible deviations of measurements if an initial survey is carried out on board a ship without any valid pre-certification test. For engines undergoing an onboard certification test, in order to be issued with an EIAPP Certificate, the same procedures apply as if the engine had been pre-certified on a test bed.

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2.2.5 NO_x reducing devices

.1 Where an NO_x-reducing device is to be included within the EIAPP certification, it must be recognized as a component of the engine and its presence shall be recorded in the engine's technical file. The engine shall be tested, at the pre-certification test, with the NO_x reducing device fitted.

.2 In those cases where an NO_x-reducing device has been fitted due to failure to meet the required emission value at the pre-certification test, in order to receive an EIAPP Certificate for this assembly, the engine, including the reducing device, as installed, must be re-tested to show compliance with the applicable NO_x emission limit. However, in this case, the assembly may be re-tested in accordance with the simplified measurement method in accordance with 6.3. In no case shall the allowances given in 6.3.11 be granted.

.3 Where, in accordance with 2.2.5.2, the effectiveness of the NO_x reducing device is verified by use of the simplified measurement method, that test report shall be added as an adjunct to the pre-certification test report that demonstrated the failure of the engine alone to meet the required emission value. Both test reports shall be submitted to the Administration, and test report data, as detailed in 2.4.1.5, covering both tests shall be included in the engine's technical file.

.4 The simplified measurement method used as part of the process to demonstrate compliance in accordance with 2.2.5.2 may only be accepted in respect of the engine and NO_x-reducing device on which its effectiveness was demonstrated, and it shall not be accepted for engine family or engine group certification.

.5 In both cases as given in 2.2.5.1 and 2.2.5.2, the NO_x-reducing device shall be included on the EIAPP Certificate together with the emission value obtained with the device in operation and all other records as required by the Administration. The engine's technical file shall also contain onboard NO_x verification procedures for the device to ensure it is operating correctly.

.6 Notwithstanding 2.2.5.3 and 2.2.5.4, an NO_x-reducing device may be approved by the Administration taking into account guidelines to be developed by the Organization.

2.2.6 Where due to changes of component design, it is necessary to establish a new engine family or engine group but there is no available parent engine, the engine builder may apply to the Administration to use the previously obtained parent engine test data modified at each specific mode of the applicable test cycle so as to allow for the resulting changes in NO_x emission values. In such cases, the engine used to determine the modification emission data shall correspond in accordance with the requirements of 4.4.6.1, 4.4.6.2 and 4.4.6.3 to the previously used parent engine. Where more than one component is to be changed the combined effect resulting from those changes is to be demonstrated by a single set of test results.

2.2.7 For pre-certification of engines within an engine family or engine group, an EIAPP Certificate shall be issued in accordance with procedures established by the Administration to the parent engine(s) and to every member engine produced under this certification to accompany the engines throughout their life whilst installed on ships under the authority of that Administration.

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2.2.8 *Issue of certification by the Administration of the country in which the engine is built*

.1 When an engine is manufactured outside the country of the Administration of the ship on which it will be installed, the Administration of the ship may request the Administration of the country in which the engine is manufactured to survey the engine. Upon satisfaction that the applicable requirements of regulation 13 are complied with pursuant to this Code, the Administration of the country in which the engine is manufactured shall issue or authorize the issuance of the EIAPP Certificate.

.2 A copy of the certificate(s) and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

.3 A certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration.

2.2.9 Guidance in respect of the pre-certification survey and certification of marine diesel engines, as described in chapter 2 of this Code, is given in the relevant flowchart in appendix II of this Code. Where discrepancies exist, the text of chapter 2 takes precedence.

2.2.10 A model form of an EIAPP Certificate is attached as appendix I to this Code.

2.3 Procedures for certification of an engine

2.3.1 For those engines that have not been adjusted or modified relative to the original specification of the manufacturer, the provision of a valid EIAPP Certificate should suffice to demonstrate compliance with the applicable NO_x limits.

2.3.2 After installation on board, it shall be determined to what extent an engine has been subjected to further adjustments and/or modifications that could affect the NO_x emission. Therefore, the engine, after installation on board, but prior to issuance of the IAPP Certificate, shall be inspected for modifications and be approved using the onboard NO_x verification procedures and one of the methods described in 2.1.2.

2.3.3 There are engines that, after pre-certification, need final adjustment or modification for performance. In such a case, the engine group concept could be used to ensure that the engine still complies with the applicable limit.

2.3.4 Every marine diesel engine installed on board a ship shall be provided with a technical file. The technical file shall be prepared by the applicant for engine certification and approved by the Administration, and is required to accompany an engine throughout its life on board ships. The technical file shall contain the information as specified in 2.4.1.

2.3.5 Where an NO_x-reducing device is installed and needed to comply with the NO_x limits, one of the options providing a ready means for verifying compliance with regulation 13 is the direct measurement and monitoring method in accordance with 6.4. However, depending on the technical possibilities of the device used, subject to the approval of the Administration, other relevant parameters could be monitored.

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2.3.6 Where, for the purpose of achieving NO_x compliance, an additional substance is introduced, such as ammonia, urea, steam, water, fuel additives, etc., a means of monitoring the consumption of such substance shall be provided. The technical file shall provide sufficient information to allow a ready means of demonstrating that the consumption of such additional substances is consistent with achieving compliance with the applicable NO_x limit.

2.3.7 Where the engine parameter check method in accordance with 6.2 is used to verify compliance, if any adjustments or modifications are made to an engine after its pre-certification, a full record of such adjustments or modifications shall be recorded in the engine's record book of engine parameters.

2.3.8 If all of the engines installed on board are verified to remain within the parameters, components, and adjustable features recorded in the technical file, the engines should be accepted as performing within the applicable NO_x limit specified in regulation 13. In this case, provided all other applicable requirements of the Annex are complied with, an IAPP Certificate should then be issued to the ship.

2.3.9 If any adjustment or modification is made which is outside the approved limits documented in the technical file, the IAPP Certificate may be issued only if the overall NO_x emission performance is verified to be within the required limits by: onboard simplified measurement in accordance with 6.3; or, reference to the test-bed testing for the relevant engine group approval showing that the adjustments or modifications do not exceed the applicable NO_x emission limit. At surveys after the initial engine survey, the direct measurement and monitoring method in accordance with 6.4, as approved by the Administration, may alternatively be used.

2.3.10 The Administration may, at its own discretion, abbreviate or reduce all parts of the survey on board, in accordance with this Code, to an engine that has been issued an EIAPP Certificate. However, the entire survey on board must be completed for at least one cylinder and/or one engine in an engine family or engine group, if applicable, and the abbreviation may be made only if all the other cylinders and/or engines are expected to perform in the same manner as the surveyed engine and/or cylinder. As an alternative to the examination of fitted components, the Administration may conduct that part of the survey on spare parts carried on board provided they are representative of the components fitted.

2.3.11 Guidance in respect of the survey and certification of marine diesel engines at initial, renewal, annual and intermediate surveys, as described in chapter 2 of this Code, is given in the flowcharts in appendix II of this Code. Where discrepancies exist, the text of chapter 2 takes precedence.

2.4 Technical file and onboard NO_x verification procedures

2.4.1 To enable an Administration to perform the engine surveys described in 2.1, the technical file required by 2.3.4 shall, at a minimum, contain the following information:

.1 identification of those components, settings and operating values of the engine that influences its NO_x emissions including any NO_x-reducing device or system;

.2 identification of the full range of allowable adjustments or alternatives for the components of the engine;

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.3 full record of the relevant engine's performance, including the engine's rated speed and rated power;

.4 a system of onboard NO_x verification procedures to verify compliance with the NO_x emission limits during onboard verification surveys in accordance with chapter 6;

.5 a copy of the relevant parent engine test data, as given in section 2 of appendix V of this Code;

.6 if applicable, the designation and restrictions for an engine that is an engine within an engine family or engine group;

.7 specifications of those spare parts/components that, when used in the engine, according to those specifications, will result in continued compliance of the engine with the applicable NO_x emission limit; and

.8 the EIAPP Certificate, as applicable.

2.4.2 As a general principle, onboard NO_x verification procedures shall enable a surveyor to easily determine if an engine has remained in compliance with the applicable requirements of regulation 13. At the same time, it shall not be so burdensome as to unduly delay the ship or to require in-depth knowledge of the characteristics of a particular engine or specialist measuring devices not available on board.

2.4.3 The onboard NO_x verification procedure shall be one of the following methods:

.1 engine parameter check method in accordance with 6.2 to verify that an engine's component, setting and operating values have not deviated from the specifications in the engine's technical file;

.2 simplified measurement method in accordance with 6.3; or

.3 direct measurement and monitoring method in accordance with 6.4.

2.4.4 When considering which onboard NO_x verification procedures should be included in an engine's technical file to verify whether an engine complies with the applicable NO_x emission limit during the required onboard verification surveys, other than at an engine's initial onboard survey, any of the three onboard NO_x verification procedures as specified in 6.1 may be applied. However, the procedures associated with the method applied are to be approved by the Administration. If the method differs from the verification procedure method specified in the technical file as originally approved, the procedure of the method needs to be either added as an amendment to the technical file or appended as an alternative to the procedure given in the technical file. Thereafter the shipowner may choose which of the methods approved in the technical file is to be used to demonstrate compliance.

2.4.5 In addition to the method specified by the engine manufacturer and given in the technical file, as approved by the Administration for the initial certification in the engine, the shipowner shall have the option of direct measurement of NO_x emissions in accordance with 6.4. Such data may take the form of spot checks logged with other engine operating data on a regular basis and over the full range of engine operation or may result from continuous monitoring and data

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storage. Data must be current (taken within the last 30 days) and must have been acquired using the test procedures cited in this Code. These monitoring records shall be kept on board for three months for verification purposes by a Party in accordance with regulation 10. Data shall also be corrected for ambient conditions and fuel specification, and measuring equipment must be checked for correct calibration and operation, in accordance with the approved procedures given in the onboard operating manual. Where exhaust gas after-treatment devices are fitted that influence the NO_x emissions, the measuring point(s) must be located downstream of such devices.

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Chapter 3

Nitrogen oxides emission standards

3.1 Maximum allowable NO_x emission limits for marine diesel engines

3.1.1 The maximum allowable NO_x emission limit values are given by paragraphs 3, 4, 5.1.1 and 7.4 of regulation 13 as applicable. The total weighted NO_x emissions, as measured and calculated, rounded to one decimal place, in accordance with the procedures in this Code, shall be equal to or less than the applicable calculated value corresponding to the rated speed of the engine.

3.1.2 When the engine operates on test fuel oils in accordance with 5.3, the total emission of nitrogen oxides (calculated as the total weighted emission of NO_2) shall be determined using the relevant test cycles and measurement methods as specified in this Code.

3.1.3 An engine's exhaust emissions limit value, given from the formulae included in paragraph 3, 4 or 5.1.1 of regulation 13 as applicable, and the actual calculated exhaust emissions value, rounded to one decimal place for the engine, shall be stated on the engine's EIAPP Certificate. If an engine is a member engine of an engine family or engine group, it is the relevant parent engine emission value that is compared to the applicable limit value for that engine family or engine group. The limit value given here shall be the limit value for the engine family or engine group based on the highest engine speed to be included in that engine family or engine group, in accordance with paragraph 3, 4 or 5.1.1 of regulation 13, irrespective of the rated speed of the parent engine or the rated speed of the particular engine as given on the engine's EIAPP certificate.

3.1.4 In the case of an engine to be certified in accordance with paragraph 5.1.1 of regulation 13 the specific emission at each individual mode point shall not exceed the applicable NO_x emission limit value by more than 50% except as follows:

.1 The 10% mode point in the D2 test cycle specified in 3.2.5.

.2 The 10% mode point in the C1 test cycle specified in 3.2.6.

.3 The idle mode point in the C1 test cycle specified in 3.2.6.

3.2 Test cycles and weighting factors to be applied

3.2.1 For every individual engine or parent engine of an engine family or engine group, one or more of the relevant test cycles specified in 3.2.2 to 3.2.6 shall be applied for verification of compliance with the applicable NO_x emission limit contained in regulation 13.

3.2.2 For constant-speed marine diesel engines for ship main propulsion, including diesel electric drive, test cycle E2 shall be applied in accordance with table 1.

3.2.3 For an engine connected to a controllable pitch propeller, irrespective of combinator curve, test cycle E2 shall be applied in accordance with table 1.

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Table 1
Test cycle for "Constant speed main propulsion" application
(including diesel-electric drive and all controllable-pitch propeller installations)

Test cycle type E2	Speed	100%	100%	100%	100%*
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

3.2.4 For propeller-law-operated main and propeller-law-operated auxiliary engines, test cycle E3 shall be applied in accordance with table 2.

Table 2
Test cycle for
"Propeller-law-operated main and propeller-law-operated auxiliary engine" application

Test cycle type E3	Speed	100%	91%	80%	63%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

3.2.5 For constant-speed auxiliary engines, test cycle D2 shall be applied in accordance with table 3.

Table 3
Test cycle for "Constant-speed auxiliary engine" application

Test cycle type D2	Speed	100%	100%	100%	100%	100%
	Power	100%	75%	50%	25%	10%
	Weighting factor	0.05	0.25	0.3	0.3	0.1

3.2.6 For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied in accordance with table 4.

Table 4
Test cycle for "Variable-speed, variable-load auxiliary engine" application

Test cycle type C1	Speed	Rated				Intermediate			Idle
	Torque	100%	75%	50%	10%	100%	75%	50%	0%
	Weighting factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

* There are exceptional cases, including large bore engines intended for E2 applications, in which, due to their oscillating masses and construction, engines cannot be run at low load at nominal speed without the risk of damaging essential components. In such cases, the engine manufacturer shall make application to the Administration that the test cycle as given in table 1 above may be modified for the 25% power mode with regard to the engine speed. The adjusted engine speed at 25% power, however, shall be as close as possible to the rated engine speed, as recommended by the engine manufacturer and approved by the Administration. The applicable weighting factors for the test cycle shall remain unchanged.

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3.2.7 The torque figures given in test cycle C1 are percentage values that represent for a given test mode the ratio of the required torque to the maximum possible torque at this given speed.

3.2.8 The intermediate speed for test cycle C1 shall be declared by the manufacturer, taking into account the following requirements:

.1 For engines that are designed to operate over a speed range on a full load torque curve, the intermediate speed shall be the declared maximum torque speed if it occurs between 60% and 75% of rated speed.

.2 If the declared maximum torque speed is less than 60% of rated speed, then the intermediate speed shall be 60% of the rated speed.

.3 If the declared maximum torque speed is greater than 75% of the rated speed, then the intermediate speed shall be 75% of rated speed.

.4 For engines that are not designed to operate over a speed range on the full load torque curve at steady state conditions, the intermediate speed will typically be between 60% and 70% of the maximum rated speed.

3.2.9 If an engine manufacturer applies for a new test cycle application on an engine already certified under a different test cycle specified in 3.2.2 to 3.2.6, then it may not be necessary for that engine to undergo the full certification process for the new application. In this case, the engine manufacturer may demonstrate compliance by recalculation, by applying the measurement results from the specific modes of the first certification test to the calculation of the total weighted emissions for the new test cycle application, using the corresponding weighting factors from the new test cycle.

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Chapter 4

Approval for serially manufactured engines: engine family and engine group concepts

4.1 General

4.1.1 To avoid certification testing of every engine for compliance with the NO_x emission limits, one of two approval concepts may be adopted, namely the engine family or the engine group concept.

4.1.2 The engine family concept may be applied to any series-produced engines that, through their design, are proven to have similar NO_x emission characteristics, are used as produced and, during installation on board, require no adjustments or modifications that could adversely affect the NO_x emissions.

4.1.3 The engine group concept may be applied to a smaller series of engines produced for similar engine application and that require minor adjustments and modifications during installation or in service on board.

4.1.4 Initially the engine manufacturer may, at its discretion, determine whether engines should be covered by the engine family or engine group concept. In general, the type of application shall be based on whether the engines will be modified, and to what extent, after testing on a test bed.

4.2 Documentation

4.2.1 All documentation for certification must be completed and suitably stamped by the duly authorized Authority as appropriate. This documentation shall also include all terms and conditions, including replacement of spare parts, to ensure that an engine is maintained in compliance with the applicable NO_x emission limit.

4.2.2 For an engine within an engine family or engine group, the required documentation for the engine parameter check method is specified in 6.2.2.

4.3 Application of the engine family concept

4.3.1 The engine family concept provides the possibility of reducing the number of engines that must be submitted for approval testing, while providing safeguards that all engines within the engine family comply with the approval requirements. In the engine family concept, engines with similar emission characteristics and design are represented by a parent engine.

4.3.2 Engines that are series-produced and not intended to be modified may be covered by the engine family concept.

4.3.3 The selection procedure for the parent engine is such that the selected engine incorporates those features that will most adversely affect the NO_x emission level. This engine, in general, shall have the highest NO_x emission level among all of the engines in the engine family.

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4.3.4 On the basis of tests and engineering judgement, the manufacturer shall propose which engines belong to an engine family, which engine(s) produce the highest NO_x emissions, and which engine(s) should be selected for certification testing.

4.3.5 The Administration shall review for certification approval the selection of the parent engine within the engine family and shall have the option of selecting a different engine, either for approval or production conformity testing, in order to have confidence that all engines within the engine family comply with the applicable NO_x emission limit.

4.3.6 The engine family concept does allow minor adjustments to the engines through adjustable features. Marine diesel engines equipped with adjustable features must comply with all requirements for any adjustment within the physically available range. A feature is not considered adjustable if it is permanently sealed or otherwise not normally accessible. The Administration may require that adjustable features be set to any specification within its adjustable range for certification or in-use testing to determine compliance with the requirements.

4.3.7 Before granting an engine family approval, the Administration shall take the necessary measures to verify that adequate arrangements have been made to ensure effective control of the conformity of production. This may include, but is not limited to:

.1 the connection between the NO_x critical component part or identification numbers as proposed for the engine family and the drawing numbers (and revision status if applicable) defining those components;

.2 the means by which the Administration will be able, at the time of a survey, to verify that the drawings used for the production of the NO_x critical components correspond to the drawings established as defining the engine family;

.3 drawing revision control arrangements. Where it is proposed by a manufacturer that revisions to the NO_x critical component drawings defining an engine family may be undertaken through the life of an engine, then the conformity of production scheme would need to demonstrate the procedures to be adopted to cover the cases where revisions will, or will not, affect NO_x emissions. These procedures shall cover drawing number allocation, effect on the identification markings on the NO_x critical components and the provision for providing the revised drawings to the Administration responsible for the original engine family approval. Where these revisions may affect the NO_x emissions the means to be adopted to assess or verify performance against the parent engine performance are to be stated together with the subsequent actions to be taken regarding advising the Administration and, where necessary, the declaration of a new parent engine prior to the introduction of those modifications into service;

.4 the implemented procedures that ensure any NO_x critical component spare parts supplied to a certified engine will be identified as given in the approved technical file and hence will be produced in accordance with the drawings as defining the engine family; or

.5 equivalent arrangements as approved by the Administration.

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4.3.8 *Guidance for the selection of an engine family*

4.3.8.1 The engine family shall be defined by basic characteristics that must be common to all engines within the engine family. In some cases there may be interaction of parameters; these effects must also be taken into consideration to ensure that only engines with similar exhaust emission characteristics are included within an engine family, e.g., the number of cylinders may become a relevant parameter on some engines due to the charge air or fuel system used, but with other designs, exhaust emissions characteristics may be independent of the number of cylinders or configuration.

4.3.8.2 The engine manufacturer is responsible for selecting those engines from their different models of engines that are to be included in an engine family. The following basic characteristics, but not specifications, shall be common among all engines within an engine family:

.1 combustion cycle:
- 2-stroke cycle
- 4-stroke cycle

.2 cooling medium:
- air
- water
- oil

.3 individual cylinder displacement:
- to be within a total spread of 15%

.4 number of cylinders and cylinder configuration:
- applicable in certain cases only, e.g., in combination with exhaust gas cleaning devices

.5 method of air aspiration:
- naturally aspirated
- pressure charged

.6 fuel type:
- distillate/residual fuel oil
- dual fuel

.7 combustion chamber
- open chamber
- divided chamber

.8 valve and porting, configuration, size and number:
- cylinder head
- cylinder wall

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.9 fuel system type:
- pump-line-injector
- in-line
- distributor
- single element
- unit injector
- gas valve

.10 miscellaneous features:
- exhaust gas re-circulation
- water/emulsion injection
- air injection
- charge cooling system
- exhaust after-treatment
- reduction catalyst
- oxidation catalyst
- thermal reactor
- particulates trap.

4.3.8.3 If there are engines that incorporate other features that could be considered to affect NO_x exhaust emissions, these features must be identified and taken into account in the selection of the engines to be included in the engine family.

4.3.9 *Guidance for selecting the parent engine of an engine family*

4.3.9.1 The method of selection of the parent engine for NO_x measurement shall be agreed to and approved by the Administration. The method shall be based upon selecting an engine that incorporates engine features and characteristics that, from experience, are known to produce the highest NO_x emissions expressed in grams per kilowatt hour (g/kWh). This requires detailed knowledge of the engines within the engine family. Under certain circumstances, the Administration may conclude that the worst case NO_x emission rate of the engine family can best be characterized by testing a second engine. Thus, the Administration may select an additional engine for test based upon features that indicate that it may have the highest NO_x emission levels of the engines within that engine family. If the range of engines within the engine family incorporate other variable features that could be considered to affect NO_x emissions, these features must also be identified and taken into account in the selection of the parent engine.

4.3.9.2 The parent engine shall have the highest emission value for the applicable test cycle.

4.3.10 *Certification of an engine family*

4.3.10.1 The certification shall include a list, to be prepared and maintained by the engine manufacturer and approved by the Administration, of all engines and their specifications accepted under the same engine family, the limits of their operating conditions and the details and limits of engine adjustments that may be permitted.

4.3.10.2 A pre-certificate, or EIAPP Certificate, shall be issued for a member engine of an engine family in accordance with this Code that certifies that the parent engine meets the applicable NO_x limit specified in regulation 13. Where member engine pre-certification requires the measurement of some performance values, the calibration of the equipment used for those measurements shall be in accordance with the requirements of 1.3 of appendix IV of this Code.

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4.3.10.3 When the parent engine of an engine family is tested and gaseous emissions measured under the most adverse conditions specified within this Code and confirmed as complying with the applicable maximum allowable emission limits as given in 3.1, the results of the test and NO_x measurement shall be recorded in the EIAPP Certificate issued for the particular parent engine and for all member engines of the engine family.

4.3.10.4 If two or more Administrations agree to accept each other's EIAPP Certificates, then an entire engine family, certified by one of these Administrations, shall be accepted by the other Administrations which entered into that agreement with the original certifying Administration, unless the agreement specifies otherwise. Certificates issued under such agreements shall be acceptable as prima facie evidence that all engines included in the certification of the engine family comply with the specific NO_x emission requirements. There is no need for further evidence of compliance with regulation 13 if it is verified that the installed engine has not been modified and the engine adjustment is within the range permitted in the engine family certification.

4.3.10.5 If the parent engine of an engine family is to be certified in accordance with an alternative standard or a different test cycle than allowed by this Code, the manufacturer must prove to the Administration that the weighted average NO_x emissions for the appropriate test cycles fall within the relevant limit values under regulation 13 and this Code before the Administration may issue an EIAPP Certificate.

4.4 Application of the engine group concept

4.4.1 Engine group engines normally require adjustment or modification to suit the onboard operating conditions, but these adjustments or modifications shall not result in NO_x emissions exceeding the applicable limits in regulation 13.

4.4.2 The engine group concept also provides the possibility for a reduction in approval testing for modifications to engines in production or in service.

4.4.3 In general, the engine group concept may be applied to any engine type having the same design features as specified in 4.4.6, but individual engine adjustment or modification after test-bed measurement is allowed. The range of engines in an engine group and choice of parent engine shall be agreed to and approved by the Administration.

4.4.4 The application for the engine group concept, if requested by the engine manufacturer or another party, shall be considered for certification approval by the Administration. If the engine owner, with or without technical support from the engine manufacturer, decides to perform modifications on a number of similar engines in the owner's fleet, the owner may apply for an engine group certification. The engine group may be based on a parent engine that is a test engine on the test bench. Typical applications are similar modifications of similar engines in similar operational conditions. If a party other than the engine manufacturer applies for engine certification, the applicant for the engine certification takes on the responsibilities of the engine manufacturer as elsewhere given within this Code.

4.4.5 Before granting an initial engine group approval for serially produced engines, the Administration shall take the necessary measures to verify that adequate arrangements have been made to ensure effective control of the conformity of production. The requirements of 4.3.7 apply *mutatis mutandis* to this section. This requirement may not be necessary for engine groups established for the purpose of engine modification on board after an EIAPP Certificate has been issued.

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4.4.6 *Guidance for the selection of an engine group*

4.4.6.1 The engine group may be defined by basic characteristics and specifications in addition to the parameters defined in 4.3.8 for an engine family.

4.4.6.2 The following parameters and specifications shall be common to engines within an engine group:

.1 bore and stroke dimensions;

.2 method and design features of pressure charging and exhaust gas system;
- constant pressure;
- pulsating system;

.3 method of charge air cooling system:
- with/without charge air cooler;

.4 design features of the combustion chamber that effect NO_x emission;

.5 design features of the fuel injection system, plunger and injection cam that may profile basic characteristics that effect NO_x emission; and

.6 rated power at rated speed. The permitted ranges of engine power (kW/cylinder) and/or rated speed are to be declared by the manufacturer and approved by the Administration.

4.4.6.3 Generally, if the criteria required by 4.4.6.2 are not common to all engines within a prospective engine group, then those engines may not be considered as an engine group. However, an engine group may be accepted if only one of those criteria is not common for all of the engines within a prospective engine group.

4.4.7 *Guidance for allowable adjustment or modification within an engine group*

4.4.7.1 Minor adjustments and modifications in accordance with the engine group concept are allowed after pre-certification or final test-bed measurement within an engine group upon agreement of the parties concerned and approval of the Administration, if:

.1 an inspection of emission-relevant engine parameters and/or provisions of the onboard NO_x verification procedures of the engine and/or data provided by the engine manufacturer confirm that the adjusted or modified engine complies with the applicable NO_x emission limit. The engine test-bed results in respect of NO_x emissions may be accepted as an option for verifying onboard adjustments or modifications to an engine within an engine group; or

.2 onboard measurement confirms that the adjusted or modified engine complies with the applicable NO_x emission limit.

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4.4.7.2 Examples of adjustments and modifications within an engine group that may be permitted, but are not limited to those described below:

1 For onboard conditions, adjustment of:
- injection timing for compensation of fuel property differences,
- injection timing for maximum cylinder pressure,
- fuel delivery differences between cylinders.

2 For performance, modification of:
- turbocharger,
- injection pump components,
- plunger specification,
- delivery valve specification,
- injection nozzles,
- cam profiles,
- intake and/or exhaust valve,
- injection cam,
- combustion chamber.

4.4.7.3 The above examples of modifications after a test-bed trial concern essential improvements of components or engine performance during the life of an engine. This is one of the main reasons for the existence of the engine group concept. The Administration, upon application, may accept the results from a demonstration test carried out on one engine, possibly a test engine, indicating the effects of the modifications on NO_x emissions that may be accepted for all engines within that engine group without requiring certification measurements on each member engine of the engine group.

4.4.8 *Guidance for the selection of the parent engine of an engine group*

4.4.8.1 The selection of the parent engine shall be in accordance with the criteria in 4.3.9, as applicable. It is not always possible to select a parent engine from small-volume production engines in the same way as the mass-produced engines (engine family). The first engine ordered may be registered as the parent engine. Furthermore at the pre-certification test where a parent engine is not adjusted to the engine-builder-defined reference or maximum tolerance operating conditions (which may include, but not limited to, maximum combustion pressure, compression pressure, exhaust back pressure, charge air temperature) for the engine group, the measured NO_x emission values shall be corrected to the defined reference and maximum tolerance conditions on the basis of emission sensitivity tests on other representative engines. The resulting corrected average weighted NO_x emission value under reference conditions is to be stated in 1.9.6 of the Supplement to the EIAPP Certificate. In no case is the effect of the reference condition tolerances to result in an emission value that would exceed the applicable NO_x emission limit as required by regulation 13. The method used to select the parent engine to represent the engine group, the reference values and the applied tolerances shall be agreed to and approved by the Administration.

4.4.9 *Certification of an engine group*

4.4.9.1 The requirements of 4.3.10 apply *mutatis mutandis* to this section.

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Chapter 5

Procedures for NO_x emission measurements on a test bed

5.1 General

5.1.1 This procedure shall be applied to every initial approval testing of a marine diesel engine regardless of the location of that testing (the methods described in 2.1.2.1 and 2.1.2.2).

5.1.2 This chapter specifies the measurement and calculation methods for gaseous exhaust emissions from reciprocating internal-combustion engines under steady-state conditions, necessary for determining the average weighted value for the NO_x exhaust gas emission.

5.1.3 Many of the procedures described below are detailed accounts of laboratory methods, since determining an emissions value requires performing a complex set of individual measurements, rather than obtaining a single measured value. Thus, the results obtained depend as much on the process of performing the measurements as they depend on the engine and test method.

5.1.4 This chapter includes the test and measurement methods, test run and test report as a procedure for a test-bed measurement.

5.1.5 In principle, during emission tests, an engine shall be equipped with its auxiliaries in the same manner as it would be used on board.

5.1.6 For many engine types within the scope of this Code, the auxiliaries which may be fitted to the engine in service may not be known at the time of manufacture or certification. It is for this reason that the emissions are expressed on the basis of brake power as defined in 1.3.13.

5.1.7 When it is not appropriate to test the engine under the conditions as defined in 5.2.3, e.g., if the engine and transmission form a single integral unit, the engine may only be tested with other auxiliaries fitted. In this case the dynamometer settings shall be determined in accordance with 5.2.3 and 5.9. The auxiliary losses shall not exceed 5% of the maximum observed power. Losses exceeding 5% shall be approved by the Administration involved prior to the test.

5.1.8 All volumes and volumetric flow rates shall be related to 273 K (0°C) and 101.3 kPa.

5.1.9 Except as otherwise specified, all results of measurements, test data or calculations required by this chapter shall be recorded in the engine's test report in accordance with 5.10.

5.1.10 References in this Code to the term "charge air" apply equally to scavenge air.

5.2 Test conditions

5.2.1 *Test condition parameter and test validity for engine family approval*

5.2.1.1 The absolute temperature T_a of the engine intake air expressed in Kelvin shall be measured, and the dry atmospheric pressure p_s, expressed in kPa, shall be measured or calculated as follows:

$$p_s = p_b - 0.01 \cdot R_a \cdot p_a$$

p_a according to formula (10)

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5.2.1.2 For naturally aspirated and mechanically pressure charged engines the parameter f_a shall be determined according to the following:

$$f_a = \left(\frac{99}{p_s}\right)\left(\frac{T_a}{298}\right)^{0.7} \quad (1)$$

5.2.1.3 For turbocharged engines with or without cooling of the intake air the parameter f_a shall be determined according to the following:

$$f_a = \left(\frac{99}{p_s}\right)^{0.7} \cdot \left(\frac{T_a}{298}\right)^{1.5} \quad (2)$$

5.2.1.4 For a test to be recognized as valid for engine family approval, the parameter f_a shall be such that:

$$0.93 \leq f_a \leq 1.07 \quad (3)$$

5.2.2 *Engines with charge air cooling*

5.2.2.1 The temperature of the cooling medium and the charge air temperature shall be recorded.

5.2.2.2 All engines when equipped as intended for installation on board ships must be capable of operating within the applicable NO_x emission limit of regulation 13 at an ambient seawater temperature of 25°C. This reference temperature shall be considered in accordance with the charge air cooling arrangement applicable to the individual installation as follows:

.1 Direct seawater cooling to engine charge air coolers. Compliance with the applicable NO_x limit shall be demonstrated with a charge air cooler coolant inlet temperature of 25°C.

.2 Intermediate freshwater cooling to engine charge air coolers. Compliance with the applicable NO_x limit shall be demonstrated with the charge air cooling system operating with the designed in service coolant inlet temperature regime corresponding to an ambient seawater temperature of 25°C.

Note: Demonstration of compliance at a parent engine test for a direct seawater cooled system, as given by (.1) above, does not demonstrate compliance in accordance with the higher charge air temperature regime inherent with an intermediate freshwater cooling arrangement as required by this section.

.3 For those installations incorporating no seawater cooling, either direct or indirect, to the charge air coolers, e.g., radiator-cooled freshwater systems, air/air charge air coolers, compliance with the applicable NO_x limit shall be demonstrated with the engine and charge air cooling systems operating as specified by the manufacturer with 25°C air temperature.

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5.2.2.3 Compliance with the applicable NO_x emission limit as defined by regulation 13 shall be demonstrated either by testing or by calculation using the charge air reference temperatures (T_{ref}) specified and justified by the manufacturer, if applicable.

5.2.3 *Power*

5.2.3.1 The basis of specific emissions measurement is uncorrected brake power as defined in 1.3.11 and 1.3.15. The engine shall be submitted with auxiliaries needed for operating the engine (e.g., fan, water pump, etc.). If it is impossible or inappropriate to install the auxiliaries on the test bench, the power absorbed by them shall be determined and subtracted from the measured engine power.

5.2.3.2 Auxiliaries not necessary for the operation of the engine and that may be mounted on the engine may be removed for the test. See also 5.1.5 and 5.1.6.

5.2.3.3 Where auxiliaries have not been removed, the power absorbed by them at the test speeds shall be determined in order to calculate the dynamometer settings, except for engines where such auxiliaries form an integral part of the engine (e.g., cooling fans for air cooled engines).

5.2.4 *Engine air inlet system*

5.2.4.1 An engine air intake system or a test shop system shall be used presenting an air intake restriction within ± 300 Pa of the maximum value specified by the manufacturer for a clean air cleaner at the speed of rated power and full-load.

5.2.4.2 If the engine is equipped with an integral air inlet system, it shall be used for testing.

5.2.5 *Engine exhaust system*

5.2.5.1 An engine exhaust system or a test shop system shall be used that presents an exhaust backpressure within ± 650 Pa of the maximum value specified by the manufacturer at the speed of rated power and full load. The exhaust system shall conform to the requirements for exhaust gas sampling, as set out in 5.9.3.

5.2.5.2 If the engine is equipped with an integral exhaust system, it shall be used for testing.

5.2.5.3 If the engine is equipped with an exhaust after-treatment device, the exhaust pipe shall have the same diameter as found in-use for at least 4 pipe diameters upstream to the inlet of the beginning of the expansion section containing the after-treatment device. The distance from the exhaust manifold flange or turbocharger outlet to the exhaust after-treatment device shall be the same as in the onboard configuration or within the distance specifications of the manufacturer. The exhaust backpressure or restriction shall follow the same criteria as above, and may be set with a valve.

5.2.5.4 Where test-bed installation prevents adjustment to the exhaust gas backpressure as required, the effect on the NO_x emissions shall be demonstrated by the engine builder and, with the approval of the Administration, the emission value duly corrected as necessary.

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5.2.6 *Cooling system*

5.2.6.1 An engine cooling system with sufficient capacity to maintain the engine at normal operating temperatures prescribed by the manufacturer shall be used.

5.3 Test fuel oils

5.3.1 Fuel oil characteristics may influence the engine exhaust gas emission; in particular, some fuel-bound nitrogen can be converted to NO_x during combustion. Therefore, the characteristics of the fuel oil used for the test are to be determined and recorded. Where a reference fuel oil is used, the reference code or specifications and the analysis of the fuel oil shall be provided.

5.3.2 The selection of the fuel oil for the test depends on the purpose of the test. If a suitable reference fuel oil is not available, it is recommended to use a DM-grade (distillate) marine fuel specified in ISO 8217:2005, with properties suitable for the engine type. In case a DM-grade fuel oil is not available, a RM-grade (residual) fuel oil according to ISO 8217:2005 shall be used. The fuel oil shall be analysed for its composition of all components necessary for a clear specification and determination of DM- or RM-grade. The nitrogen content shall also be determined. The fuel oil used during the parent engine test shall be sampled during the test.

5.3.3 The fuel oil temperature shall be in accordance with the manufacturer's recommendations. The fuel oil temperature shall be measured at the inlet to the fuel injection pump, or as specified by the manufacturer, and the temperature and location of measurement recorded.

5.3.4 Dual fuel engines using liquid fuel as pilot fuel shall be tested using maximum liquid to gas fuel ratio. The liquid fraction of the fuel shall comply with 5.3.1, 5.3.2 and 5.3.3.

5.4 Measurement equipment and data to be measured

5.4.1 The emission of gaseous components by the engine submitted for testing shall be measured by the methods described in appendix III of this Code that describe the recommended analytical systems for the gaseous emissions.

5.4.2 Other systems or analysers may, subject to the approval of the Administration, be accepted if they yield equivalent results to that of the equipment referenced in 5.4.1. In establishing equivalency it shall be demonstrated that the proposed alternative systems or analysers would, as qualified by using recognized national or international standards, yield equivalent results when used to measure diesel engine exhaust emission concentrations in terms of the requirements referenced in 5.4.1.

5.4.3 For introduction of a new system the determination of equivalency shall be based upon the calculation of repeatability and reproducibility, as described in ISO 5725-1 and ISO 5725-2, or any other comparable recognized standard.

5.4.4 This Code does not contain details of flow, pressure, and temperature measuring equipment. Instead, only the accuracy requirements of such equipment necessary for conducting an emissions test are given in 1.3.1 of appendix IV of this Code.

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5.4.5 *Dynamometer specification*

5.4.5.1 An engine dynamometer with adequate characteristics to perform the appropriate test cycle described in 3.2 shall be used.

5.4.5.2 The instrumentation for torque and speed measurement shall allow the measurement accuracy of the shaft power within the given limits. Additional calculations may be necessary.

5.4.5.3 The accuracy of the measuring equipment shall be such that the maximum permissible deviations given in 1.3.1 of appendix IV of this Code are not exceeded.

5.5 Determination of exhaust gas flow

5.5.1 The exhaust gas flow shall be determined by one of the methods specified in 5.5.2, 5.5.3 or 5.5.4.

5.5.2 *Direct measurement method*

5.5.2.1 This method involves the direct measurement of the exhaust flow by flow nozzle or equivalent metering system and shall be in accordance with a recognized international standard.

Note: Direct gaseous flow measurement is a difficult task. Precautions shall be taken to avoid measurement errors which will result in emission value errors.

5.5.3 *Air and fuel measurement method*

5.5.3.1 The method for determining exhaust emission flow using the air and fuel measurement method shall be conducted in accordance with a recognized international standard.

5.5.3.2 This involves measurement of the air flow and the fuel flow. Air flow-meters and fuel flow-meters with an accuracy defined in 1.3.1 of appendix IV of this Code shall be used.

5.5.3.3 The exhaust gas flow shall be calculated as follows:

$$q_{mew} = q_{maw} + q_{mf} \qquad (4)$$

5.5.3.4 The air flow-meter shall meet the accuracy specifications of appendix IV of this Code, the CO_2 analyser used shall meet the specifications of appendix III of this Code, and the total system shall meet the accuracy specifications for the exhaust gas flow as given in appendix IV of this Code.

5.5.4 *Fuel flow and carbon balance method*

5.5.4.1 This involves exhaust mass flow rate calculation from fuel consumption, fuel composition and exhaust gas concentrations using the carbon balance method, as specified in appendix VI of this Code.

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5.6 Permissible deviations of instruments for engine-related parameters and other essential parameters

5.6.1 The calibration of all measuring instruments including both the measuring instruments as detailed under appendix IV of this Code and additional measuring instruments required in order to define an engine's NO_x emission performance, for example the measurement of peak cylinder or charge air pressures, shall be traceable to standards recognized by the Administration and shall comply with the requirements as set out in 1.3.1 of appendix IV of this Code.

5.7 Analysers for determination of the gaseous components

5.7.1 The analysers to determine the gaseous emissions shall meet the specifications as set out in appendix III of this Code.

5.8 Calibration of the analytical instruments

5.8.1 Each analyser used for the measurement of an engine's gaseous emissions shall be calibrated in accordance with the requirements of appendix IV of this Code.

5.9 Test run

5.9.1 *General*

5.9.1.1 Detailed descriptions of the recommended sampling and analysing systems are contained in 5.9.2 to 5.9.4 and appendix III of this Code. Since various configurations may produce equivalent results, exact conformance with these figures is not required. Additional components, such as instruments, valves, solenoids, pumps, and switches, may be used to provide additional information and coordinate the functions of the component systems. Other components which are not needed to maintain the accuracy on some systems may, with the agreement of the Administration, be excluded if their exclusion is based upon good engineering judgement.

5.9.1.2 The treatment of inlet restriction (naturally aspirated engines) or charge air pressure (turbo-charged engines) and exhaust back pressure shall be in accordance with 5.2.4 and 5.2.5 respectively.

5.9.1.3 In the case of a pressure charged engine, the inlet restriction conditions shall be taken as the condition with a clean air inlet filter and the pressure charging system working within the bounds as declared, or to be established, for the engine family or engine group to be represented by the parent engine test result.

5.9.2 *Main exhaust components: CO, CO_2, HC, NO_x and O_2*

5.9.2.1 An analytical system for the determination of the gaseous emissions in the raw exhaust gas shall be based on the use of analysers given in 5.4.

5.9.2.2 For the raw exhaust gas, the sample for all components may be taken with one sampling probe or with two sampling probes located in close proximity and internally split to the different analysers. Care must be taken that no condensation of exhaust components (including water and sulphuric acid) occurs at any point of the analytical system.

5.9.2.3 Specifications and calibration of these analysers shall be as set out in appendices III and IV of this Code, respectively.

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5.9.3 *Sampling for gaseous emissions*

5.9.3.1 The sampling probes for the gaseous emissions shall be fitted at least 10 pipe diameters after the outlet of the engine, turbocharger, or last after-treatment device, whichever is furthest downstream, but also at least 0.5 m or 3 pipe diameters upstream of the exit of the exhaust gas system, whichever is greater. For a short exhaust system that does not have a location that meets both of these specifications, an alternative sample probe location shall be subject to approval by the Administration.

5.9.3.2 The exhaust gas temperature shall be at least 190°C at the HC sample probe, and at least 70°C at the sample probes for other measured gas species where they are separate from the HC sample probe.

5.9.3.3 In the case of a multi-cylinder engine with a branched exhaust manifold, the inlet of the probe shall be located sufficiently far downstream so as to ensure that the sample is representative of the average exhaust emissions from all cylinders. In the case of a multi-cylinder engine having distinct groups of manifolds, it is permissible to acquire a sample from each group individually and calculate an average exhaust emission. Alternatively, it would also be permissible to acquire a sample from a single group to represent the average exhaust emission provided that it can be justified to the Administration that the emissions from other groups are identical. Other methods, subject to the approval of the Administration, that have been shown to correlate with the above methods may be used. For exhaust emission calculation, the total exhaust mass flow shall be used.

5.9.3.4 The exhaust gas sampling system shall be leakage tested in accordance with section 4 of appendix IV of this Code.

5.9.3.5 If the composition of the exhaust gas is influenced by any exhaust after-treatment system, the exhaust gas sample shall be taken downstream of that device.

5.9.3.6 The inlet of the probe shall be located as to avoid ingestion of water that is injected into the exhaust system for the purpose of cooling, tuning or noise reduction.

5.9.4 *Checking of the analysers*

5.9.4.1 The emission analysers shall be set at zero and spanned in accordance with section 6 of appendix IV of this Code.

5.9.5 *Test cycles*

5.9.5.1 An engine shall be tested in accordance with the test cycles as defined in 3.2. This takes into account the variations in engine application.

5.9.6 *Test sequence*

5.9.6.1 After the procedures in 5.9.1 to 5.9.5 have been completed, the test sequence shall be started. The engine shall be operated in each mode, in any order, in accordance with the appropriate test cycles defined in 3.2.

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5.9.6.2 During each mode of the test cycle after the initial transition period, the specified speed shall be held within ± 1% of the rated speed or ± 3 min^{-1}, whichever is greater, except for low idle, which shall be within the tolerances declared by the manufacturer. The specified torque shall be held so that the average over the period during which the measurements are being taken is within ± 2% of the rated torque at the engine's rated speed.

5.9.7 *Analyser response*

5.9.7.1 When stabilized, the output of the analysers shall be recorded both during the test and during all zero and span response checks, using a data acquisition system or a strip chart recorder. The recording period shall not be less than 10 minutes when analysing exhaust gas or not less than 3 minutes for each zero and span response check. For data acquisition systems, a minimum sampling frequency of 3 per minute shall be used. Measured concentrations of CO, HC and NO_x are to be recorded in terms of, or equivalent to, ppm to at least the nearest whole number. Measured concentrations of CO_2 and O_2 are to be recorded in terms of, or equivalent to, % to not fewer than two decimal places.

5.9.8 *Engine conditions*

5.9.8.1 The engine speed, load and other essential parameters shall be measured at each mode point only after the engine has been stabilized. The exhaust gas flow shall be measured or calculated and recorded.

5.9.9 *Re-checking the analysers*

5.9.9.1 After the emission test, the zero and span responses of the analysers shall be re-checked using a zero gas and the same span gas as used prior to the measurements. The test shall be considered acceptable if:

.1 the difference between the responses to the zero gas before and after the test is less than 2% of the initial span gas concentration; and

.2 the difference between the responses to the span gas before and after the test is less than 2% of the initial span gas concentration.

5.9.9.2 Zero- and span-drift correction shall not be applied to the analyser responses recorded in accordance with 5.9.7.

5.10 Test report

5.10.1 For every individual engine or parent engine tested to establish an engine family or engine group, the engine manufacturer shall prepare a test report that shall contain the necessary data to fully define the engine performance and enable calculation of the gaseous emissions including the data as set out in section 1 of appendix V of this Code. The original of the test report shall be maintained on file with the engine manufacturer and a certified true copy shall be maintained on file by the Administration.

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5.11 Data evaluation for gaseous emissions

5.11.1 For the evaluation of the gaseous emissions, the data recorded for at least the last 60 seconds of each mode shall be averaged, and the concentrations of CO, CO_2, HC, NO, and O_2 during each mode shall be determined from the averaged recorded data and the corresponding zero and span check data. The averaged results shall be given in terms of % to not fewer than two decimal places for CO_2 and O_2 species and in terms of ppm to at least the nearest whole number for CO, HC and NO_x species.

5.12 Calculation of the gaseous emissions

5.12.1 The final results for the test report shall be determined by following the steps in 5.12.2 to 5.12.6.

5.12.2 *Determination of the exhaust gas flow*

5.12.2.1 The exhaust gas flow rate (q_{mew}) shall be determined for each mode in accordance with one of the methods described in 5.5.2 to 5.5.4.

5.12.3 *Dry/wet correction*

5.12.3.1 If the emissions are not measured on a wet basis, the measured concentration shall be converted to a wet basis according to the following formulae:

$$c_w = k_w \cdot c_d \tag{5}$$

5.12.3.2 For the raw exhaust gas:

.1 Complete combustion where exhaust gas flow is to be determined in accordance with direct measurement method in 5.5.2 or air and fuel measurement method in 5.5.3 either of the following formulae shall be used:

$$k_{w,1} = \left(1 - \frac{1.2442 \cdot H_a + 111.19 \cdot w_{ALF} \cdot \frac{q_{maf}}{q_{mad}}}{773.4 + 1.2442 \cdot H_a + \frac{q_{mf}}{q_{mad}} \cdot f_{fs} \cdot 1000} \right) \cdot 1.008 \tag{6}$$

or

$$k_{w,1} = \left(1 - \frac{1.2442 \cdot H_a + 111.19 \cdot w_{ALF} \cdot \frac{q_{maf}}{q_{mad}}}{773.4 + 1.2442 \cdot H_a + \frac{q_{mf}}{q_{mad}} \cdot f_{fs} \cdot 1000} \right) \Bigg/ \left(1 - \frac{p_r}{p_b} \right) \tag{7}$$

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with:

$f_{fw} = 0.055594 \cdot w_{ALF} + 0.0080021 \cdot w_{DEL} + 0.0070046 \cdot w_{EPS}$ (8)

H_a is the absolute humidity of intake air, in g water per kg dry air

Note: H_a may be derived from relative humidity measurement, dewpoint measurement, vapour pressure measurement or dry/wet bulb measurement using the generally accepted formulae.

$$H_a = 6.22 \cdot p_a \cdot R_a / (p_b - 0.01 \cdot R_a \cdot p_a) \quad (9)$$

where:

p_a = saturation vapour pressure of the intake air, kPa

$$p_a = (4.856884 + 0.2660089 \cdot t_a + 0.01688919 \cdot t_a^2 - 7.477123 \cdot 10^{-5} \cdot t_a^3 + 8.10525 \cdot 10^{-6} \cdot t_a^4 - 3.115221 \cdot 10^{-8} \cdot t_a^5) \cdot (101.32 / 760) \quad (10)$$

with:

t_a = temperature of the intake air, °C ; $t_a = T_a - 273.15$

p_b = total barometric pressure, kPa

p_v = water vapour pressure after cooling bath of the analysis system, kPa

p_r = 0.76 kPa for cooling bath temperature 3°C

.2 Incomplete combustion, CO more than 100 ppm or HC more than 100 ppmC at one or more mode points, where exhaust gas flow is determined in accordance with direct measurement method 5.5.2, air and fuel measurement method 5.5.3 and in all cases where the carbon-balance method 5.5.4 is used – the following equation shall be used:

Note: The unit for the CO and CO_2 concentrations in (11) and (13) is %.

$$k_{we2} = \frac{1}{1 + \alpha \cdot 0.005 \cdot (c_{CO2} + c_{CO}) - 0.01 \cdot c_{H2} + k_{w2} \cdot \frac{p_r}{p_b}} \quad (11)$$

with:

$$\alpha = 11.9164 \cdot \frac{w_{ALF}}{w_{BET}} \quad (12)$$

$$c_{H2} = \frac{0.5 \cdot \alpha \cdot c_{CO2} \cdot (c_{CO} + c_{CO2})}{c_{CO} + 3 \cdot c_{CO2}} \quad (13)$$

$$k_{w2} = \frac{1.608 \cdot H_a}{1000 + (1.608 \cdot H_a)} \quad (14)$$

5.12.3.3 For the intake air:

$$k_{ww} = 1 - k_{w2} \quad (15)$$

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5.12.4 *NO_x correction for humidity and temperature*

5.12.4.1 As the NO_x emission depends on ambient air conditions, the NO_x concentration shall be corrected for ambient air temperature and humidity with the factors in accordance with 5.12.4.5 or 5.12.4.6 as applicable.

5.12.4.2 Other reference values for humidity instead of 10.71 g/kg at the reference temperature of 25°C shall not be used.

5.12.4.3 Other correction formulae may be used if they can be justified, validated and are approved by the Administration.

5.12.4.4 Water or steam injected into the charge air (air humidification) is considered an emission control device and shall therefore not be taken into account for humidity correction. Water that condensates in the charge cooler will change the humidity of the charge air and therefore shall be taken into account for humidity correction.

5.12.4.5 For compression ignition engines:

$$k_{hd} = \frac{1}{1 - 0.0182 \cdot (H_a - 10.71) + 0.0045 \cdot (T_a - 298)} \quad (16)$$

where:

T_a = the temperature of the air at the inlet to the air filter in K,

H_a = the humidity of the intake air at the inlet to the air filter in g water per kg dry air.

5.12.4.6 For compression ignition engines with intermediate air cooler the following alternative equation shall be used:

$$k_{hd} = \frac{1}{1 - 0.012 \cdot (H_a - 10.71) - 0.00275 \cdot (T_a - 298) + 0.00285 \cdot (T_{SC} - T_{SCRef})} \quad (17)$$

where:

T_{SC} is the temperature of the charge air;

T_{SCRef} is the temperature of the charge air at each mode point corresponding to a seawater temperature of 25°C as specified in 5.2.2. T_{SCRef} is to be specified by the manufacturer

To take the humidity in the charge air into account, the following consideration is added:

H_{SC} = humidity of the charge air, g water per kg dry air in which:

$H_{SC} = 6.22 \cdot p_{SC} \cdot 100 / (p_C - p_{SC})$

where:

p_{SC} = saturation vapour pressure of the charge air, kPa

p_C = charge air pressure, kPa

However if $H_a \geq H_{SC}$, then H_{SC} shall be used in place of H_a in formula (17).

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5.12.5 *Calculation of the emission mass flow rates*

5.12.5.1 The emission mass flow rate of the respective component in the raw exhaust gas for each mode shall be calculated in accordance with 5.12.5.2 from the measured concentration as obtained in accordance with 5.11.1, the applicable u_{gas} value from table 5 and the exhaust gas mass flow rate in accordance with 5.5.

Table 5
Coefficient u_{gas} and fuel-specific parameters for raw exhaust gas

Gas		NO_x	CO	HC	CO_2	O_2
ρ_{gas} kg/m³		2.053	1.250	*	1.9636	1.4277
	ρ_e **	Coefficient u_{gas} ***				
Fuel oil	1.2943	0.001586	0.000966	0.000479	0.001517	0.001105

* depending on fuel
** ρ_e is the normal density of the exhaust gas
*** at $\lambda = 2$, wet air, 273 K, 101.3 kPa

Values for u given in table 5 are based on ideal gas properties.

5.12.5.2 The following formulae shall be applied:

$$q_{mgas} = u_{gas} \cdot c_{gas} \cdot q_{mew} \cdot k_{hd} \text{ (for } NO_x\text{)} \quad (18)$$

$$q_{mgas} = u_{gas} \cdot c_{gas} \cdot q_{mew} \text{ (for other gases)} \quad (18a)$$

where:

q_{mgas} = emission mass flow rate of individual gas, g/h
u_{gas} = ratio between density of exhaust component and density of exhaust gas, see table 5
c_{gas} = concentration of the respective component in the raw exhaust gas, ppm, wet
q_{mew} = exhaust mass flow, kg/h, wet
k_{hd} = NO_x humidity correction factor

Note: In the case of CO_2 and O_2 measurement, the concentration will normally be reported in terms of %. With regard to the application of formula 18a, these concentrations will need to be expressed in ppm. 1.0 % = 10000 ppm.

5.12.5.3 For the calculation of NO_x, the humidity correction factor k_{hd} as determined according to 5.12.4 shall be used.

5.12.5.4 The measured concentration shall be converted to a wet basis according to 5.12.3 if not already measured on a wet basis.

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5.12.6 *Calculation of the specific emission*

5.12.6.1 The emission shall be calculated for all individual components in accordance with the following:

$$\text{gas}_x = \frac{\sum_{i=1}^{n} \left(q_{mgasi} \cdot W_{Fi} \right)}{\sum_{i=1}^{n} \left(P_i \cdot W_{Fi} \right)} \qquad (19)$$

where:

$$P = P_m + P_{aux} \qquad (20)$$

and

q_{mgas} is the mass flow of individual gas;
P_m is the measured power of the individual mode;
P_{aux} is the power of the auxiliaries fitted to the engine of the individual mode.

5.12.6.2 The weighting factors and the number of modes (n) used in the above calculation shall be according to the provisions of 3.2.

5.12.6.3 The resulting average weighted NO_x emission value for the engine as determined by formula (19) shall then be compared to the applicable emission limit given in regulation 13 to determine if the engine is in compliance.

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Chapter 6

Procedures for demonstrating compliance with NO_x emission limits on board

6.1 General

6.1.1 After installation of a pre-certificated engine on board a ship, every marine diesel engine shall have an onboard verification survey conducted as specified in 2.1.1.2 to 2.1.1.4 to verify that the engine continues to comply with the applicable NO_x emission limit contained in regulation 13. Such verification of compliance shall be determined by using one of the following methods:

.1 engine parameter check method in accordance with 6.2 to verify that an engine's component, settings and operating values have not deviated from the specifications in the engine's technical file;

.2 simplified measurement method in accordance with 6.3; or

.3 direct measurement and monitoring method in accordance with 6.4.

6.2 Engine parameter check method

6.2.1 *General*

6.2.1.1 Engines that meet the following conditions shall be eligible for an engine parameter check method:

.1 engines that have received a pre-certificate (EIAPP Certificate) on the test bed and those that received a certificate (EIAPP Certificate) following an initial certification survey in accordance with 2.2.4; and

.2 engines that have undergone modifications or adjustments to the designated engine components and adjustable features since they were last surveyed.

6.2.1.2 When a diesel engine is designed to run within the applicable NO_x emission limit, it is most likely that within the marine life of the engine, the NO_x emission limit may be adhered to. The applicable NO_x emission limit may, however, be contravened by adjustments or modification to the engine. Therefore, an engine parameter check method shall be used to verify whether the engine is still within the applicable NO_x emission limit.

6.2.1.3 Engine component checks, including checks of settings and an engine's operating values, are intended to provide an easy means of deducing the emissions performance of the engine for the purpose of verification that an engine with no, or minor, adjustments or modifications complies with the applicable NO_x emission limit. Where the measurement of some operating values is required, the calibration of the equipment used for those measurements shall be in accordance with the requirements of appendix IV of this Code.

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6.2.1.4 The purpose of such checks is to provide a ready means of determining that an engine is correctly adjusted in accordance with the manufacturer's specification and remains in a condition of adjustment consistent with the initial certification by the Administration as being in compliance with regulation 13 as applicable.

6.2.1.5 If an electronic engine management system is employed, this shall be evaluated against the original settings to ensure that appropriate parameters are operating within "as-built" limits.

6.2.1.6 For the purpose of assessing compliance with regulation 13, it is not always necessary to measure the NO_x emissions to know that an engine, not equipped with an after-treatment device, is likely to comply with the applicable NO_x emission limit. It may be sufficient to know that the present state of the engine corresponds to the specified components, calibration or parameter adjustment state at the time of initial certification. If the results of an engine parameter check method indicate the likelihood that the engine complies with the applicable NO_x mission limit, the engine may be re-certified without direct NO_x measurement.

6.2.1.7 For an engine equipped with a NO_x-reducing device, it will be necessary to check the operation of the device as part of the engine parameter check method.

6.2.2 *Documentation for an engine parameter check method*

6.2.2.1 Every marine diesel engine shall have a technical file as required in 2.3.4 that identifies the engine's components, settings or operating values that influence exhaust emissions and must be checked to ensure compliance.

6.2.2.2 An engine's technical file shall contain all applicable information, relevant to the NO_x emission performance of the engine, on the designated engine's components, adjustable features and parameters at the time of the engine's pre-certification or onboard certification, whichever occurred first.

6.2.2.3 Dependent on the specific design of the particular engine, different onboard NO_x-influencing modifications and adjustments are possible and usual. These include the engine parameters as follows:

.1 injection timing,
.2 injection nozzle,
.3 injection pump,
.4 fuel cam,
.5 injection pressure for common rail systems,
.6 combustion chamber,
.7 compression ratio,
.8 turbocharger type and build,
.9 charge air cooler, charge air pre-heater,
.10 valve timing,
.11 NO_x abatement equipment "water injection",
.12 NO_x abatement equipment "emulsified fuel" (fuel water emulsion),
.13 NO_x abatement equipment "exhaust gas recirculation",
.14 NO_x abatement equipment "selective catalytic reduction", or
.15 other parameter(s) specified by the Administration.

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6.2.2.4 The actual technical file of an engine may, based on the recommendations of the applicant for engine certification and the approval of the Administration, include less components and/or parameters than discussed in section 6.2.2.3 depending on the particular engine and the specific design.

6.2.2.5 For some parameters, different survey possibilities exist. As approved by the Administration, the shipowner, supported by the applicant for engine certification, may choose what method is applicable. Any one of, or a combination of, the methods listed in the checklist for the engine parameter check method given in appendix VII of this Code may be sufficient to show compliance.

6.2.2.6 Technical documentation in respect of engine component modification for inclusion in an engine's technical file shall include details of that modification and its influence on NO_x emissions, and it shall be supplied at the time when the modification is carried out. Test-bed data obtained from a later engine that is within the applicable range of the engine group concept may be accepted.

6.2.2.7 The shipowner or person responsible for a ship equipped with a marine diesel engine required to undergo an engine parameter check method shall maintain on board the following documentation in relation to the onboard NO_x verification procedures:

.1 a record book of engine parameters for recording all changes, including like-for-like replacements, and adjustments within the approved ranges made relative to an engine's components and settings;

.2 an engine parameter list of an engine's designated components and settings and/or the documentation of an engine's load-dependent operating values submitted by an applicant for engine certification and approved by the Administration; and

.3 technical documentation of an engine component modification when such a modification is made to any of the engine's designated engine components.

6.2.2.8 Descriptions of any changes affecting the designated engine parameters, including adjustments, parts replacements and modifications to engine parts, shall be recorded chronologically in the record book of engine parameters. These descriptions shall be supplemented with any other applicable data used for the assessment of the engine's NO_x emissions.

6.2.3 *Procedures for an engine parameter check method*

6.2.3.1 An engine parameter check method shall be carried out using the two procedures as follows:

.1 a documentation inspection of engine parameter(s) shall be carried out in addition to other inspections and include inspection of the record book of engine parameters and verification that engine parameters are within the allowable range specified in the engine's technical file; and

.2 an actual inspection of engine components and adjustable features shall be carried out as necessary. It shall then be verified, also referring to the results of the documentation inspection, that the engine's adjustable features are within the allowable range specified in the engine's technical file.

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6.2.3.2 The surveyor shall have the option of checking one or all of the identified components, settings or operating values to ensure that the engine with no, or minor, adjustments or modifications complies with the applicable NO_x emission limit and that only components of the approved specification, as given by 2.4.1.7, are being used. Where adjustments and/or modifications in a specification are referenced in the technical file, they must fall within the range recommended by the applicant for engine certification and approved by the Administration.

6.3 Simplified measurement method

6.3.1 *General*

6.3.1.1 The following simplified test and measurement procedure specified in this section shall be applied only for onboard confirmation tests and renewal, annual and intermediate surveys when required. Every first engine testing on a test bed shall be carried out in accordance with the procedure specified in chapter 5. Corrections for ambient air humidity and temperature in accordance with 5.12.4 are essential, as ships are sailing in cold/hot and dry/humid climates, which may cause a difference in NO_x emissions.

6.3.1.2 To gain meaningful results for onboard confirmation tests and onboard renewal, annual and intermediate surveys, as an absolute minimum, the gaseous emission concentrations of NO, and CO_2 shall be measured in accordance with the appropriate test cycle. The weighting factors (W_F) and the number of modes (n) used in the calculation shall be in accordance with 3.2.

6.3.1.3 The engine torque and engine speed shall be measured but, to simplify the procedure, the permissible deviations of instruments (see 6.3.7) for measurement of engine-related parameters for onboard verification purposes are different from those permissible deviations allowed under the test-bed testing method. If it is difficult to measure the torque directly, the brake power may be estimated by any other means recommended by the applicant for engine certification and approved by the Administration.

6.3.1.4 In practical cases, it is often impossible to measure the fuel oil consumption once an engine has been installed on board a ship. To simplify the procedure on board, the results of the measurement of the fuel oil consumption from an engine's pre-certification test-bed testing may be accepted. In such cases, especially concerning residual fuel oil operation (RM-grade fuel oil according to ISO 8217:2005), an estimation with a corresponding estimated error shall be made. Since the fuel oil flow rate used in the calculation (q_{mf}) must relate to the fuel oil composition determined in respect of the fuel sample drawn during the test, the measurement of q_{mf} from the test-bed testing shall be corrected for any difference in net calorific values between the test bed and test fuel oils. The consequences of such an error on the final emissions shall be calculated and reported with the results of the emission measurement.

6.3.1.5 Except as otherwise specified, all results of measurements, test data or calculations required by this chapter shall be recorded in the engine's test report in accordance with 5.10.

6.3.2 *Engine parameters to be measured and recorded*

6.3.2.1 Table 6 lists the engine parameters that shall be measured and recorded during onboard verification procedures.

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Table 6
Engine parameters to be measured and recorded

Symbol	Parameter	Dimension
H_a	Absolute humidity (mass of engine intake air water content related to mass of dry air)	g/kg
$n_{(i)}$	Engine speed (at the i^{th} mode during the cycle)	min^{-1}
$n_{turbo,i}$	Turbocharger speed (if applicable) (at the i^{th} mode during the cycle)	min^{-1}
p_b	Total barometric pressure (in ISO 3046-1, 1995: p_x = Px = site ambient total pressure)	kPa
$p_{CA,i}$	Charge air pressure after the charge air cooler (at the i^{th} mode during the cycle)	kPa
P_i	Brake power (at the i^{th} mode during the cycle)	kW
$q_{mf,i}$	Fuel oil flow (at the i^{th} mode during the cycle)	kg/h
s_i	Fuel rack position (of each cylinder, if applicable) (at the i^{th} mode during the cycle)	
T_a	Intake air temperature at air inlet (in ISO 3046-1, 1995: T_x = TTx = site ambient thermodynamic air temperature)	K
$T_{SC,i}$	Charge air temperature after the charge air cooler (if applicable) (at the i^{th} mode during the cycle)	K
T_{cacin}	Charge air cooler, coolant inlet temperature	°C
T_{cacout}	Charge air cooler, coolant outlet temperature	°C
$T_{Exh,i}$	Exhaust gas temperature at the sampling point (at the i^{th} mode during the cycle)	°C
T_{Fuel}	Fuel oil temperature before the engine	°C
T_{Sea}	Seawater temperature	°C

6.3.3 *Brake power*

6.3.3.1 The point regarding the ability to obtain the required data during onboard NO_x testing is particularly relevant to brake power. Although the case of directly coupled gearboxes is considered in chapter 5 (5.1.7), an engine, as may be presented on board, could, in many applications, be arranged such that the measurements of torque (as obtained from a specially installed strain gauge) may not be possible due to the absence of a clear shaft. Principal in this context would be generators, but engines may also be coupled to pumps, hydraulic units, compressors, etc.

6.3.3.2 The engines driving the machinery given in 6.3.3.1 would typically have been tested against a water brake at the manufacture stage prior to the permanent connection of the power consuming unit when installed on board. For generators it should not pose a problem to use voltage and amperage measurements together with a manufacturer's declared generator efficiency. For propeller-law-governed equipment, a declared speed power curve may be applied together with ensured capability to measure engine speed, either from the free end or by ratio of, for example, the camshaft speed.

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6.3.4 *Test fuel oils*

6.3.4.1 Generally all emission measurements shall be carried out with the engine running on marine diesel fuel oil of an ISO 8217:2005, DM-grade.

6.3.4.2 To avoid an unacceptable burden to the shipowner, the measurements for confirmation tests or re-surveys may, based on the recommendation of the applicant for engine certification and the approval of the Administration, be allowed with an engine running on residual fuel oil of an ISO 8217:2005, RM-grade. In such a case the fuel-bound nitrogen and the ignition quality of the fuel oil may have an influence on the NO_x emissions of the engine.

6.3.5 *Sampling for gaseous emissions*

6.3.5.1 The general requirements described in 5.9.3 shall be also applied for onboard measurements.

6.3.5.2 The installation on board of all engines shall be such that these tests may be performed safely and with minimal interference to the engine. Adequate arrangements for the sampling of the exhaust gas and the ability to obtain the required data shall be provided on board a ship. The uptakes of all engines shall be fitted with an accessible standard sampling point. An example of a sample point connecting flange is given in section 5 of appendix VIII of this Code.

6.3.6 *Measurement equipment and data to be measured*

6.3.6.1 The emission of gaseous pollutants shall be measured by the methods described in chapter 5.

6.3.7 *Permissible deviation of instruments for engine-related parameters and other essential parameters*

6.3.7.1 Tables 3 and 4 contained in section 1.3 of appendix IV of this Code list the permissible deviation of instruments to be used in the measurement of engine-related parameters and other essential parameters during onboard verification procedures.

6.3.8 *Determination of the gaseous components*

6.3.8.1 The analytical measuring equipment and the methods described in chapter 5 shall be applied.

6.3.9 *Test cycles*

6.3.9.1 Test cycles used on board shall conform to the applicable test cycles specified in 3.2.

6.3.9.2 Engine operation on board under a test cycle specified in 3.2 may not always be possible, but the test procedure shall, based on the recommendation of the engine manufacturer and approval by the Administration, be as close as possible to the procedure defined in 3.2. Therefore, values measured in this case may not be directly comparable with test-bed results because measured values are very much dependent on the test cycles.

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6.2.9.3 If the number of measuring points on board is different than those on the test bed, the measuring points and the weighting factors shall be in accordance with the recommendations of the applicant for engine certification and approved by the Administration, taking into account the provisions of 6.4.6.

6.3.10 *Calculation of gaseous emissions*

6.3.10.1 The calculation procedure specified in chapter 5 shall be applied, taking into account the special requirements of this simplified measurement procedure.

6.3.11 *Allowances*

6.3.11.1 Due to the possible deviations when applying the simplified measurement procedures of this chapter on board a ship, an allowance of 10% of the applicable limit value may be accepted for confirmation tests and renewal, annual and intermediate surveys only.

6.3.11.2 The NO_x emission of an engine may vary depending on the ignition quality of the fuel oil and the fuel-bound nitrogen. If there is insufficient information available on the influence of the ignition quality on the NO_x formation during the combustion process and the fuel-bound nitrogen conversion rate also depends on the engine efficiency, an allowance of 10% may be granted for an onboard test run carried out on an RM-grade fuel oil (ISO 8217:2005), except that there will be no allowance for the pre-certification test on board. The fuel oil used shall be analysed for its composition of carbon, hydrogen, nitrogen, sulphur and, to the extent given in ISO 8217:2005, any additional components necessary for a clear specification of the fuel oil.

6.3.11.3 In no case shall the total granted allowance for both the simplification of measurements on board and the use of residual fuel oil of an ISO 8217:2005, RM-grade fuel oil, exceed 15% of the applicable limit value.

6.4 Direct measurement and monitoring method

6.4.1 *General*

6.4.1.1 The following direct measurement and monitoring procedure may be applied for onboard verification at renewal, annual and intermediate surveys.

6.4.1.2 Due attention is to be given to the safety implications related to the handling and proximity of exhaust gases, the measurement equipment and the storage and use of cylindered pure and calibration gases. Sampling positions and access staging shall be such that this monitoring may be performed safely and will not interfere with the engine.

6.4.2 *Emission species measurement*

6.4.2.1 Onboard NO_x monitoring includes, as an absolute minimum, the measurement of gaseous emission concentrations of NO_x (as $NO + NO_2$).

6.4.2.2 If exhaust gas mass flow is to be determined in accordance with the carbon balance method in accordance with appendix VI of this Code, then CO_2 shall also be measured. Additionally CO, HC and O_2 may be measured.

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6.4.3 *Engine performance measurements*

6.4.3.1 Table 7 lists the engine performance parameters that shall be measured, or calculated, and recorded at each mode point during onboard NO_x monitoring.

Table 7
Engine parameters to be measured and recorded

Symbol	Parameter	Dimension
n_d	Engine speed	min^{-1}
p_{ir}	Charge air pressure at receiver	kPa
P	Brake power (as specified below)	kW
P_{aux}	Auxiliary power (if relevant)	kW
T_{ac}	Charge air temperature at receiver (if applicable)	K
T_{cwcin}	Charge air cooler, coolant inlet temperature (if applicable)	°C
T_{cwcout}	Charge air cooler, coolant outlet temperature (if applicable)	°C
T_{Sea}	Seawater temperature (if applicable)	°C
q_{mf}	Fuel oil flow (as specified below)	kg/h

6.4.3.2 Other engine settings necessary to define engine-operating conditions, e.g., waste-gate, charge air bypass, turbocharger status, shall be determined and recorded.

6.4.3.3 The settings and operating conditions of any NO_x-reducing devices shall be determined and recorded.

6.4.3.4 If it is difficult to measure power directly, uncorrected brake power may be estimated by any other means as approved by the Administration. Possible methods to determine brake power include, but are not limited to:

.1 indirect measurement in accordance with 6.3.3; or

.2 by estimation from nomographs.

6.4.3.5 The fuel oil flow (actual consumption rate) shall be determined by:

.1 direct measurement; or

.2 test-bed data in accordance with 6.3.1.4.

6.4.4 *Ambient condition measurements*

6.4.4.1 Table 8 lists the ambient condition parameters that shall be measured, or calculated, and recorded at each mode point during onboard NO_x monitoring.

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Table 8
Ambient condition parameters to be measured and recorded

Symbol	Parameter	Dimension
H_a	Absolute humidity (mass of engine intake air water content related to mass of dry air)	g/kg
p_b	Total barometric pressure (in ISO 3046-1, 1995: p_x P_x=site ambient total pressure)	kPa
T_a	Temperature at air inlet (in ISO 3046-1, 1995: T_x=TT_x=site ambient thermodynamic air temperature)	K

6.4.5 *Engine performance and ambient condition monitoring equipment*

6.4.5.1 The engine performance and ambient condition monitoring equipment shall be installed and maintained in accordance with manufacturers' recommendations such that requirements of section 1.3 and tables 3 and 4 of appendix IV of this Code are met in respect of the permissible deviations.

6.4.6 *Test cycles*

6.4.6.1 Engine operation on board under a specified test cycle may not always be possible, but the test procedure, as approved by the Administration, shall be as close as possible to the procedure defined in 3.2. Therefore, values measured in this case may not be directly comparable with test-bed results because measured values are very much dependant on the test cycle.

6.4.6.2 In the case of the E3 test cycle, if the actual propeller curve differs from the E3 curve, the load point used shall be set using the engine speed, or the corresponding mean effective pressure (MEP) or mean indicated pressure (MIP), given for the relevant mode of that cycle.

6.4.6.3 Where the number of measuring points on board is different from those on the test bed, the number of measurement points and the associated revised weighting factors shall be approved by the Administration.

6.4.6.4 Further to 6.4.6.3, where the E2, E3 or D2 test cycles are applied, a minimum of load points shall be used of which the combined nominal weighting factor, as given in 3.2, is greater than 0.5.

6.4.6.5 Further to 6.4.6.3, where the C1 test cycle is applied, a minimum of one load point shall be used from each of the rated, intermediate and idle speed sections. If the number of measuring points on board is different from those on the test bed, the nominal weighting factors at each load point shall be increased proportionally in order to sum to unity (1.0).

6.4.6.6 With regard to the application of 6.4.6.3, guidance in respect of the selection of load points and revisal weighting factors is given in section 6 of appendix VIII of this Code.

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6.4.6.7 The actual load points used to demonstrate compliance shall be within ± 5% of the rated power at the modal point except in the case of 100% load, where the range shall be +0 to – 10%. For example, at the 75% load point the acceptable range shall be 70% – 80% of rated power.

6.4.6.8 At each selected load point, except idle, and after the initial transition period (if applicable), the engine power shall be maintained at the load set point within a 5% coefficient of variance (%C.O.V.) over a 10-minute interval. A worked example of the coefficient of variance calculation is given in section 7 of appendix VIII of this Code.

6.4.6.9 Regarding the C1 test cycle, the idle speed tolerance shall be declared, subject to the approval of the Administration.

6.4.7 *Test condition parameter*

6.4.7.1 The test condition parameter specified in 5.2.1 shall not apply to onboard NO_x monitoring. Data under any prevailing ambient condition shall be acceptable.

6.4.8 *Analyser in-service performance*

6.4.8.1 Analysing equipment shall be operated in accordance with manufacturer's recommendations.

6.4.8.2 Prior to measurement, zero and span values shall be checked and the analysers shall be adjusted as necessary.

6.4.8.3 After measurement, analyser zero and span values shall be verified as being within that permitted by 5.9.9.

6.4.9 *Data for emission calculation*

6.4.9.1 The output of the analysers shall be recorded both during the test and during all response checks (zero and span). These data shall be recorded on a strip chart recorder or other types of data recording devices. Data recording precision shall be in accordance with 5.9.7.1.

6.4.9.2 For the evaluation of the gaseous emissions, a 1-Hertz minimum chart reading of a stable 10-minute sampling interval of each load point shall be averaged. The average concentrations of NO_x, and, if required CO_2, and, optionally, CO, HC and O_2, shall be determined from the averaged chart readings and the corresponding calibration data.

6.4.9.3 As a minimum, emission concentrations, engine performance and ambient condition data shall be recorded over the aforementioned 10-minute period.

6.4.10 *Exhaust gas flow rate*

6.4.10.1 Exhaust gas flow rate shall be determined:

.1 in accordance with 5.5.2 or 5.5.3; or

.2 in accordance with 5.5.4 and appendix VI of this Code, with not measured species set to zero and c_{CO2a} set to 0.03%.

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6.4.11 *Fuel oil composition*

6.4.11.1 Fuel oil composition, to calculate gas mass flow wet, q_{mf}, shall be provided by one of the following:

.1 fuel oil composition, carbon, hydrogen, nitrogen and oxygen, by analysis (default oxygen value may be adopted); or

.2 default values as given in table 9.

Table 9
Default fuel oil parameters

	Carbon	Hydrogen	Nitrogen	Oxygen
	w_{DBT}	w_{ALF}	w_{DEL}	w_{EPS}
Distillate fuel oil (ISO 8217:2005, DM grade)	86.2%	13.6%	0.0%	0.0%
Residual fuel oil (ISO 8217:2005, RM grade)	86.1%	10.9%	0.4%	0.0%

6.4.12 *Dry/wet correction*

6.4.12.1 If not already measured on a wet basis, the gaseous emissions concentrations shall be converted to a wet basis according to:

.1 direct measurement of the water component; or

.2 dry/wet correction calculated in accordance with 5.12.3.

6.4.13 *NO_x correction for humidity and temperature*

6.4.13.1 NO_x correction for humidity and temperature shall be in accordance with 5.12.4. The reference charge air temperature (T_{SCRef}) shall be stated and approved by the Administration. The T_{SCRef} values are to be referenced to 25°C seawater temperature and in the application of the T_{SCRef} value due allowance shall be made for the actual seawater temperature.

6.4.14 *Calculation of emission flow rates and specific emissions*

6.4.14.1 The calculation of emission flow rates and specific emissions shall be in accordance with 5.12.5 and 5.12.6.

6.4.15 *Limit value and allowances*

6.4.15.1 In the case of the application of 6.4.6.3 the emission value obtained shall, subject to the approval of the Administration, be corrected as follows:

$$\text{Corrected gas}_x = \text{gas}_x \cdot 0.9 \qquad (21)$$

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6.4.15.2 The emission value, gas_i or corrected gas, as appropriate, shall be compared to the applicable NO_x emission limit value as given in regulation 13 together with the allowance values as given in 6.3.11.1, 6.3.11.2 and 6.3.11.3 in order to verify that an engine continues to comply with the requirements of regulation 13.

6.4.16 *Data for demonstrating compliance*

6.4.16.1 Compliance is required to be demonstrated at renewal, annual and intermediate surveys or following a substantial modification as per 1.3.2. In accordance with 2.4.5, data are required to be current; that is within 30 days. Data are required to be retained on board for at least three months. These time periods shall be taken to be when the ship is in operation. Data within that 30-day period either may be collected as a single test sequence across the required load points or may be obtained on two or more separate occasions when the engine load corresponds to that required by 6.4.6.

6.4.17 *Form of approval*

6.4.17.1 The direct measurement and monitoring method shall be documented in an onboard monitoring manual. The onboard monitoring manual shall be submitted to the Administration for approval. The approval reference of that onboard monitoring manual shall be entered under section 3 of the supplement to the EIAPP Certificate. The Administration may issue a new EIAPP Certificate, with the details in section 3 of the supplement duly amended, if the method is approved after the issue of the first EIAPP Certificate, i.e. following the pre-certification survey.

6.4.18 *Survey of equipment and method*

6.4.18.1 The survey of the direct measurement and monitoring method shall take into account, but is not limited to:

.1 the data obtained and developed from the required measurements; and

.2 the means by which those data have been obtained, taking into account the information given in the onboard monitoring manual, as required by 6.4.14.

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Chapter 7

Certification of an existing engine

7.1 Where an existing engine is to comply with regulation 13.7, then the entity responsible for obtaining emissions certification shall apply to the approving Administration for certification.

7.2 Where an application for approved method approval includes gaseous emission measurements and calculations, those are to be in accordance with chapter 5.

7.3 Emission and performance data obtained from one engine may be shown to apply to a range of engines.

7.4 The approved method for achieving compliance with regulation 13.7 shall include a copy of the approved method file that is required to accompany the engine throughout its life on board ship.

7.5 A description of the engine's onboard verification procedure shall be included in the approved method file.

7.6 After installation of the approved method, a survey shall be conducted in accordance with the approved method file. If this survey confirms compliance, the Administration shall amend the ship's IAPP Certificate accordingly.

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Appendix I

Form of EIAPP Certificate
(Refer to 2.2.10 of the NO_x Technical Code 2008)

ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.176(58) in 2008, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....
(full designation of the country)

by .....
(full designation of the competent person or organization authorized under the provisions of the Convention)

Engine manufacturer	Model number	Serial number	Test cycle(s)	Rated power (kW) and speed (rpm)	Engine approval number

THIS IS TO CERTIFY:

1 That the above-mentioned marine diesel engine has been surveyed for pre-certification in accordance with the requirements of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines 2008 made mandatory by Annex VI of the Convention; and

2 That the pre-certification survey shows that the engine, its components, adjustable features, and technical file, prior to the engine's installation and/or service on board a ship, fully comply with the applicable regulation 13 of Annex VI of the Convention.

This certificate is valid for the life of the engine subject to surveys in accordance with regulation 5 of Annex VI of the Convention, installed in ships under the authority of this Government.

Issued at:

.....
(Place of issue of certificate)

(dd/mm/yyyy) .....
(Date of issue)

.....
(Signature of duly authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

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SUPPLEMENT TO ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE (EIAPP CERTIFICATE)

RECORD OF CONSTRUCTION, TECHNICAL FILE AND MEANS OF VERIFICATION

Notes:

1 This Record and its attachments shall be permanently attached to the EIAPP Certificate. The EIAPP Certificate shall accompany the engine throughout its life and shall be available on board the ship at all times.

2 The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.

3 Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and the requirements for an engine's technical file and means of verifications refer to mandatory requirements from the revised NO_x Technical Code 2008.

1 Particulars of the engine

1.1 Name and address of manufacturer .....
1.2 Place of engine build .....
1.3 Date of engine build .....
1.4 Place of pre-certification survey .....
1.5 Date of pre-certification survey .....
1.6 Engine type and model number .....
1.7 Engine serial number .....
1.8 If applicable, the engine is a parent engine □ or a member engine □ of the following engine family □ or engine group □ .....
1.9 Individual engine or engine family/engine group details:
1.9.1 Approval reference .....
1.9.2 Rated power (kW) and rated speed (rpm) values or ranges .....
1.9.3 Test cycle(s) .....
1.9.4 Parent engine(s) test fuel oil specification .....
1.9.5 Applicable NO_x emission limit (g/kWh), regulation 13.3, 13.4, or 13.5.1 (delete as appropriate) .....
1.9.6 Parent engine(s) emission value (g/kWh) .....

2 Particulars of the technical file

The technical file, as required by chapter 2 of the NO_x Technical Code 2008, is an essential part of the EIAPP Certificate and must always accompany an engine throughout its life and always be available on board a ship.

2.1 Technical file identification/approval number .....
2.2 Technical file approval date .....

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3 Specifications for the onboard NO_x verification procedures

The specifications for the onboard NO_x verification procedures, as required by chapter 6 of the NO_x Technical Code 2008, are an essential part of the EIAPP Certificate and must always accompany an engine through its life and always be available on board a ship.

3.1 Engine parameter check method:
3.1.1 Identification/approval number .....
3.1.2 Approval date .....
3.2 Direct measurement and monitoring method:
3.2.1 Identification/approval number .....
3.2.2 Approval date .....

Alternatively the simplified measurement method in accordance with 6.3 of the NO_x Technical Code 2008 may be utilized.

Issued at:

.....

(Place of issue of certificate)

(dd/mm/yyyy) .....
(Date of issue)

.....
(Signature of duly authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

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Appendix II

Flowcharts for survey and certification of marine diesel engines
(Refer to 2.2.9 and 2.3.1.1 of the NO_x Technical Code 2008)

Guidance for compliance with survey and certification of marine diesel engines, as described in chapter 2 of this Code, is given in figures 1, 2 and 3 of this appendix:

Figure 1: Pre-certification survey at the manufacturer's facility

Figure 2: Initial survey on board a ship

Figure 3: Renewal, annual or intermediate survey on board a ship

Note: These flowcharts do not show the criteria for the certification of an existing engine as required by regulation 13.7.

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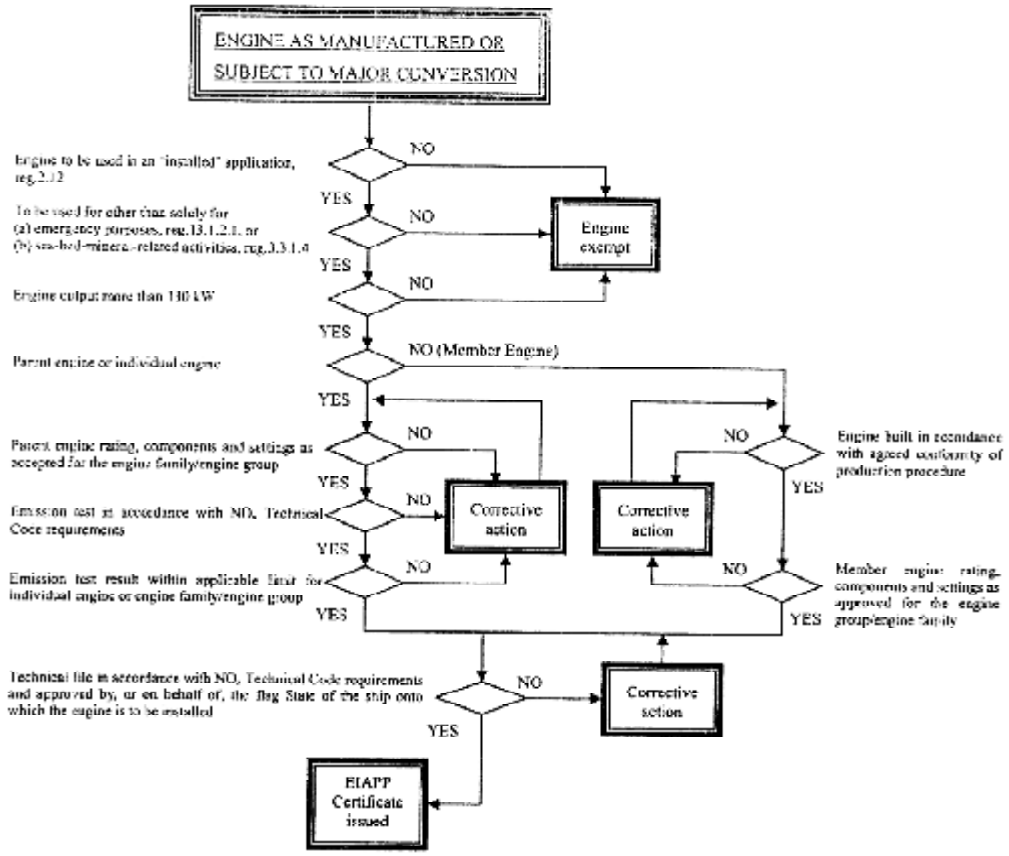

Figure 1 – Pre-certification survey at the manufacturer's facility

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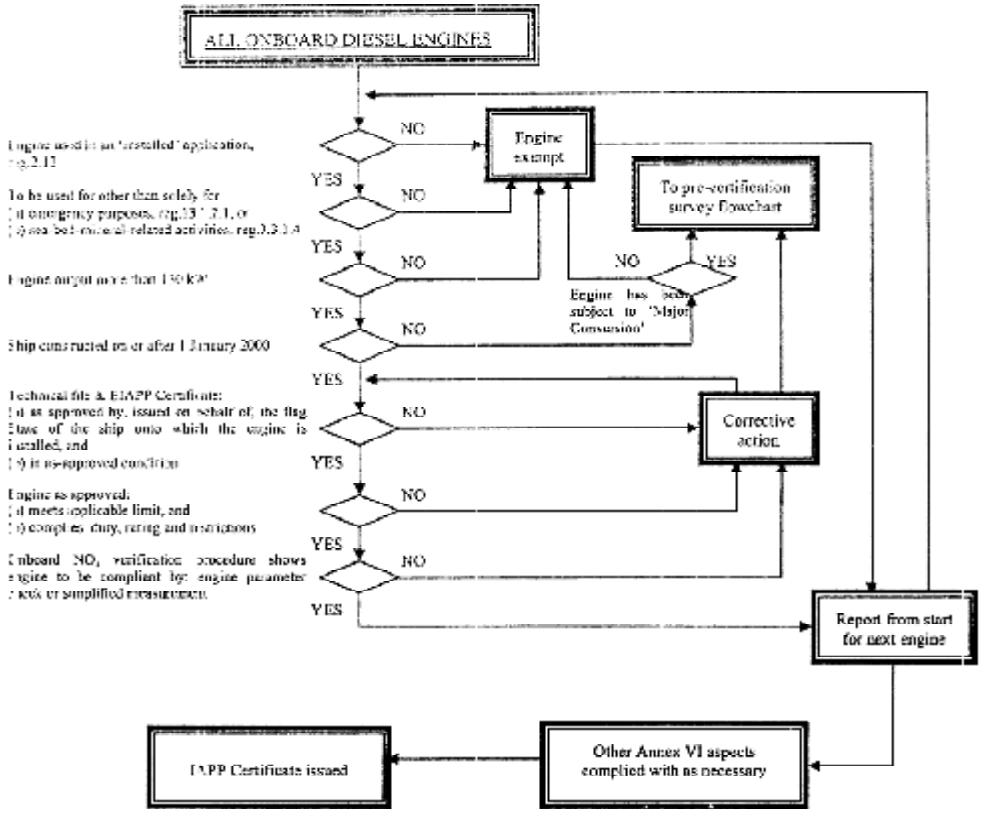

Figure 2 – Initial survey on board a ship

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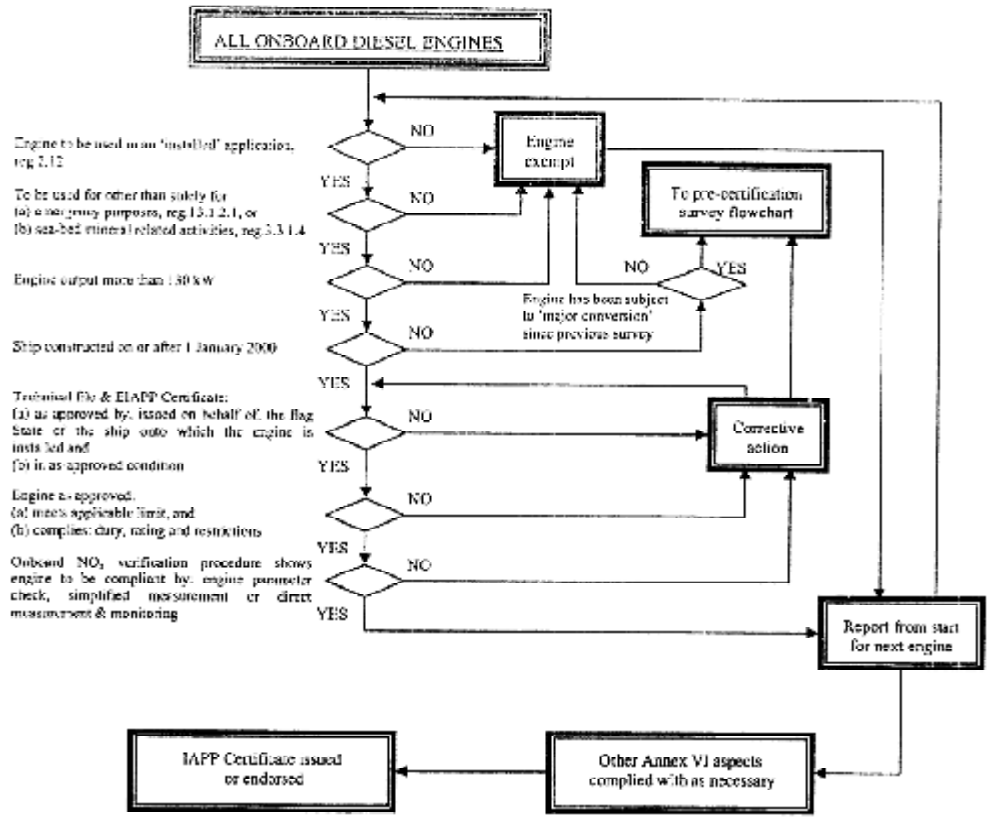

Figure 3 – Renewal, annual or intermediate survey on board a ship

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Appendix III

Specifications for analysers to be used in the determination of gaseous components of marine diesel engine emissions

(Refer to chapter 5 of the NO$_x$ Technical Code 2008)

1 General

1.1 The components included in an exhaust gas analysis system for the determination of the concentrations of CO, CO_2, NO_x, HC and O_2 are shown in figure 1. All components in the sampling gas path must be maintained at the temperatures specified for the respective systems.

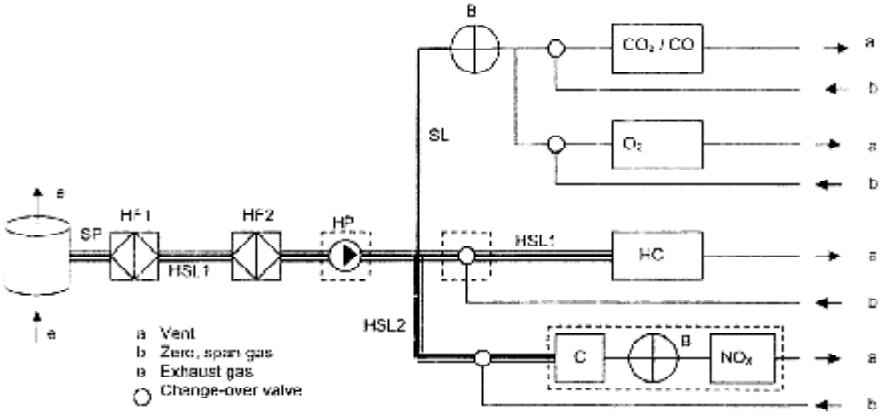

Figure 1 – Arrangement of exhaust gas analysis system

1.2 An exhaust gas analysis system shall include the following components. In accordance with chapter 5 of this Code equivalent arrangements and components may, subject to approval by the Administration, be accepted.

.1 SP – Raw exhaust gas sampling probe

A stainless steel, straight, closed-end, multi-hole probe. The inside diameter shall not be greater than the inside diameter of the sampling line. The wall thickness of the probe should not be greater than 1 mm. There should be a minimum of three holes in three different radial planes sized to sample approximately the same flow.

For the raw exhaust gas, the sample for all components may be taken with one sampling probe or with two sampling probes located in close proximity and internally split to the different analysers.

Note: If exhaust pulsations or engine vibrations are likely to affect the sampling probe, the wall thickness of the probe may be enlarged subject to the approval of the Administration.

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.2 HSL1 – Heated sampling line

The sampling line provides a gas sample from a single probe to the split point(s) and the HC analyser. The sampling line shall be made of stainless steel or polytetrafluorethylene (PTFE) and have a 4 mm minimum and a 13.5 mm maximum inside diameter.

The exhaust gas temperature at the sampling probe shall not be less than 190°C. The temperature of the exhaust gas from the sampling point to the analyser shall be maintained by using a heated filter and a heated transfer line with a wall temperature of 190°C ± 10°C.

If the temperature of the exhaust gas at the sampling probe is above 190°C, a wall temperature greater than 180°C shall be maintained.

Immediately before the heated filter and the HC analyser a gas temperature of 190°C ± 10°C shall be maintained.

.3 HSL2 – Heated NO_x sampling line

The sampling line shall be made of stainless steel or PTFE and maintain a wall temperature of 55°C to 200°C, up to the converter C when using a cooling unit B and up to the analyser when a cooling unit B is not used.

.4 HF1 – Heated pre-filter (optional)

The required temperature shall be the same as for HSL1.

.5 HF2 – Heated filter

The filter shall extract any solid particles from the gas sample before the analyser. The temperature shall be the same as for HSL1. The filter shall be changed as necessary.

.6 HP – Heated sampling pump (optional)

The pump shall be heated to the temperature of HSL1.

.7 SL – Sampling line for CO, CO_2 and O_2

The line shall be made of PTFE or stainless steel. It may be heated or unheated.

.8 CO_2/CO – Carbon dioxide and carbon monoxide analysers

Non-dispersive infrared (NDIR) absorption. Either separate analysers or two functions incorporated into a single analyser unit.

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.9 HC – Hydrocarbon analyser

Heated flame ionization detector (HFID). The temperature shall be kept at 180°C to 200°C.

.10 NO_x – Nitrogen oxides analyser

Chemiluminescent detector (CLD) or heated chemiluminescent detector (HCLD). If a HCLD is used, it shall be kept at a temperature of 55°C to 200°C.

Note: In the arrangement shown NO_x is measured on a dry basis. NO_x may also be measured on a wet basis in which case the analyser shall be of the HCLD type.

.11 C – Converter

A converter shall be used for the catalytic reduction of NO_2 to NO prior to analysis in the CLD or HCLD.

.12 O_2 – Oxygen analyser

Paramagnetic detector (PMD), zirconium dioxide (ZRDO) or electrochemical sensor (ECS).

Note: In the arrangement shown O_2 is measured on a dry basis. O_2 may also be measured on a wet basis in which case the analyser shall be of the ZRDO type.

.13 B – Cooling unit

To cool and condense water from the exhaust sample. The cooler shall be maintained at a temperature of 0°C to 4°C by ice or refrigerator. If water is removed by condensation, the sample gas temperature or dew point shall be monitored either within the water trap or downstream. The sample gas temperature or dew point shall not exceed 7°C.

1.3 The analysers shall have a measuring range appropriate for the accuracy required to measure the concentrations of the exhaust gas components (see 1.6) and 5.9.7.1 of this Code. It is recommended that the analysers be operated such that the measured concentration falls between 15% and 100% of full scale, where full scale refers to the measurement range used.

1.4 If the full-scale value is 155 ppm (or ppmC) or less, or if read-out systems (computers, data loggers) that provide sufficient accuracy and resolution below 15% of full scale are used, concentrations below 15% of full scale are also acceptable. In this case, additional calibrations are to be made to ensure the accuracy of the calibration curves.

1.5 The electromagnetic compatibility (EMC) of the equipment shall be such as to minimize additional errors.

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1.6 **Accuracy**

1.6.1 Definitions

ISO 5725-1: 1994/Cor 1: 1998, Accuracy (trueness and precision) of measurement methods and results – Part 1: General principles and definitions, Technical Corrigendum 1.

ISO 5725-2: 1994, Accuracy (trueness and precision) of measurement methods and results – Part 2: Basic method for the determination of repeatability and reproducibility of a standard measurement method.

1.6.2 An analyser shall not deviate from the nominal calibration point by more than ± 2% of the reading over the whole measurement range except zero, or ± 0.3% of full scale, whichever is larger. The accuracy shall be determined according to the calibration requirements laid down in section 5 of appendix IV of this Code.

1.7 **Precision**

The precision, defined as 2.5 times the standard deviation of 10 repetitive responses to a given calibration or span gas, shall be not greater than ± 1% of full-scale concentration for each range used above 100 ppm (or ppmC) or ± 2% of each range used below 100 ppm (or ppmC).

1.8 **Noise**

The analyser peak-to-peak response to zero and calibration or span gases over any 10-second period shall not exceed 2% of full scale on all ranges used.

1.9 **Zero drift**

Zero response is defined as the mean response, including noise, to a zero gas during a 30-second time interval. The drift of the zero response during a one-hour period shall be less than 2% of full scale on the lowest range used.

1.10 **Span drift**

Span response is defined as the mean response, including noise, to a span gas during a 30-second time interval. The drift of the span response during a one-hour period shall be less than 2% of full scale on the lowest range used.

2 **Gas drying**

Exhaust gases may be measured wet or dry. A gas-drying device, if used, shall have a minimal effect on the composition of the measured gases. Chemical dryers are not an acceptable method of removing water from the sample.

3 **Analysers**

Sections 3.1 to 3.5 describe the measurement principles to be used. The gases to be measured shall be analysed with the following instruments. For non-linear analysers, the use of linearizing circuits is permitted.

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3.1 **Carbon monoxide (CO) analysis**

The carbon monoxide analyser shall be of the non-dispersive infrared (NDIR) absorption type.

3.2 **Carbon dioxide (CO_2) analysis**

The carbon dioxide analyser shall be of the non-dispersive infrared (NDIR) absorption type.

3.3 **Hydrocarbon (HC) analysis**

The hydrocarbon analyser shall be of the heated flame ionization detector (HFID) type with detector, valves, pipe-work and associated components heated so as to maintain a gas temperature of 190°C ± 10°C.

3.4 **Nitrogen oxides (NO_x) analysis**

The nitrogen oxides analyser shall be of the chemiluminescent detector (CLD) or heated chemiluminescent detector (HCLD) type with an NO_2/NO converter, if measured on a dry basis. If measured on a wet basis, a HCLD with converter maintained above 55°C shall be used, provided the water quench check (see section 9.2.2 of appendix IV of this Code) is satisfied. For both CLD and HCLD, the sampling path shall be maintained at a wall temperature of 55°C to 200°C up to the converter for dry measurement, and up to the analyser for wet measurement.

3.5 **Oxygen (O_2) analysis**

The oxygen analyser shall be of the paramagnetic detector (PMD), zirconium dioxide (ZRDO) or electrochemical sensor (ECS) type.

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Appendix IV

Calibration of the analytical and measurement instruments
(Refer to chapters 5 and 6 of the NO_x Technical Code 2008)

1 Introduction

1.1 Each analyser used for the measurement of an engine's parameters shall be calibrated as often as necessary in accordance with the requirements of this appendix.

1.2 Except as otherwise specified, all results of measurements, test data or calculations required by this appendix shall be recorded in the engine's test report in accordance with section 5.10 of this Code.

1.3 *Accuracy of measuring instruments*

1.3.1 The calibration of all measuring instruments shall comply with the requirements as set out in tables 1, 2, 3 and 4 and shall be traceable to standards recognized by the Administration. Additional engine measurements may be required by the Administration, and such additional measuring instruments used shall comply with the appropriate deviation standard and calibration validity period.

1.3.2 The instruments shall be calibrated:

.1 in time intervals not greater than as given in tables 1, 2, 3 and 4; or

.2 in accordance with alternative calibration procedures and validity periods subject to such proposals being submitted in advance of the tests and approved by the Administration.

Note: The deviations given in tables 1, 2, 3, and 4 refer to the final recorded value, which is inclusive of the data acquisition system.

Table 1
Permissible deviations and calibration validity periods of instruments for engine-related parameters for measurements on a test bed

No.	Measurement instrument	Permissible deviation	Calibration validity period (months)
1	Engine speed	± 2% of reading or ± 1% of engine's maximum value, whichever is larger	3
2	Torque	± 2% of reading or ± 1% of engine's maximum value, whichever is larger	3

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No.	Measurement instrument	Permissible deviation	Calibration validity period (months)
3	Power (where measured directly)	+ 2% of reading or ± 1% of engine's maximum value, whichever is larger	3
4	Fuel consumption	± 2% of engine's maximum value	6
5	Air consumption	± 2% of reading or ± 1% of engine's maximum value, whichever is larger	6
6	Exhaust gas flow	± 2.5% of reading or ± 1.5% of engine's maximum value, whichever is larger	6

Table 2
Permissible deviations and calibration interval periods of instruments for other essential parameters for measurements on a test bed

No.	Measurement instrument	Permissible deviation	Calibration validity period (months)
1	Temperatures ≤ 327°C	± 2°C absolute	3
2	Temperatures > 327°C	± 1% of reading	3
3	Exhaust gas pressure	± 0.2 kPa absolute	3
4	Charge air pressure	± 0.3 kPa absolute	3
5	Atmospheric pressure	± 0.1 kPa absolute	3
6	Other pressures ≤ 1000 kPa	± 20 kPa absolute	3
7	Other pressures > 1000 kPa	± 2% of reading	3
8	Relative humidity	± 3% absolute	1

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Table 3
Permissible deviations and calibration validity periods of instruments for engine-related parameters for measurements on board a ship when the engine is already pre-certified

No.	Measurement instrument	Permissible deviation	Calibration validity period (months)
1	Engine speed	± 2% of engine's maximum value	12
2	Torque	± 5% of engine's maximum value	12
3	Power (where measured directly)	± 5% of engine's maximum value	12
4	Fuel consumption	± 4% of engine's maximum value	12
5	Air consumption	± 5% of engine's maximum value	12
6	Exhaust gas flow	± 5% of engine's maximum value	12

Table 4
Permissible deviations calibration validity period of instruments for other essential parameters for measurements on board a ship when the engine is already pre-certified

No.	Measurement instrument	Permissible deviation	Calibration validity period (months)
1	Temperatures ≤ 327°C	± 2°C absolute	12
2	Temperatures > 327°C	± 15°C absolute	12
3	Exhaust gas pressure	± 5% of engine's maximum value	12
4	Charge air pressure	± 5% of engine's maximum value	12
5	Atmospheric pressure	± 0.5% of reading	12
6	Other pressures	± 5 % of reading	12
7	Relative humidity	± 3% absolute	6

2 Calibration gases and zero and span check gases

The shelf life of all calibration gases and span and zero check gases shall be respected. The expiry date of the calibration gases and the zero and span check gases, stated by the manufacturer, shall be recorded.

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2.1 *Pure gases (including zero check gas(s))*

2.1.1 The required purity of the gases is defined by the contamination limits given below. The following gases shall be available:

.1 purified nitrogen (contamination ≤ 1 ppmC, ≤ 1 ppm CO, ≤ 400 ppm CO_2, ≤ 0.1 ppm NO);

.2 purified oxygen (purity > 99.5% volume O_2);

.3 hydrogen-helium mixture (40 ± 2% hydrogen, balance helium). (contamination ≤ 1 ppmC, ≤ 400 ppm CO_2); and

.4 purified synthetic air (contamination ≤ 1 ppmC, ≤ 1 ppm CO, ≤ 400 ppm CO_2, ≤ 0.1 ppm NO (oxygen content 18% - 21% volume).

2.2 *Calibration and span gases*

2.2.1 Mixtures of gases having the following chemical compositions shall be available:

.1 CO and purified nitrogen;

.2 NO_x and purified nitrogen the amount of NO_2 contained in this calibration gas shall not exceed 5% of the NO content);

.3 O_2 and purified nitrogen;

.4 CO_2 and purified nitrogen; and

.5 CH_4 and purified synthetic air or C_3H_8 and purified synthetic air.

Note: Other gas combinations are allowed provided the gases do not react with one another.

2.2.2 The true concentration of a calibration and span gas must be within ± 2% of the nominal value. All concentrations of calibration and span gases shall be given on a volume basis (volume per cent or volume ppm).

2.2.3 The gases used for calibration and span may also be obtained by means of precision blending devices (gas dividers), diluting with purified N_2 or with purified synthetic air. The accuracy of the mixing device must be such that the concentration of the blended calibration gases is accurate to within ±2%. This accuracy implies that primary gases used for blending must be known to an accuracy of at least ±1%, traceable to national or international gas standards. The verification shall be performed at between 15 and 50% of full scale for each calibration incorporating a blending device. Optionally, the blending device may be checked with an instrument that by nature is linear, e.g., using NO gas with a CLD. The span value of the instrument shall be adjusted with the span gas directly connected to the instrument. The blending device shall be checked at the used settings and the nominal value shall be compared to the measured concentration of the instrument. This difference shall in each point be within ±1% of the nominal value. This linearity check of the gas divider shall not be performed with a gas analyser that was previously linearized with the same gas divider.

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2.2.4 Oxygen interference check gases shall contain propane or methane with 350 ppmC ± 75 ppmC hydrocarbon. The concentration shall be determined to calibration gas tolerances by chromatographic analysis of total hydrocarbons plus impurities or by dynamic blending. Nitrogen shall be the predominant diluent with the balance oxygen. Blends required are listed in table 5.

Table 5
Oxygen interference check gases

O_2 concentration	Balance
21 (20 to 22)	Nitrogen
10 (9 to 11)	Nitrogen
5 (4 to 6)	Nitrogen

3 Operating procedure for analysers and sampling system

The operating procedure for analysers shall follow the start-up and operating instructions of the instrument manufacturer. The minimum requirements given in sections 4 to 9 shall be included.

4 Leakage test

4.1 A system leakage test shall be performed. The probe shall be disconnected from the exhaust system and the end plugged. The analyser pump shall be switched on. After an initial stabilization period all flow meters shall read zero. If not, the sampling lines shall be checked and the fault corrected.

4.2 The maximum allowable leakage rate on the vacuum side shall be 0.5% of the in-use flow rate for the portion of the system being checked. The analyser flows and bypass flows may be used to estimate the in-use flow rates.

4.3 Another method is the introduction of a concentration step change at the beginning of the sampling line by switching from zero to span gas. If after an adequate period of time the reading shows a lower concentration compared to the introduced concentration, this points to calibration or leakage problems.

4.4 Other arrangements may be acceptable subject to approval of the Administration.

5 Calibration procedure

5.1 *Instrument assembly*

The instrument assembly shall be calibrated and the calibration curves checked against standard gases. The same gas flow rates shall be used as when sampling exhaust.

5.2 *Warming-up time*

The warming-up time shall be according to the recommendations of the analyser's manufacturer. If not specified, a minimum of two hours is recommended for warming up the analysers.

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5.3 *NDIR and HFID analysers*

The NDIR analyser shall be tuned, as necessary. The HFID flame shall be optimized as necessary.

5.4 *Calibration*

5.4.1 Each normally used operating range shall be calibrated. Analysers shall be calibrated not more than 3 months before being used for testing or whenever a system repair or change is made that can influence calibration, or as per provided for by 1.3.2.2.

5.4.2 Using purified synthetic air (or nitrogen) the CO, CO_2, NO, and O_2 analysers shall be set at zero. The HFID analyser shall be set to zero using purified synthetic air.

5.4.3 The appropriate calibration gases shall be introduced to the analysers, the values recorded, and the calibration curve established accordingly.

5.5 *Establishment of the calibration curve*

5.5.1 General Guidance

5.5.1.1 The calibration curve shall be established by at least 6 calibration points (excluding zero) approximately equally spaced over the operating range from zero to the highest value expected during emissions testing.

5.5.1.2 The calibration curve shall be calculated by the method of least-squares. A best-fit linear or non-linear equation may be used.

5.5.1.3 The calibration points shall not differ from the least-squares best-fit line by more than ± 2% of reading or ± 0.3% of full scale, whichever is larger.

5.5.1.4 The zero setting shall be rechecked and the calibration procedure repeated, if necessary.

5.5.1.5 If it can be shown that alternative calibration methods (e.g., computer, electronically controlled range switch, etc.) can give equivalent accuracy, then these alternatives may be used subject to the approval by the Administration.

6 Verification of the calibration

6.1 Each normally used operating range shall be checked prior to each analysis in accordance with the following procedure:

.1 the calibration shall be checked by using a zero gas and a span gas whose nominal value shall be more than 80% of full scale of the measuring range; and

.2 if, for the two points considered, the value found does not differ by more than ± 4% of full scale from the declared reference value, the adjustment parameters may be modified. If this is not the case, a new calibration curve shall be established in accordance with 5.5 above.

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7 Efficiency test of the NO_x converter

The efficiency of the converter used for the conversion of NO_2 into NO shall be tested as given in 7.1 to 7.10 below.

7.1 *Test set-up*

Using the test set-up as schematically shown in figure 1 and the procedure below, the efficiency of converter shall be tested by means of an ozonator.

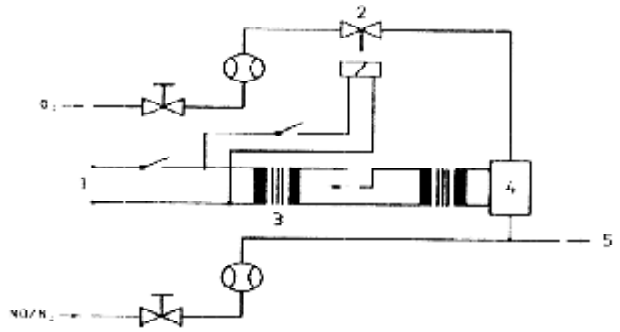

Figure 1 – Schematic representation of NO_2 converter efficiency device

1	AC	4	Ozonator
2	Solenoid valve	5	To analyser
3	Variac		

7.2 *Calibration*

The CLD and the HCLD shall be calibrated in the most common operating range following the manufacturer's specifications using zero and span gas (the NO content of which must amount to about 80% of the operating range and the NO_2 concentration of the gas mixture to less than 5% of the NO concentration). The NO_x analyser must be in the NO mode so that the span gas does not pass through the converter. The indicated concentration shall be recorded.

7.3 *Calculation*

The efficiency of the NO_x converter shall be calculated as follows:

3. $$E_{NO_x} = \left(1 + \frac{a-b}{c-d}\right) \cdot 100 \qquad (1)$$

where:

a = NO_x concentration according to 7.6 below
b = NO_x concentration according to 7.7 below
c = NO concentration according to 7.4 below
d = NO concentration according to 7.5 below.

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7.4 *Adding of oxygen*

7.4.1 Via a T-fitting, oxygen or zero air is added continuously to the gas flow until the concentration indicated is about 20% less than the indicated calibration concentration given in 7.2 above. The analyser must be in the NO mode.

7.4.2 The indicated concentration (*c*) shall be recorded. The ozonator must be kept deactivated throughout the process.

7.5 *Activation of the ozonator*

The ozonator shall then be activated to generate enough ozone to bring the NO concentration down to about 20% (minimum 10%) of the calibration concentration given in 7.2 above. The indicated concentration (*d*) shall be recorded. The analyser must be in the NO mode.

7.6 *NO_x mode*

The NO analyser shall then be switched to the NO_x mode so that the gas mixture (consisting of NO, NO_2, O_2 and N_2) now passes through the converter. The indicated concentration (*a*) shall be recorded. The analyser must be in the NO_x mode.

7.7 *Deactivation of the ozonator*

The ozonator is then deactivated. The mixture of gases described in 7.6 above passes through the converter into the detector. The indicated concentration (*b*) shall be recorded. The analyser is in the NO_x mode.

7.8 *NO mode*

Switched to NO mode with the ozonator deactivated, the flow of oxygen or synthetic air shall also be shut off. The NO_x reading of the analyser shall not deviate by more than 5% from the value measured according to 7.2 above. The analyser must be in the NO mode.

7.9 *Test interval*

The efficiency of the converter shall be tested prior to each calibration of the NO_x analyser.

7.10 *Efficiency requirement*

The efficiency of the converter shall not be less than 90%.

8 Adjustment of the HFID

8.1 *Optimization of the detector response*

8.1.1 The HFID shall be adjusted as specified by the instrument manufacturer. A propane in air span gas shall be used to optimize the response on the most common operating range.

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8.1.2 With the fuel and air flow rates set at the manufacturer's recommendations, a 350 = 75 ppmC span gas shall be introduced to the analyser. The response at a given fuel flow shall be determined from the difference between the span gas response and the zero gas response. The fuel flow shall be incrementally adjusted above and below the manufacturer's specification. The span and zero response at these fuel flows shall be recorded. The difference between the span and zero response shall be plotted and the fuel flow adjusted to the rich side of the curve. This is the initial flow rate setting, which may need further optimization depending on the results of the hydrocarbon response factors and the oxygen interference check according to 8.2 and 8.3.

8.1.3 If the oxygen interference or the hydrocarbon response factors do not meet the following specifications, the air flow shall be incrementally adjusted above and below the manufacturer's specifications, 8.2 and 8.3 for each flow.

8.1.4 The optimization may optionally be conducted using alternative procedures subject to the approval of the Administration.

8.2 *Hydrocarbon response factors*

8.2.1 The analyser shall be calibrated using propane in air and purified synthetic air, according to 5.

8.2.2 Response factors shall be determined when introducing an analyser into service and after major service intervals. The response factor (r_h) for a particular hydrocarbon species is the ratio of the HFID ppmC reading to the gas concentration in the cylinder expressed in terms of ppmC.

8.2.3 The concentration of the test gas must be at a level to give a response of approximately 80% of full scale. The concentration must be known to an accuracy of ± 2% in reference to a gravimetric standard expressed in volume. In addition, the gas cylinder must be preconditioned for 24 hours at a temperature of 25°C ± 5°C.

8.2.4 The test gases to be used and the recommended relative response factor ranges are as follows:

- Methane and purified synthetic air $1.00 \leq r_h \leq 1.15$
- Propylene and purified synthetic air $0.90 \leq r_h \leq 1.1$
- Toluene and purified synthetic air $0.90 \leq r_h \leq 1.1$.

These values are relative to a r_h of 1 for propane and purified synthetic air.

8.3 *Oxygen interference check*

8.3.1 The oxygen interference check shall be determined when introducing an analyser into service and after major service intervals.

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8.3.2 A range shall be chosen where the oxygen interference check gases will fall in the upper 50%. The test shall be conducted with the oven temperature set as required. The oxygen interference gases are specified in 2.2.4.

.1 The analyser shall be zeroed.

.2 The analyser shall be spanned with the 21% oxygen blend.

.3 The zero response shall be re-checked. If it has changed more than 0.5% of full scale (FS) steps 8.3.2.1 and 8.3.2.2 shall be repeated.

.4 The 5% and 10% oxygen interference check gases shall be introduced.

.5 The zero response shall be rechecked. If it has changed more than ± 1% of full scale, the test shall be repeated.

.6 The oxygen interference ($\%O_2I$) shall be calculated for each mixture in step .4 as follows:

$$\%O_2I = \frac{(B - analyser\ response)}{B} \cdot 100 \qquad (2)$$

where:

analyser response is (A/% FS at A) · (%FS at B)

where:

A = hydrocarbon concentration in ppmC (microlitres per litre) of the span gas used in 8.3.2.2

B = hydrocarbon concentration (ppmC) of the oxygen interference check gases used in 8.3.2.4

$$(ppmC) = \frac{A}{D} \qquad (3)$$

D = percentage of full scale analyser response due to A.

.7 The % of oxygen interference ($\%O_2I$) shall be less than ± 3.0% for all required oxygen interference check gases prior to testing.

.8 If the oxygen interference is greater than ± 3.0%, the air flow above and below the manufacturer's specifications shall be incrementally adjusted, repeating 8.1 for each flow.

.9 If the oxygen interference is greater than ± 3.0% after adjusting the air flow, the fuel flow, and thereafter the sample flow shall be varied, repeating 8.1 for each new setting.

.10 If the oxygen interference is still greater than ± 3.0%, the analyser, HFID fuel, or burner air shall be repaired or replaced prior to testing. This clause shall then be repeated with the repaired or replaced equipment or gases.

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9 Interference effects with CO, CO_2, NO_x and O_2 analysers

Gases other than the one being analysed can interfere with the reading in several ways. Positive interference occurs in NDIR and PMD instruments where the interfering gas gives the same effect as the gas being measured, but to a lesser degree. Negative interference occurs in NDIR instruments by the interfering gas broadening the absorption band of the measured gas, and in CLD instruments by the interfering gas quenching the radiation. The interference checks in 9.1 and 9.2 shall be performed prior to an analyser's initial use and after major service intervals, but at least once per year.

9.1 *CO analyser interference check*

Water and CO_2 can interfere with the CO analyser performance. Therefore, a CO_2 span gas having a concentration of 80% to 100% of full scale of the maximum operating range used during testing shall be bubbled through water at room temperature and the analyser response recorded. The analyser response must not be more than 1% of full scale for ranges equal to or above 300 ppm or more than 3 ppm for ranges below 300 ppm.

9.2 *NO_x analyser quench checks*

The two gases of concern for CLD (and HCLD) analysers are CO_2 and water vapour. Quench responses to these gases are proportional to their concentrations, and therefore require test techniques to determine the quench at the highest expected concentrations experienced during testing.

9.2.1 CO_2 quench check

9.2.1.1 A CO_2 span gas having a concentration of 80% to 100% of full scale of the maximum operating range shall be passed through the NDIR analyser and the CO_2 value recorded as *A*. It shall then be diluted approximately 50% with NO span gas and passed through the NDIR and (H)CLD, with the CO_2 and NO values recorded as *B* and *C*, respectively. The CO_2 shall then be shut off and only the NO span gas be passed through the (H)CLD and the NO value recorded as *D*.

9.2.1.2 The quench shall be calculated as follows:

$$E_{CO2} = \left[1 - \left(\frac{(C \cdot A)}{(D \cdot A) - (D \cdot B)}\right)\right] \cdot 100 \qquad (4)$$

where:

A = the undiluted CO_2 concentration measured with NDIR in percentage by volume
B = the diluted CO_2 concentration measured with NDIR in percentage by volume;
C = the diluted NO concentration measured with (H)CLD in ppm; and
D = the undiluted NO concentration measured with (H)CLD in ppm.

9.2.1.3 Alternative methods of diluting and quantifying of CO_2 and NO span gas values such as dynamic mixing/blending, can be used.

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9.2.2 Water quench check

9.2.2.1 This check applies to wet gas concentration measurements only. Calculation of water quench must consider dilution of the NO span gas with water vapour and scaling of water vapour concentration of the mixture to that expected during testing.

9.2.2.2 An NO span gas having a concentration of 80% to 100% of full scale of the normal operating range shall be passed through the HCLD and the NO value recorded as D. The NO span gas shall then be bubbled through water at a temperature of 25°C ± 5°C and pass through the HCLD and the NO value recorded as C. The water temperature shall be determined and recorded as F. The mixture's saturation vapour pressure that corresponds to the bubbler water temperature (F) shall be determined and recorded as G. The water vapour concentration (H in %) of the mixture shall be calculated as follows:

$$H = 100 \cdot \left(\frac{G}{p_b} \right) \tag{5}$$

The expected diluted NO span gas (in water vapour) concentration (D_e) shall be calculated as follows:

$$D_e = D \cdot \left(1 - \frac{H}{100} \right) \tag{6}$$

For diesel engine exhaust, the maximum exhaust water concentration (in %) expected during testing shall be estimated, under the assumption of a fuel atom H/C ratio of 1.8/1, from the maximum CO_2 concentration A in the exhaust gas as follows:

$$H_m = 0.9 \cdot A \tag{7}$$

and H_m is recorded.

9.2.2.3 The water quench shall be calculated as follows:

$$E_{NO} = 100 \cdot \left(\frac{D_e - C}{D_e} \right) \cdot \left(\frac{H_m}{H} \right) \tag{8}$$

where:

D_e = the expected diluted NO concentration in ppm;
C = the diluted NO concentration in ppm;
H_m = the maximum water vapour concentration in %; and
H = the actual water vapour concentration in %.

Note: It is important that the NO span gas contains minimal NO_2 concentration for this check, as absorption of NO_2 in water has not been accounted for in the quench calculations.

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9.2.3 Maximum allowable quench

The maximum allowable quench shall be:

.1 CO_2 quench according to 9.2.1: 2% of full scale.
.2 Water quench according to 9.2.2: 3% of full scale.

9.3 *O_2 analyser interference*

9.3.1 Instrument response of a PMD analyser caused by gases other than oxygen is comparatively slight. The oxygen equivalents of the common exhaust gas constituents are shown in table 6.

Table 6
Oxygen equivalents

Gas	O_2 equivalent %
Carbon dioxide (CO_2)	−0.623
Carbon monoxide (CO)	−0.354
Nitric oxide (NO)	+44.4
Nitrogen dioxide (NO_2)	+28.7
Water (H_2O)	−0.381

9.3.2 The observed oxygen concentration shall be corrected by the following formula:

$$E_{O2} = \frac{(Equivalent\ O_2 \cdot c_{observed})}{100} \quad (9)$$

9.3.3 For ZRDO and ECS analysers, instrument interference caused by gases other than oxygen shall be compensated in accordance with the manufacturer's recommendations and with good engineering practice. Electrochemical sensors shall be compensated for CO_2 and NO_x interference.

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Appendix V

Parent engine test report and test data
(Refer to 2.4.1.5 and 5.10 of the NO, Technical Code 2008)

Section 1 – Parent engine test report – see 5.10 of the Code

Emissions test report No. ..... **Sheet 1/5**

Engine		
Manufacturer		
Engine type		
Engine family or engine group identification		
Serial number		
Rated speed		rpm
Rated power		kW
Intermediate speed		rpm
Maximum torque at intermediate speed		Nm
Static injection timing		deg CA BTDC
Electronic injection control	No: Yes:	
Variable injection timing	No: Yes:	
Variable turbocharger geometry	No: Yes:	
Bore		mm
Stroke		mm
Nominal compression ratio		
Mean effective pressure, at rated power		kPa
Maximum cylinder pressure, at rated power		kPa
Cylinder number and configuration	Number: V:	In-line:
Auxiliaries		
Specified ambient conditions:		
Maximum seawater temperature		°C
Maximum charge air temperature, if applicable		°C
Cooling system spec. intermediate cooler	No: Yes:	
Cooling system spec. charge air stages		
Low/high temperature cooling system set points	/	°C
Maximum inlet depression		kPa
Maximum exhaust back pressure		kPa
Fuel oil specification		
Fuel oil temperature		°C

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Emissions test results:				
Cycle				
NO_x				g/kWh
Test identification				
Date/time				
Test site/bench				
Test number				
Surveyor				
Date and place of report				
Signature				

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Emissions test report No. ..... Engine family information Sheet 2/5

Engine family/engine group information (common specifications)	
Combustion cycle	2-stroke cycle/4-stroke cycle
Cooling medium	Air/Water
Cylinder configuration	Required to be written, only if the exhaust cleaning devices are applied
Method of aspiration	Natural aspired/Pressure charged
Fuel type to be used on board	Distillate/distillate or heavy fuel/dual
Combustion chamber	Open chamber/Divided chamber
Valve port configuration	Cylinder head/Cylinder wall
Valve port size and number	
Fuel system type	

Miscellaneous features:	
Exhaust gas recirculation	No/Yes
Water injection/emulsion	No/Yes
Air injection	No/Yes
Charge cooling system	No/Yes
Exhaust after-treatment	No/Yes
Exhaust after-treatment type	
Dual fuel	No/Yes

Engine family/engine group information (selection of parent engine for test-bed test)					
Family/group identification					
Method of pressure charging					
Charge air cooling system					
Criteria of the selection of parent engine					Highest NO_x emission value
Number of cylinders					
Max. rated power per cylinder					
Rated speed					
Injection timing (range)					
Selected parent engine					Parent
Test cycle(s)					

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Emissions test report No. ..... Test cell information Sheet 3/5

Exhaust pipe		
Diameter		mm
Length		m
Insulation	No: Yes:	
Probe location		

Measurement equipment					
	Manufacturer	Model	Measurement ranges	Calibration	
				Span gas conc.	Deviation of calibration
Analyser					
NO_x Analyser			ppm		%
CO Analyser			ppm		%
CO_2 Analyser			%		%
O_2 Analyser			%		%
HC Analyser			ppmC		%
Speed			rpm		%
Torque			Nm		%
Power, if applicable			kW		%
Fuel flow					%
Air flow					%
Exhaust flow					%
Temperatures					
Charge air coolant inlet			°C		°C
Exhaust gas			°C		°C
Inlet air			°C		°C
Charge air			°C		°C
Fuel			°C		°C
Pressures					
Exhaust gas			kPa		kPa
Charge air			kPa		kPa
Atmospheric			kPa		kPa
Vapour pressure					
Intake air			kPa		%
Humidity					
Intake air			%		%

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Fuel characteristics

Fuel type				
Fuel properties:			Fuel elemental analysis:	
Density	ISO 3675	kg/m^3	Carbon	% m/m
Viscosity	ISO 3104	mm^2/s	Hydrogen	% m/m
Water	ISO 3733	% V/V	Nitrogen	% m/m
			Oxygen	% m/m
			Sulphur	% m/m
			LHV/Hu	MJ/kg

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Emissions test report No. ..... **Ambient and gaseous emissions data** **Sheet 4/5**

Mode		1	2	3	4	5	6	7	8	9	10
Power/torque	%										
Speed	%										
Time at beginning of mode											

Ambient data											
Atmospheric pressure	kPa										
Intake air temperature	°C										
Intake air humidity	g/kg										
Relative humidity (RH) of intake air	%										
Air temperature at RH sensor	°C										
Dry bulb temperature of intake air	°C										
Wet bulb temperature of intake air	°C										
Test condition parameter, f_a											

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Gaseous emissions data:												
NO_x concentration dry/wet	ppm											
CO concentration	ppm											
CO_2 concentration	%											
O_2 concentration dry/wet	%											
HC concentration	ppmC											
NO_x humidity correction factor, k_{hd}												
Dry/wet correction factor, k_w												
NO_x mass flow	kg/h											
CO mass flow	kg/h											
CO_2 mass flow	kg/h											
O_2 mass flow	kg/h											
HC mass flow	kg/h											
NO_x specific	g/kWh											

* As applicable.

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Emissions test report No. ..... **Engine test data** **Sheet 5/5**

Mode		1	2	3	4	5	6	7	8	9	10
Power/torque	%										
Speed	%										
Time at beginning of mode											

Engine data											
Speed	rpm										
Auxiliary power	kW										
Dynamometer setting	kW										
Power	kW										
Mean effective pressure	kPa										
Fuel rack	mm										
Uncorrected spec. fuel consumption	g/kWh										
Fuel flow	kg/h or m^3/h*										
Air flow	kg/h										
Exhaust flow (G_{mew})	kg/h										
Exhaust temperature	°C										
Exhaust back pressure	kPa										
Charge air coolant temperature in	°C										
Charge air coolant temperature out	°C										
Charge air temperature	°C										
Charge air reference temperature	°C										
Charge air pressure	kPa										
Fuel oil temperature	°C										

* As applicable.

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Section 2 – Parent engine test data to be included in the technical file – see 2.4.1.5 of the Code

Engine family/engine group reference		
Parent engine		
Model/type		
Nominated rated power	kW	
Nominated rated speed	rpm	

Parent engine test fuel oil	
Reference fuel designation	
ISO 8217: 2005 grade (DM or RM)	
Carbon	% m/m
Hydrogen	% m/m
Sulphur	% m/m
Nitrogen	% m/m
Oxygen	% m/m
Water	% V/V

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Measured data (parent engine)									
Power/torque	%								
Speed	%								
Mode point		1	2	3	4	5	6	7	8
Engine performance									
Power	kW								
Speed	rpm								
Fuel flow	kg/h								
Intake air flow (wet/dry)	kg/h								
Exhaust gas flow	kg/h								
Intake air temperature	°C								
Charge air temperature	°C								
Charge air reference temperature	°C								
Charge air pressure	kPa								
Additional parameter(s) used for emission corrections (specify)									
Ambient conditions									
Atmospheric pressure	kPa								
Relative humidity (RH) of intake air	%								
Air temperature at RH sensor*	°C								
Dry bulb temperature of intake air*	°C								
Wet bulb temperature of intake air*	°C								
Absolute humidity of intake air*	g/kg								

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Emission concentrations											
NO_x wet/dry	ppm										
CO_2	%										
O_2 wet/dry	%										
CO	ppm										
HC	ppmC										
Calculated data (parent engine)											
Intake air humidity	g/kg										
Charge air humidity	g/kg										
Test condition parameter, f_a											
Dry/wet correction factor, k_{w2}											
NO_x humidity correction factor, k_{hd}											
Exhaust gas flow rate	kg/h										
NO_x emission flow rate	kg/h										
Additional emission correction factor(s) (specify)	g/kWh										
NO_x emission	g/kWh										

Test cycle						
Emission value	g/kWh					

As applicable.

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Appendix VI

Calculation of exhaust gas mass flow (carbon-balance method)
(Refer to chapter 5 of the NO_x Technical Code 2008)

1 Introduction

1.1 This appendix addresses the calculation of the exhaust gas mass flow based on exhaust gas concentration measurement, and on the knowledge of fuel consumption. Symbols and descriptions of terms and variables used in the formulae for the carbon-balance measurement method are summarized in the introduction of this Code.

1.2 Except as otherwise specified, all results of calculations required by this appendix shall be reported in the engine's test report in accordance with 5.10 of this Code.

2 Carbon balance method, 1-step calculation procedure

2.1 This method involves exhaust mass calculation from fuel consumption, fuel composition and exhaust gas concentrations.

2.2 Exhaust gas mass flow rate on wet basis:

$$q_{mew} = q_{mf} \cdot \left(\left(\frac{12 \left(w_{BET} - w_{BE1} \right)}{\left(\frac{\left(14 - w_{BET} \right)}{f_c} - \left(w_{ALF} \cdot 0.08936 \right) - 1 \right) \cdot \frac{1}{1293} + f_{fd}} - \left(w_{ALF} \cdot 0.08936 \right) - 1 \right) \cdot \left(1 - \frac{H_a}{1000} \right) + 1 \right) \quad (1)$$

with:

f_{fd} according to equation (2), f_c according to equation (3).
H_a is the absolute humidity of intake air, in gram water per kg dry air. However, if $H_a \geq H_{SC}$, then H_{SC} shall be used in place of H_a in formula (1).

Note: H_a may be derived from relative humidity measurement, dewpoint measurement, vapour pressure measurement or dry/wet bulb measurement using the generally accepted formulae.

2.3 The fuel-specific constant f_{fd} for the dry exhaust shall be calculated by adding up the additional volumes of the combustion of the fuel elements:

$$f_{fd} = -0.055593 \cdot w_{ALF} + 0.008002 \cdot w_{DEL} + 0.0070046 \cdot w_{EPS} \quad (2)$$

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2.4 Carbon factor f_c according to equation (3):

$$f_c = \left(c_{CO2d} - c_{CO2ad}\right) \cdot 0.5441 + \frac{c_{COd}}{18522} + \frac{c_{HCw}}{17355} \qquad (3)$$

with

c_{CO2d} = dry CO_2 concentration in the raw exhaust, %
c_{CO2ad} = dry CO_2 concentration in the ambient air, % = 0.03%
c_{COd} = dry CO concentration in the raw exhaust, ppm
c_{HCw} = wet HC concentration in the raw exhaust, ppm.

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Appendix VII

Checklist for an engine parameter check method
(Refer to 6.2.2.3 of the NO$_x$ Technical Code 2008)

1 For some of the parameters listed below, more than one survey possibility exists. In such cases, as a guideline, any one of, or a combination of, the below-listed methods may be sufficient to show compliance. As approved by the Administration, the shipowner, supported by the applicant for engine certification, may choose which method is applicable.

.1 parameter "injection timing":

.1 Fuel cam position (individual cam or camshaft if cams are not adjustable):

- optional (dependent on design): position of a link between the cam and the pump drive,
- optional for sleeve-metered pumps: variable injection timing (VIT: index and cam position or position of the barrel, or
- other sleeve-metering device:

.2 start of delivery for certain fuel rack positions (dynamic pressure measurement);

.3 opening of injection valve for certain load points, e.g., using a Hall sensor or acceleration pick-up;

.4 load-dependent operating values for charge air pressure, combustion peak pressure, charge air temperature, exhaust gas temperature versus graphs showing the correlation with NO_x. Additionally, it shall be ensured that the compression ratio corresponds to the initial certification value (see 1.7).

Note: To assess the actual timing, it is necessary to know the allowable limits for meeting the emission limits or even graphs showing the influence of timing on NO_x, based on the test-bed measurement results.

.2 parameter "injection nozzle":

.1 specification and component identification number;

.3 parameter "injection pump":

.1 component identification number (specifying plunger and barrel design);

.4 parameter "fuel cam":

.1 component identification number (specifying shape);

.2 start and end of delivery for a certain fuel rack position (dynamic pressure measurement);

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.5 parameter "injection pressure":

.1 only for common-rail systems: load-dependent: pressure in the rail, graph showing correlation with NO_x;

.6 parameter "combustion chamber":

.1 component identification numbers for the cylinder head and piston head;

.7 parameter "compression ratio":

.1 check for actual clearance;

.2 check for shims in piston rod or connecting rod;

.8 parameter "turbocharger type and build":

.1 model and specification (identification numbers);

.2 load-dependent charge air pressure, graph showing the correlation with NO_x;

.9 parameter "charge air cooler, charge air heater":

.1 model and specification;

.2 load-dependent charge air temperature corrected to reference conditions, graph showing the correlation with NO_x;

.10 parameter "valve timing" (only for 4-stroke engines with inlet valve closure before bottom dead centre (BDC)):

.1 cam position;

.2 check actual timing;

.11 parameter "water injection" (for assessment: graph showing influence on NO_x):

.1 load-dependent water consumption (monitoring);

.12 parameter "emulsified fuel" (for assessment: graph showing influence on NO_x):

.1 load-dependent fuel rack position (monitoring);

.2 load-dependent water consumption (monitoring);

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.13 parameter "exhaust gas recirculation" (for assessment: graph showing influence on NO_x):

.1 load-dependent mass flow of recirculated exhaust gas (monitoring);

.2 CO_2 concentration in the mixture of fresh air and recirculated exhaust gas, i.e. in the "scavenge air" (monitoring);

.3 O_2 concentration in the "scavenge air" (monitoring);

.14 parameter "selective catalytic reduction" (SCR):

.1 load-dependent mass flow of reducing agent (monitoring) and additional periodical spot checks on NO_x concentration after SCR (for assessment: graph showing influence on NO_x).

2 For engines with selective catalytic reduction (SCR) without feedback control, optional NO_x measurement (periodical spot checks or monitoring) is useful to show that the SCR efficiency still corresponds to the state at the time of certification regardless of whether the ambient conditions or the fuel quality fed to different raw emissions.

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Appendix VIII

Implementation of the direct measurement and monitoring method
(Refer to 6.4 of the NO_x Technical Code 2008)

1 Electrical equipment: materials and design

1.1 Electrical equipment shall be constructed of durable, flame-retardant, moisture-resistant materials that are not subject to deterioration in the installed environment and at the temperatures to which the equipment is likely to be exposed.

1.2 Electrical equipment shall be designed such that current carrying parts with potential to earth are protected against accidental contact

2 Analysing equipment

2.1 *Analysers*

2.1.1 The exhaust gases shall be analysed with the following instruments. For non-linear analysers, the use of linearizing circuits is permitted. Other systems or analysers may be accepted, subject to the approval of the Administration, provided they yield equivalent results to that of the equipment referenced below:

.1 Nitrogen oxides (NO_x) analysis

The nitrogen oxides analyser shall be of the chemiluminescent detector (CLD) or heated chemiluminescent detector (HCLD) type. The exhaust gas sampled for NO_x measurement shall be maintained above its dewpoint temperature until it has passed through the NO_2-to-NO converter.

Note: In the case of raw exhaust gas this temperature shall be greater than 60°C if the engine is fuelled with ISO 8217: 2005 DM-grade type fuel and greater than 140°C if fuelled with ISO 8217: 2005 RM-grade type fuel.

.2 Carbon dioxide (CO_2) analysis

When required, the carbon dioxide analyser shall be of the non-dispersive infrared (NDIR) absorption type.

.3 Carbon monoxide (CO) analysis

When required, the carbon monoxide analyser shall be of the (NDIR) absorption type.

.4 Hydrocarbon (HC) analysis

When required, the hydrocarbon analyser shall be of the heated flame ionization detector (HFID) type. The exhaust gas sampled for HC measurement shall be maintained at 190°C +10°C from the sample point to the detector.

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.5 Oxygen (O_2) analysis

When required, the oxygen analyser shall be of the paramagnetic detector (PMD), zirconium dioxide (ZRDO) or electrochemical sensor (ECS) type.

2.2 *Analyser specifications*

2.2.1 The analyser specifications shall be consistent with 1.6, 1.7, 1.8, 1.9 and 1.10 of appendix III of this Code.

2.2.2 The analyser range shall be such that the measured emission value is within 15% - 100% of the range used.

2.2.3 The analysing equipment shall be installed and maintained in accordance with manufacturers' recommendations in order to meet the requirements of 1.7, 1.8, 1.9, and 1.10 of appendix III of this Code and sections 7 and 9 of appendix IV of this Code.

3 Pure and calibration gases

3.1 Pure and calibration gases, as required, shall comply with 2.1 and 2.2 of appendix IV of this Code. Declared concentrations shall be traceable to national and/or international standards. Calibration gases shall be in accordance with the analysing equipment manufacturers' recommendations.

3.2 Analyser span gases shall be between 80% – 100% of the analyser scale being spanned.

4 Gas sampling and transfer system

4.1 The exhaust gas sample shall be representative of the average exhaust emission from all the engine's cylinders. The gas sampling system shall comply with 5.9.3 of this Code.

4.2 The exhaust gas sample shall be drawn from a zone within 10% to 90% of the duct diameter.

4.3 In order to facilitate the installation of the sampling probe, an example of a sample point connection flange is given in section 5.

4.4 The exhaust gas sample for NO_x measurement shall be maintained so as to prevent NO_2 loss via water or acid condensation in accordance with analysing equipment manufacturers' recommendations.

4.5 The gas sample shall not be dried by chemical driers.

4.6 The gas sampling system shall be capable of being verified to be free of ingress leakage in accordance with analysing equipment manufacturers' recommendations.

4.7 An additional sample point adjacent to that used shall be provided to facilitate quality control checks on the system.

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5 **Sample point connection flange**

5.1 The following is an example of a general purpose sample point connection flange, which shall be sited, as convenient, on the exhaust duct of each engine for which it may be required to demonstrate compliance by means of the direct measurement and monitoring method.

Description	Dimension
Outer diameter	160 mm
Inner diameter	35 mm
Flange thickness	9 mm
Bolt circle diameter 1	130 mm
Bolt circle diameter 2	65 mm
Flange slots	4 holes, each 12 mm diameter, equidistantly placed on each of the above bolt circle diameters. Holes on the two bolt circle diameters to be aligned on same radii. Flange to be slotted, 12 mm wide, between inner and outer bolt circle diameter holes.
Bolts and nuts	4 sets, diameter and length as required.
Flange shall be of steel and be finished with a flat face.	

5.2 The flange shall be fitted to a stub pipe of suitable gauge material aligned with the exhaust duct diameter. The stub pipe shall be no longer than necessary to project beyond the exhaust duct cladding, sufficient to enable access to the far side of the flange. The stub pipe shall be insulated. The stub pipe shall terminate at an accessible position free from nearby obstructions that would interfere with the location or mounting of a sample probe and associated fittings.

5.3 When not in use, the stub pipe shall be closed with a steel blank flange and a gasket of suitable heat resisting material. The sampling flange, and closing blank flange, when not in use, shall be covered with a readily removable and suitable heat resistant material that protects against accidental contact.

6 **Selection of load points and revised weighting factors**

6.1 As provided for by 6.4.6.4 of this Code, in the case of the E2, E3 or D2 test cycles, the minimum number of load points shall be such that the combined nominal weighting factors, as given in 3.2 of this Code, are greater than 0.5.

6.2 In accordance with 6.1, for the E2 and E3 test cycles it would be necessary to use the 75% load point plus one or more other load points. In the case of the D2 test cycle, either the 25% or 50% load point shall be used plus either one or more load points such that the combined nominal weighting factor is greater than 0.5.

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6.3 The examples below give some of the possible combinations of load points that may be used together with the respective revised weighting factors:

.1 E2 and E3 test cycles

Power	100%	75%	50%	25%
Nominal weighting factor	0.2	0.5	0.15	0.15
Option A	0.29	0.71		
Option B		0.77	0.23	
Option C	0.24	0.59		0.18
Plus other combinations that result in a combined nominal weighting factor greater than 0.5. Hence use of the 100% + 50% + 25% load points would be insufficient.				

.2 D2 test cycle

Power	100%	75%	50%	25%	10%
Nominal weighting factor	0.05	0.25	0.3	0.3	0.1
Option D			0.5	0.5	
Option E		0.45		0.55	
Option F		0.38	0.46		0.15
Option G	0.06	0.28	0.33	0.33	
Plus other combinations that result in a combined nominal weighting factor greater than 0.5. Hence use of the 100% + 50% + 10% load points would be insufficient.					

6.4 In the case of the C1 test cycle, as a minimum, one load point from each of the rated, intermediate and idle speed sections shall be used. The examples below give some of the possible combinations of load points that may be used together with the respective revised weighting factors:

.1 C1 test cycle

Speed	Rated				Intermediate			Idle
Torque	100%	75%	50%	10%	100%	75%	50%	0%
Nominal weighting factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15
Option H		0.38			0.25			0.38
Option I				0.29		0.29		0.43
Option J	0.27	0.27					0.18	0.27
Option K	0.19	0.19	0.19	0.13		0.13		0.19
Plus other combinations incorporating at least one load point at each of rated, intermediate and idle speeds.								

6.5 Examples of calculation of revised weighting factors:

.1 For a given load point, revised weighting factors shall be calculated as follows:

y% load = nominal weighting factor at load y · (1/(sum of the load factors for load points where data were acquired))

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.2 For Option A:

75% load: revised value is calculated as: 0.5 ÷ (1/(0.5 + 0.2)) = 0.71
100% load: revised value is calculated as: 0.2 ÷ (1/(0.5 + 0.2)) = 0.29

.3 For Option F:

75% load: revised value is calculated as: 0.25 ÷ (1/(0.25 + 0.3 + 0.1)) = 0.38

.4 The revised weighting factors are shown to two decimal places. However, the values to be applied to equation (19) of this Code shall be to the full precision. Hence in the Option F case above the revised weighting factor is shown as 0.38 although the actual calculated value is 0.384615..... Consequently, in these examples of revised weighting factors the summation of the values shown (to two decimal places) may not sum to 1.00 due to rounding.

7 Determination of power set point stability

7.1 To determine set point stability, the power coefficient of variance shall be calculated over a 10-minute interval, and the sampling rate shall be at least 1-Hz. The result shall be less than or equal to five per cent (5%).

7.2 The formulae for calculating the coefficient of variance are as follows:

$$Ave = \frac{1}{N}\sum_{j=1}^{N} x_j \qquad (1)$$

$$S.D. = \sqrt{\frac{1}{N-1}\sum_{i=1}^{N}(x_i - Ave)^2} \qquad (2)$$

$$\%C.O.V. = \frac{S.D.}{Ave} \cdot 100 \le 5\% \qquad (3)$$

where:

%C.O.V.	power coefficient of variance in %
S.D.	standard deviation
Ave	average
N	total number of data points sampled
x_i, x_j	i^{th}, j^{th} value of power data point in kW
i	index variable in standard deviation formula
j	index variable in average formula.

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CERTIFIED TRUE COPY of the text of the amendments to the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NO_x Technical Code 2008), adopted at the fifty-eighth session of the Marine Environment Protection Committee of the International Maritime Organization on 10 October 2008, in accordance with article 16(2)(d) of the International Convention for the Prevention of Pollution from Ships, 1973, and set out in the annex to resolution MEPC.177(58), the original text of which is deposited with the Secretary-General of the International Maritime Organization.

For the Secretary-General of the International Maritime Organization: R. P. Basse

London, 12 March 2010

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2006 AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Revised Annex III of MARPOL 73/78)

(Resolution MEPC.156(55))

AMENDEMENTS DE 2006 À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Annexe III révisée de MARPOL 73/78)

(Résolution MEPC.156(55))

ПОПРАВКИ 2006 ГОДА К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Пересмотренное Приложение III МАРПОЛ 73/78)

(Резолюция MEPC.156(55))

ENMIENDAS DE 2006 AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973

(Anexo III revisado del MARPOL 73/78)

(Resolución MEPC.156(55))

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RESOLUTION MEPC.156(55)
Adopted on 13 October 2006

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Revised Annex III of MARPOL 73/78)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

RECALLING further that, at its fifty-fourth session, it had endorsed the proposal by the DSC Sub-Committee regarding the timeframe leading to the entry into force of the revised MARPOL Annex III to make it coincide with the entry into force of amendment 34-08 to the International Maritime Dangerous Goods (IMDG) Code,

HAVING CONSIDERED the proposed amendments to Annex III of MARPOL 73/78 (revised Annex III),

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex III of MARPOL 73/78, the text of which is set out at Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(ii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2009, unless prior to that date, not less than one-third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2010 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex; and

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5 REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the present resolution and its Annex.

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ANNEX

AMENDMENTS TO ANNEX III OF MARPOL 73/78

(Revised Annex III)

The existing text of MARPOL Annex III is replaced by the following:

"REGULATIONS FOR THE PREVENTION OF POLLUTION BY HARMFUL SUBSTANCES CARRIED BY SEA IN PACKAGED FORM

Regulation 1
Application

1 Unless expressly provided otherwise, the regulations of this Annex apply to all ships carrying harmful substances in packaged form.

.1 For the purpose of this Annex, "harmful substances" are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code) or which meet the criteria in the Appendix of this Annex.

.2 For the purposes of this Annex, "packaged form" is defined as the forms of containment specified for harmful substances in the IMDG Code.

2 The carriage of harmful substances is prohibited, except in accordance with the provisions of this Annex.

3 To supplement the provisions of this Annex, the Government of each Party to the Convention shall issue, or cause to be issued, detailed requirements on packing, marking, labelling, documentation, stowage, quantity limitations and exceptions for preventing or minimizing pollution of the marine environment by harmful substances.

4 For the purposes of this Annex, empty packagings which have been used previously for the carriage of harmful substances shall themselves be treated as harmful substances unless adequate precautions have been taken to ensure that they contain no residue that is harmful to the marine environment.

5 The requirements of this Annex do not apply to ship's stores and equipment.

Regulation 2
Packing

Packages shall be adequate to minimize the hazard to the marine environment, having regard to their specific contents.

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Regulation 3
Marking and labelling

1 Packages containing a harmful substance shall be durably marked with the correct technical name (trade names alone shall not be used) and, further, shall be durably marked or labelled to indicate that the substance is a marine pollutant. Such identification shall be supplemented where possible by any other means, for example, by use of the relevant United Nations number.

2 The method of marking the correct technical name and of affixing labels on packages containing a harmful substance shall be such that this information will still be identifiable on packages surviving at least three months' immersion in the sea. In considering suitable marking and labelling, account shall be taken of the durability of the materials used and of the surface of the package.

3 Packages containing small quantities of harmful substances may be exempted from the marking requirements.

Regulation 4
Documentation

1 In all documents relating to the carriage of harmful substances by sea where such substances are named, the correct technical name of each such substance shall be used (trade names alone shall not be used) and the substance further identified by the addition of the words "MARINE POLLUTANT".

2 The shipping documents supplied by the shipper shall include, or be accompanied by, a signed certificate or declaration that the shipment offered for carriage is properly packaged and marked, labelled or placarded as appropriate and in proper condition for carriage to minimize the hazard to the marine environment.

3 Each ship carrying harmful substances shall have a special list or manifest setting forth the harmful substances on board and the location thereof. A detailed stowage plan which sets out the location of the harmful substances on board may be used in place of such special list or manifest. Copies of such documents shall also be retained on shore by the owner of the ship or his representative until the harmful substances are unloaded. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.

4 At any stopover, where any loading or unloading operations, even partial, are carried out, a revision of the documents listing the harmful substances taken on board, indicating their location on board or showing a detailed stowage plan, shall be made available before departure to the person or organization designated by the port State authority.

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5 When the ship carries a special list or manifest or a detailed stowage plan, required for the carriage of dangerous goods by the International Convention for the Safety of Life at Sea, 1974, as amended, the documents required by this regulation may be combined with those for dangerous goods. Where documents are combined, a clear distinction shall be made between dangerous goods and harmful substances covered by this Annex.

Regulation 5
Stowage

Harmful substances shall be properly stowed and secured so as to minimize the hazards to the marine environment without impairing the safety of the ship and persons on board.

Regulation 6
Quantity limitations

Certain harmful substances may, for sound scientific and technical reasons, need to be prohibited for carriage or be limited as to the quantity which may be carried aboard any one ship. In limiting the quantity, due consideration shall be given to size, construction and equipment of the ship, as well as the packaging and the inherent nature of the substances.

Regulation 7
Exceptions

1 Jettisoning of harmful substances carried in packaged form shall be prohibited, except where necessary for the purpose of securing the safety of the ship or saving life at sea.

2 Subject to the provisions of the present Convention, appropriate measures based on the physical, chemical and biological properties of harmful substances shall be taken to regulate the washing of leakages overboard, provided that compliance with such measures would not impair the safety of the ship and persons on board.

Regulation 8
Port State control on operational requirements

1 A ship when in a port or an offshore terminal of another Party is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of pollution by harmful substances.

2 In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as will ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.

3 Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.

4 Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

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APPENDIX TO ANNEX III

Criteria for the identification of harmful substances in packaged form

For the purposes of this Annex, substances ident fied by any one of the following criteria are harmful substances:

Category: Acute 1	
96 hr LC_{50} (for fish)	≤ 1 mg/l and/or
48 hr EC_{50} (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC_{50} (for algae or other aquatic plants)	≤ 1 mg/l

Category: Chronic 1	
96 hr LC_{50} (for fish)	≤ 1 mg/l and/or
48 hr EC_{50} (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC_{50} (for algae or other aquatic plants)	≤ 1 mg/l
and the substance is not rapidly degradable and/or the log K_{ow} ≥ 4 (unless the experimentally determined BCF < 500).	

Category: Chronic 2	
96 hr LC_{50} (for fish)	>1 to ≤ 10 mg/l and/or
48 hr EC_{50} (for crustacea)	>1 to ≤ 10 mg/l and/or
72 or 96 hr ErC_{50} (for algae or other aquatic plants)	>1 to ≤ 10 mg/l
and the substance is not rapidly degradable and/or the log K_{ow} ≥ 4 (unless the experimentally determined BCF <500), unless the chronic toxicity NOECs are > 1 mg/l.	

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RÉSOLUTION MEPC.156(55)

adoptée le 13 octobre 2006

AMENDEMENTS À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Annexe III révisée de MARPOL 73/78)

LE COMITÉ DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale, qui a trait aux fonctions conférées au Comité de la protection du milieu marin (le Comité) aux termes des conventions internationales visant à prévenir et combattre la pollution des mers,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973") et l'article VI du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé le "Protocole de 1978"), lesquels énoncent ensemble la procédure d'amendement du Protocole de 1978 et confèrent à l'organe compétent de l'Organisation la fonction d'examiner et d'adopter des amendements à la Convention de 1973, telle que modifiée par le Protocole de 1978 (MARPOL 73/78),

RAPPELANT en outre que, à sa cinquante-quatrième session, il avait souscrit à la proposition du Sous-comité DSC visant à ce que le calendrier relatif à l'entrée en vigueur de l'Annexe III révisée de MARPOL coïncide avec celui de l'entrée en vigueur de l'Amendement 34-08 au Code maritime international des marchandises dangereuses (Code IMDG),

AYANT EXAMINÉ les amendements qu'il était proposé d'apporter à l'Annexe III de MARPOL 73/78 (Annexe III révisée),

1. ADOPTE, conformément à l'article 16 2) d) de la Convention de 1973, les amendements à l'Annexe III de MARPOL 73/78 dont le texte figure en annexe à la présente résolution;

2. DÉCIDE, conformément à l'article 16 2) f) iii) de la Convention de 1973, que les amendements seront réputés avoir été acceptés le 1er juillet 2009 à moins que, avant cette date, un tiers au moins des Parties ou des Parties dont les flottes marchandes représentent au total au moins 50 % du tonnage brut de la flotte mondiale des navires de commerce n'aient notifié à l'Organisation qu'elles élèvent une objection à ces amendements;

3. INVITE les Parties à noter que, conformément à l'article 16 2) g) ii) de la Convention de 1973, lesdits amendements entreront en vigueur le 1er janvier 2010, après avoir été acceptés suivant la procédure décrite au paragraphe 2 ci-dessus;

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4. PRIE le Secrétaire général, en application de l'article 16 2) e) de la Convention de 1973, de communiquer à toutes les Parties à MARPOL 73/78 des copies certifiées conformes de la présente résolution et du texte des amendements qui y est annexé; et

5. PRIE EN OUTRE le Secrétaire général de communiquer des exemplaires de la présente résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à MARPOL 73/78.

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ANNEXE

AMENDEMENTS À L'ANNEXE III DE MARPOL 73/78

(Annexe III révisée)

Remplacer le texte actuel de l'Annexe III de MARPOL par ce qui suit :

"RÈGLES RELATIVES À LA PRÉVENTION DE LA POLLUTION PAR LES SUBSTANCES NUISIBLES TRANSPORTÉES PAR MER EN COLIS

Règle 1
Champ d'application

1 Sauf disposition expresse contraire, les règles de la présente Annexe s'appliquent à tous les navires transportant des substances nuisibles en colis.

.1 Aux fins de la présente Annexe, on entend par "substances nuisibles" les substances qui sont identifiées comme polluants marins dans le Code maritime international des marchandises dangereuses (Code IMDG), ou encore qui satisfont aux critères énoncés dans l'appendice de la présente Annexe.

.2 Aux fins de la présente Annexe, l'expression "en colis" désigne les formes d'emballage spécifiées dans le Code IMDG pour les substances nuisibles.

2 Le transport de substances nuisibles en colis est interdit, sauf s'il est effectué conformément aux dispositions de la présente Annexe.

3 Pour compléter les dispositions de la présente Annexe, le Gouvernement de chaque Partie à la Convention doit publier ou faire publier des prescriptions détaillées pour l'emballage, le marquage, l'étiquetage, les documents, l'arrimage, les limites quantitatives et les exceptions visant à prévenir ou à réduire au minimum la pollution du milieu marin par des substances nuisibles.

4 Aux fins de la présente Annexe, les emballages vides ayant déjà servi au transport de substances nuisibles doivent eux-mêmes être traités comme des substances nuisibles, à moins que des précautions suffisantes n'aient été prises pour s'assurer qu'ils ne contiennent aucun résidu dangereux pour le milieu marin.

5 Les dispositions de la présente Annexe ne s'appliquent pas aux provisions de bord ni au matériel d'armement du navire.

Règle 2
Emballage

Les emballages doivent être de nature à réduire au minimum les risques pour le milieu marin, compte tenu de leur contenu spécifique.

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Règle 3
Marquage et étiquetage

1 Les colis contenant une substance nuisible doivent porter une marque durable définissant cette substance par son appellation technique exacte (les appellations commerciales seules ne sont pas admises) et porter en outre de façon durable une marque ou une étiquette indiquant que la substance est un polluant marin. Cette identification doit être complétée, si possible, par un autre moyen, par exemple, par le numéro de référence des Nations Unies.

2 Le procédé de marquage de l'appellation technique exacte et le procédé d'étiquetage des colis contenant une substance nuisible doivent être tels que l'on puisse encore identifier les renseignements donnés lorsque les colis ont survécu à un séjour d'au moins trois mois dans la mer. Lorsque l'on envisage les procédés de marquage et d'étiquetage qui pourraient convenir, on doit tenir compte de la durabilité des matériaux utilisés et de la nature de la surface extérieure du colis.

3 Les colis contenant de faibles quantités de substances nuisibles peuvent être exemptés de l'application des prescriptions relatives au marquage.

Règle 4
Documents

1 Dans tous les documents relatifs au transport par mer de substances nuisibles qui font mention de ces substances, on doit utiliser l'appellation technique exacte de chacune de ces substances (l'appellation commerciale seule n'est pas admise) en la complétant par les mots "POLLUANT MARIN".

2 Les documents d'expédition fournis par le chargeur doivent soit comprendre un certificat ou une déclaration signés, soit être accompagnés d'un tel certificat ou d'une telle déclaration, attestant que le chargement présenté aux fins du transport est convenablement emballé et, selon le cas, marqué, étiqueté ou muni d'une étiquette-placard et qu'il est dans un état propre à réduire au minimum les risques que son transport présente pour le milieu marin.

3 Tout navire qui transporte des substances nuisibles doit posséder une liste ou un manifeste spécial énumérant les substances nuisibles embarquées et indiquant leur lieu d'arrimage à bord. Au lieu de cette liste ou de ce manifeste, on peut utiliser un plan d'arrimage détaillé indiquant l'emplacement des substances nuisibles à bord. Des copies de ces documents doivent également être conservées à terre par le propriétaire du navire ou son mandataire jusqu'à ce que les substances nuisibles aient été déchargées. Une copie de l'un de ces documents doit être remise avant le départ à la personne ou à l'organisme désigné par l'autorité de l'État du port.

4 À chaque escale au cours de laquelle une opération de chargement ou déchargement, même partielle, est effectuée, une version mise à jour des documents énumérant les substances nuisibles embarquées et indiquant leur lieu d'arrimage à bord, ou du plan d'arrimage détaillé, doit être remise avant le départ à la personne ou à l'organisme désigné par l'autorité de l'État du port.

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5 Si le navire possède à bord la liste ou le manifeste spécial ou le plan d'arrimage détaillé prescrit pour le transport des marchandises dangereuses aux termes de la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer, telle que modifiée, les documents exigés par la présente règle peuvent être combinés avec les documents relatifs aux marchandises dangereuses. Lorsque les documents sont combinés, il doit être établi une claire distinction entre les marchandises dangereuses et les substances nuisibles visées par la présente Annexe.

Règle 5
Arrimage

Les substances nuisibles doivent être convenablement arrimées et assujetties de manière à réduire au minimum les risques pour le milieu marin, sans porter atteinte à la sécurité du navire et des personnes à bord.

Règle 6
Limites quantitatives

Il peut être nécessaire, pour des raisons scientifiques et techniques valables, d'interdire le transport de certaines substances nuisibles ou de limiter la quantité de ces substances que peut transporter un même navire. En fixant ces limites, il convient de tenir dûment compte des dimensions, de la construction et de l'équipement du navire, ainsi que de l'emballage et des propriétés intrinsèques de ces substances.

Règle 7
Exceptions

1 Il est interdit de jeter à la mer de substances nuisibles transportées en colis, sauf si cela est nécessaire pour assurer la sécurité du navire ou pour sauver des vies humaines en mer.

2 Sous réserve des dispositions de la présente Convention, des mesures appropriées doivent être prises compte tenu des propriétés physiques, chimiques et biologiques des substances nuisibles, pour réglementer le rejet à la mer des eaux de nettoyage des fuites, pour autant que l'application de ces mesures ne compromette pas la sécurité du navire et des personnes à bord.

Règle 8
Contrôle des normes d'exploitation par l'État du port

1 Un navire qui se trouve dans un port ou une installation terminale au large d'une autre Partie est soumis à une inspection effectuée par des fonctionnaires dûment autorisés par ladite Partie en vue de vérifier l'application des normes d'exploitation prévues par la présente Annexe, lorsqu'il y a de bonnes raisons de penser que le capitaine ou les membres de l'équipage ne sont pas au fait des procédures essentielles à bord pour prévenir la pollution par les substances nuisibles.

2 Dans les circonstances visées au paragraphe 1) de la présente règle, la Partie prend les dispositions nécessaires pour empêcher le navire d'appareiller jusqu'à ce qu'il ait été remédié à la situation conformément aux prescriptions de la présente Annexe.

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3 Les procédures relatives au contrôle par l'État du port prévues à l'article 5 de la présente Convention s'appliquent dans le cas de la présente règle.

4 Aucune disposition de la présente règle ne doit être interprétée comme limitant les droits et obligations d'une Partie qui effectue le contrôle des normes d'exploitation expressément prévues dans la présente Convention.

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Appendice de l'Annexe III

Critères pour l'identification des substances nuisibles en eclis

Aux fins de la présente Annexe, sont considérées comme nuisibles les substances qui satisfont à l'un des critères suivants :

Catégorie : Toxicité aiguë 1	
CL_{50} 96 h (pour les poissons)	≤ 1 mg/ℓ et/ou
CE_{50} 48 h (pour les crustacés)	≤ 1 mg/ℓ et/ou
CEr_{50} 72 ou 96 h (pour les algues et d'autres plantes aquatiques)	≤ 1 mg/ℓ

Catégorie : Toxicité chronique 1	
CL_{50} 96 h (pour les poissons)	≤ 1 mg/ℓ et/ou
CE_{50} 48 h (pour les crustacés)	≤ 1 mg/ℓ et/ou
CEr_{50} 72 ou 96 h (pour les algues et d'autres plantes aquatiques)	≤ 1 mg/ℓ
et la substance n'est pas rapidement dégradable et/ou le log K_{oe} ≥ 4 (sauf si le FBC déterminé par voie expérimentale est <500)	

Catégorie : Toxicité chronique 2	
CL_{50} 96 h (pour les poissons)	>1 à ≤ 10 mg/ℓ et/ou
CE_{50} 48 h (pour les crustacés)	>1 à ≤ 10 mg/ℓ et/ou
CEr_{50} 72 ou 96 h (pour les algues et d'autres plantes aquatiques)	>1 à ≤ 10 mg/ℓ
et la substance n'est pas rapidement dégradable et/ou le log K_{oe} ≥ 4 (sauf si le FBC déterminé par voie expérimentale est < 500), sauf si les CSEO de la toxicité chronique sont > 1 mg/ℓ.	

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РЕЗОЛЮЦИЯ МЕРС.156(55)
Принята 13 октября 2006 года

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Пересмотренное Приложение III к МАРПОЛ 73/78)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета по защите морской среды (Комитет), возложенных на него международными конвенциями по предотвращению загрязнения моря и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемой «Конвенция 1973 года») и статью VI Протокола 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемого «Протокол 1978 года»), которые совместно устанавливают процедуру внесения поправок в Протокол 1978 года и возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколом 1978 года (МАРПОЛ 73/78),

ССЫЛАЯСЬ далее на то, что на своей пятьдесят четвертой сессии он утвердил предложение Подкомитета DSC относительно временных рамок вступления в силу пересмотренного Приложения III к Конвенции МАРПОЛ, с тем чтобы оно вступало в силу одновременно с поправкой 34-08 к Международному кодексу морской перевозки опасных грузов (МКМПОГ),

РАССМОТРЕВ предложенные поправки к Приложению III к МАРПОЛ 73/78 (пересмотренное Приложение III),

1. ОДОБРЯЕТ в соответствии со статьей 16 2) d) Конвенции 1973 года поправки к Приложению III к МАРПОЛ 73/78, текст которых изложен в приложении к настоящей резолюции;

2. ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции 1973 года, что поправки считаются принятыми 1 июля 2009 года, если до этой даты Организации не будут сообщены возражения против поправок не менее одной трети Сторон или Сторон, общая валовая вместимость торговых судов которых составляет не менее 50 процентов валовой вместимости судов мирового торгового флота;

3. ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции 1973 года вышеупомянутые поправки вступают в силу 1 января 2010 года после их принятия в соответствии с пунктом 2, выше;

4. ПРОСИТ Генерального секретаря, в соответствии со статьей 16 2) e) Конвенции 1973 года, направить всем Сторонам МАРПОЛ 73/78 заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении; и

5. ПРОСИТ ДАЛЕЕ Генерального секретаря направить членам Организации, которые не являются Сторонами МАРПОЛ 73/78, копии настоящей резолюции и приложения к ней.

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ПРИЛОЖЕНИЕ

ПОПРАВКИ К ПРИЛОЖЕНИЮ III К МАРПОЛ 73/78

(Пересмотренное Приложение III)

Существующий текст Приложения III к Конвенции МАРПОЛ заменяется следующим:

«ПРАВИЛА ПРЕДОТВРАЩЕНИЯ ЗАГРЯЗНЕНИЯ ВРЕДНЫМИ ВЕЩЕСТВАМИ, ПЕРЕВОЗИМЫМИ МОРЕМ В УПАКОВКЕ

Правило 1
Применение

1 Если специально не предусмотрено иное, правила настоящего Приложения применяются ко всем судам, перевозящим вредные вещества в упаковке.

.1 Для целей настоящего Приложения «вредными веществами» являются вещества, которые определены как загрязнители моря в Международном кодексе морской перевозки опасных грузов (МКМПОГ) или которые отвечают критериям, указанным в дополнении к настоящему Приложению.

.2 Для целей настоящего Приложения «упаковка» определяется как формы грузовых емкостей, указанные для вредных веществ в МКМПОГ.

2 Перевозка вредных веществ запрещена, за исключением той, которая соответствует положениям настоящего Приложения.

3 В дополнение к положениям настоящего Приложения правительство каждой Стороны Конвенции издает или поручает издать подробные требования по упаковке, маркировке, ярлыкам, документации, укладке, предельным количествам и исключениям в целях предотвращения или сведения к минимуму загрязнения морской среды вредными веществами.

4 Для целей настоящего Приложения порожние упаковки, ранее использовавшиеся для перевозки вредных веществ, сами рассматриваются как вредные вещества, если только не были приняты надлежащие предупредительные меры для того, чтобы обеспечить отсутствие в них какого-либо остатка, представляющего вред для морской среды.

5 Требования настоящего Приложения не применяются к судовым запасам и судовому оборудованию.

Правило 2
Упаковка

Упаковки должны отвечать требованиям сведения к минимуму опасности для морской среды с учетом их специфического содержимого.

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Правило 3
Маркировка и ярлыки

1 Грузовые места, содержащие вредное вещество, маркируются надежной долговечной маркировкой с правильным техническим наименованием (одни коммерческие названия применять нельзя) и маркируются надежной долговечной маркировкой или снабжаются надежным долговечным ярлыком, указывающими, что вещество является загрязнителем моря. Такое обозначение дополняется, где это возможно, также и любым другим способом, например указанием соответствующего номера вещества по списку опасных грузов ООН.

2 Метод маркировки правильного технического наименования или снабжения ярлыками грузовых мест, содержащих вредное вещество, является таковым, чтобы эта информация поддавалась распознанию на грузовых местах, находившихся в море в погруженном состоянии по меньшей мере в течение трех месяцев. При выборе подходящих маркировки и ярлыков учитывается долговечность применяемых материалов и поверхности грузового места.

3 На грузовые места, содержащие небольшие количества вредных веществ, требования по маркировке могут не распространяться.

Правило 4
Документация

1 Во всех документах, относящихся к морской перевозке вредных веществ, в которых перечисляются такие вещества, используется правильное техническое наименование каждого такого вещества (одни коммерческие названия применять нельзя), и вещество обозначается дополнительными словами «ЗАГРЯЗНИТЕЛЬ МОРЯ».

2 Транспортные документы, представленные грузоотправителем, должны включать подтвержденное подписью свидетельство или декларацию о том, что предъявляемый к перевозке груз надлежащим образом упакован, маркирован или снабжен ярлыками или плакатами и находится в пригодном к перевозке состоянии, обеспечивающем сведение к минимуму опасности для морской среды, либо сопровождаться такими свидетельством или декларацией.

3 Каждое судно, перевозящее вредные вещества, должно иметь специальный реестр или манифест с перечислением находящихся на борту вредных веществ и указанием их размещения на судне. Вместо такого специального реестра или манифеста может использоваться подробный грузовой план, на котором представлено расположение имеющихся на борту вредных веществ. Копии таких документов сохраняются также на берегу у судовладельца или его представителя до выгрузки этих вредных веществ. Копия одного из этих документов предоставляется перед отходом судна лицу или организации, назначенным властями государства порта.

4 При любой остановке в пути, если выполняются любые, даже частичные, операции по погрузке или выгрузке, перед отправлением судна лицу или организации, назначенным властями государства порта, предоставляется опись документов, перечисляющих принятые на борт вредные вещества с указанием их размещения на судне или подробного грузового плана.

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5 При наличии на судне специального реестра, манифеста или подробного грузового плана, предписываемых Международной конвенцией по охране человеческой жизни на море 1974 года с поправками для случая перевозки опасных грузов, документы, предписываемые настоящим правилом, могут быть объединены с документами, предписываемыми для перевозки опасных грузов. В случае объединения этих документов проводится четкое разграничение между опасными грузами и вредными веществами, на которые распространяется действие настоящего Приложения.

Правило 5
Размещение

Вредные вещества размещаются и закрепляются так, чтобы свести к минимуму опасность для морской среды без ухудшения безопасности судна и находящихся на борту людей.

Правило 6
Предельные количества

По обоснованным научным и техническим причинам может потребоваться запрещение перевозки некоторых вредных веществ или ограничение количества, которое может перевозиться на борту любого судна. При ограничении перевозимого количества учитываются должны образом размерения, конструкция и оборудование судна, а также характер упаковки и свойства веществ.

Правило 7
Исключения

1 Выбрасывание за борт вредных веществ, перевозимых в упаковке, запрещается, за исключением случаев, когда это необходимо в целях обеспечения безопасности судна или спасения человеческой жизни на море.

2 С учетом положений настоящей Конвенции принимаются соответствующие меры, основанные на физических, химических и биологических свойствах вредных веществ, для контролирования сброса за борт утечек при условии, что применение таких мер не ухудшает безопасности судна и находящихся на борту людей.

Правило 8
Контроль государства порта за выполнением эксплуатационных требований

1 Судно, находясь в порту или у удаленного от берега терминала другой Стороны, подлежит инспектированию должностными лицами, надлежащим образом уполномоченными этой Стороной, которое касается выполнения эксплуатационных требований согласно настоящему Приложению, если имеются явные основания полагать, что капитан или экипаж не знают важнейших судовых процедур, относящихся к предотвращению загрязнения вредными веществами.

2 При обстоятельствах, приведенных в пункте 1 настоящего правила, Сторона принимает меры, обеспечивающие, чтобы судно не отошло до тех пор, пока положение дел не будет исправлено в соответствии с требованиями настоящего Приложения.

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3 К настоящему правилу применяется предписанный в статье 5 настоящей Конвенции порядок проведения контроля государством порта.

4 Ничто в настоящем правиле не должно истолковываться как ограничивающее права и обязанности Стороны, осуществляющей контроль за выполнением эксплуатационных требований, специально предусмотренные в настоящей Конвенции.

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ДОПОЛНЕНИЕ К ПРИЛОЖЕНИЮ III

Критерии определения вредных веществ в упаковке

Для целей настоящего Приложения вредными веществами являются вещества, определенные по любому из следующих критериев:

Категория: Острая токсичность 1	
96 ч $ЛК_{50}$ (для рыб)	≤ 1 мг/л и/или
48 ч $ЭК_{50}$ (для ракообразных)	≤ 1 мг/л и/или
72 или 96 ч $ЭСК_{50}$ (для водорослей или других водных растений)	≤ 1 мг/л

Категория: Хроническая токсичность 1	
96 ч $ЛК_{50}$ (для рыб)	≤ 1 мг/л и/или
48 ч $ЭК_{50}$ (для ракообразных)	≤ 1 мг/л и/или
72 или 96 ч $ЭСК_{50}$ (для водорослей или других водных растений)	≤ 1 мг/л

и вещество не является быстроразлагающимся и/или $\log K_{ов} \geq 4$ (за исключением случаев, когда экспериментально установленная величина КБК < 500).

Категория: Хроническая токсичность 2	
96 ч $ЛК_{50}$ (для рыб)	>1 ≤ 10 мг/л и/или
48 ч $ЭК_{50}$ (для ракообразных)	>1 ≤ 10 мг/л и/или
72 или 96 ч $ЭСК_{50}$ (для водорослей или других водных растений)	>1 ≤ 10 мг/л

и вещество не является быстроразлагающимся и/или $\log K_{ов} \geq 4$ (за исключением случаев, когда экспериментально установленная величина КБК < 500), за исключением случаев, когда значения хронической токсичности NOEC > 1 мг/л.

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J/9370

RESOLUCIÓN MEPC.156 (55)
adoptada el 13 de octubre de 2006

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973

(Anexo III revisado del MARPOL 73/78)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, artículo que trata de las funciones conferidas al Comité de Protección del Medio Marino (el Comité) por los convenios internacionales relativos a la prevención y contención de la contaminación del mar,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Convenio de 1973") y del artículo VI del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Protocolo de 1978"), en los que conjuntamente se especifica el procedimiento para enmendar el Protocolo de 1978 y se confiere al órgano competente de la Organización la función de examinar y adoptar enmiendas al Convenio de 1973 modificado por el Protocolo de 1978 (MARPOL 73/78),

RECORDANDO además que, en su 54º periodo de sesiones, había refrendado la propuesta del Subcomité DSC relativa al calendario para la entrada en vigor del Anexo III revisado del MARPOL 73/78 de modo que ésta coincida con la entrada en vigor de la enmienda 34-08 al Código marítimo internacional de mercancías peligrosas (Código IMDG),

HABIENDO EXAMINADO la propuesta de enmiendas al Anexo III del MARPOL 73/78 (Anexo III revisado),

1. ADOPTA, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio de 1973, las enmiendas al Anexo III del MARPOL 73/78, cuyo texto figura en el anexo de la presente resolución;

2. DECIDE, de conformidad con lo dispuesto en el artículo 16 2) f) iii) del Convenio de 1973, que las enmiendas se considerarán aceptadas el 1 de julio de 2009, salvo que, con anterioridad a esa fecha, un tercio cuando menos de las Partes, o aquellas Partes cuyas flotas mercantes combinadas representen como mínimo el 50% del tonelaje bruto de la flota mercante mundial, hayan notificado a la Organización que rechazan las enmiendas;

3. INVITA a las Partes a que tomen nota de que, de conformidad con lo dispuesto en el artículo 16 2) g) ii) del Convenio de 1973, dichas enmiendas entrarán en vigor el 1 de enero de 2010, una vez aceptadas de conformidad con lo estipulado en el párrafo 2 anterior;

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4 PIDE al Secretario General que, de conformidad con lo dispuesto en el artículo 16.2) e) del Convenio de 1973, remita a todas las Partes en el MARPOL 73/78 copias certificadas de la presente resolución y del texto de las enmiendas que figura en el anexo; y

5 PIDE ADEMÁS al Secretario General que remita copias de la presente resolución y de su anexo a los Miembros de la Organización que no son partes en el MARPOL 73/78.

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ANEXO

ENMIENDAS AL ANEXO III DEL MARPOL 73/78

(Anexo III revisado)

Se sustituye el texto actual del Anexo III del MARPOL por el siguiente:

"REGLAS PARA PREVENIR LA CONTAMINACIÓN POR SUSTANCIAS PERJUDICIALES TRANSPORTADAS POR MAR EN BULTOS

Regla 1
Ámbito de aplicación

1 Salvo disposición expresa en otro sentido, las reglas del presente anexo son de aplicación a todos los buques que transporten sustancias perjudiciales en bultos.

.1 A los efectos del presente anexo, "sustancias perjudiciales" son las consideradas como contaminantes del mar en el Código marítimo internacional de mercancías peligrosas (Código IMDG) o las que cumplen los criterios que figuran en el Apéndice del presente Anexo.

.2 A los efectos del presente Anexo, la expresión "en bultos" remite a las formas de contención especificadas en el Código IMDG para las sustancias perjudiciales.

2 El transporte de sustancias perjudiciales está prohibido a menos que se realice de conformidad con las disposiciones del presente anexo.

3 Como complemento de las disposiciones del presente anexo, el Gobierno de cada Parte en el Convenio publicará o hará publicar prescripciones detalladas relativas al embalaje/envase, marcado, etiquetado, documentación, estiba, limitaciones cuantitativas y excepciones, con objeto de prevenir o reducir al mínimo la contaminación del medio marino ocasionada por las sustancias perjudiciales.

4 A los efectos del presente anexo, los embalajes/envases vacíos que hayan sido utilizados previamente para transportar sustancias perjudiciales serán considerados a su vez como sustancias perjudiciales, a menos que se hayan tomado precauciones adecuadas para garantizar que no contienen ningún residuo perjudicial para el medio marino.

5 Las prescripciones del presente Anexo no son aplicables a los pertrechos ni al equipo de a bordo.

Regla 2
Embalaje y envasado

Los bultos serán de tipo idóneo para que, habida cuenta de su contenido específico, sea mínimo el riesgo de dañar el medio marino.

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Regla 3
Marcado y etiquetado

1 Los bultos que contengan alguna sustancia perjudicial irán marcados de forma duradera con el nombre técnico correcto de dicha sustancia (no se admitirán sólo nombres comerciales) y, además, irán marcados o etiquetados de forma duradera para indicar que la sustancia es un contaminante del mar. Cuando sea posible, se complementará esa identificación utilizando otros medios, por ejemplo el número correspondiente de las Naciones Unidas.

2 El método de marcar el nombre técnico correcto y de fijar etiquetas en los bultos que contengan alguna sustancia perjudicial será tal que los datos en ellos consignados sigan siendo identificables tras un periodo de tres meses por lo menos de inmersión en el mar. Al estudiar qué métodos de marcado y etiquetado conviene adoptar, se tendrán en cuenta la durabilidad de los materiales utilizados y la naturaleza de la superficie del bulto.

3 Los bultos que contengan cantidades pequeñas de sustancias perjudiciales podrán quedar exentos de las prescripciones sobre marcado.

Regla 4
Documentación

1 En todos los documentos relativos al transporte de sustancias perjudiciales por mar en los que haya que nombrar tales sustancias, éstas serán designadas por su nombre técnico correcto (no se admitirán sólo nombres comerciales), consignándose además, a efectos de identificación, las palabras "CONTAMINANTE DEL MAR".

2 Los documentos de embarque presentados por el expedidor incluirán o llevarán adjunta una certificación o una declaración firmada en la que se haga constar que la carga que se presenta para el transporte ha sido adecuadamente embalada/envasada y, según sea el caso, marcada, etiquetada o rotulada, y que se halla en condiciones de ser transportada de modo que sea mínimo el riesgo de dañar el medio marino.

3 Todo buque que transporte sustancias perjudiciales llevará una lista o un manifiesto especial en los que se indiquen las sustancias perjudiciales embarcadas y el emplazamiento de éstas a bordo. En lugar de tal lista o manifiesto cabrá utilizar un plano detallado de estiba que muestre el emplazamiento a bordo de las sustancias perjudiciales. De tales documentos retendrán también copias en tierra el propietario del buque o su agente hasta que las sustancias perjudiciales hayan sido desembarcadas. Antes de salir de puerto, se entregará copia de uno de esos documentos a la persona u organización designada por la autoridad del Estado rector del puerto.

4 En cualquier escala en la que se lleven a cabo operaciones de carga o descarga, incluso parciales, se facilitará antes de salir de puerto, a la persona u organización designada por la autoridad del Estado rector del puerto, una versión actualizada de los documentos en los que se enumeren las sustancias perjudiciales embarcadas, se indique su emplazamiento a bordo o figure un plano detallado de estiba.

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5 En el caso de que el buque lleve una lista o un manifiesto especial o un plano detallado de estiba, de acuerdo con lo prescrito para el transporte de mercancías peligrosas en el Convenio internacional para la seguridad de la vida humana en el mar, 1974, enmendado, los documentos prescritos en la presente regla podrán combinarse con los correspondientes a las mercancías peligrosas. Cuando se combinen dichos documentos, se establecerá en ellos una clara distinción entre las mercancías peligrosas y las sustancias perjudiciales regidas por el presente anexo.

Regla 5
Estiba

Las sustancias perjudiciales irán adecuadamente estibadas y sujetas para que sea mínimo el riesgo de dañar el medio marino, sin menoscabar por ello la seguridad del buque y de las personas a bordo.

Regla 6
Limitaciones cuantitativas

Por fundadas razones científicas y técnicas, podrá ser necesario prohibir el transporte de ciertas sustancias perjudiciales o limitar la cantidad que de ellas se permita transportar en un solo buque. Al establecer esa limitación cuantitativa se tendrán en cuenta las dimensiones, la construcción y el equipo del buque, así como el embalaje/envase y la naturaleza de la sustancia de que se trate.

Regla 7
Excepciones

1 La echazón de las sustancias perjudiciales transportadas en bultos estará prohibida, a menos que sea necesaria para salvaguardar la seguridad del buque o la vida humana en la mar.

2 A reserva de lo dispuesto en el presente Convenio, se tomarán medidas basadas en las propiedades físicas, químicas y biológicas de las sustancias perjudiciales para reglamentar el lanzamiento al mar, mediante baldeo, de los derrames, a condición de que la aplicación de tales medidas no menoscabe la seguridad del buque y de las personas a bordo.

Regla 8
Supervisión de las prescripciones operacionales por el Estado rector del puerto

1 Un buque que se halle en un puerto o en una terminal mar adentro de otra Parte estará sujeto a inspección por funcionarios debidamente autorizados de dicha Parte en lo que concierne a las prescripciones operacionales en virtud del presente anexo, cuando existan claros indicios para suponer que el capitán o la tripulación no están familiarizados con los procedimientos esenciales de a bordo relativos a la prevención de la contaminación por sustancias perjudiciales.

2 Si se dan las circunstancias mencionadas en el párrafo 1 de la presente regla, la Parte tomará las medidas necesarias para que el buque no zarpe hasta que se haya resuelto la situación de conformidad con lo prescrito en el presente anexo.

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3 Los procedimientos relacionados con la supervisión por el Estado rector del puerto estipulados en el artículo 5 del presente Convenio se aplicarán a la presente regla.

4 Nada de lo dispuesto en la presente regla se interpretará de manera que se limiten los derechos y obligaciones de una Parte que lleve a cabo la supervisión de las prescripciones operacionales expresamente establecidas en el presente Convenio.

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APÉNDICE del Anexo III

CRITERIOS PARA DETERMINAR SI LAS SUSTANCIAS QUE SE TRANSPORTAN EN BULTOS SON PERJUDICIALES

A los efectos del presente anexo, son perjudiciales las sustancias a las que se aplique uno cualquiera de los siguientes criterios:

Categoría: Toxicidad aguda 1

CL_{50} 96 h (para peces)	≤ 1 mg/l y/o
CE_{50} 48 h (para crustáceos)	≤ 1 mg/l y/o
CEr_{50} 72 ó 96 h (para algas u otras plantas acuáticas)	≤ 1 mg/l

Categoría: Toxicidad crónica 1

CL_{50} 96 h (para peces)	≤ 1 mg/l y/o
CE_{50} 48 h (para crustáceos)	≤ 1 mg/l y/o
CEr_{50} 72 o 96 h (para algas u otras plantas acuáticas)	≤ 1 mg/l

y la sustancia no sea rápidamente degradable y/o el log $K_{OA} \geq 4$ (a menos que el FBC, determinado experimentalmente, sea < 500)

Categoría: Toxicidad crónica 2

CL_{50} 96 h (para peces)	>1 a ≤ 10 mg/l y/o
CE_{50} 48 h (para crustáceos)	>1 a ≤ 10 mg/l y/o
CEr_{50} 72 ó 96 h(para algas u otras plantas acuáticas)	>1 a ≤ 10 mg/l

y la sustancia no sea rápidamente degradable y/o el log $K_{OA} \geq 4$ (a menos que el FBC, determinado experimentalmente, sea < 500), y que las concentraciones sin efecto observado (NOEC) de la toxicidad crónica sean> 1 mg/l.

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CERTIFIED TRUE COPY of the text of the amendments to the Annex of the Protocol of 1978 relating to the International Convention for the prevention of Pollution from Ships, 1973, (Revised Annex III of MARPOL 73/78) adopted at the fifty-fifth session of the Marine Environment Protection Committee of the International Maritime Organization on 13 October 2006, in accordance with article 16 of the International Convention for the Prevention of Pollution from Ships 1973, and set out in the annex to resolution MEPC.156(55), the original text of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du texte des amendements à l'Annexe du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires, (Annexe III révisée de MARPOL 73/78) adoptés par la résolution MEPC.156(55) le 13 octobre 2006 lors de la cinquante-cinquième session du Comité de la protection du milieu marin de l'Organisation maritime internationale, conformément aux dispositions de l'article 16 de la Convention internationale pour la prévention de la pollution par les navires,1973 dont l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ поправок к Приложению к Протоколу 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (Пересмотренное Приложение III МАРПОЛ 73/78) добренных на пятьдесят пятой сессии Комитета по защите морской среды Международной морской организации, 13 октября 2006 года, в соответствии со статьей 16 Международной конвенции по предотвращению загрязнения с судов 1973 года и изложенных в приложении к резолюции MEPC.156(55), подлинный текст которых сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTÉNTICA CERTIFICADA de las enmiendas al Anexo del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (Anexo III revisado del MARPOL 73/78) adoptadas por el Comité de Protección del Medio Marino de la Organización Marítima Internacional en su 55º período de sesiones, de conformidad con lo dispuesto en el artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973, mediante la resolución MEPC.156(55), cuyo texto original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General of the International Maritime Organization:
Pour le Secrétaire général de l'Organisation maritime internationale:
За Генерального секретаря Международной морской организации:
Por el Secretario General de la Organización Marítima Internacional:

R. I. Ball

London,
Londres, le
Лондон,
Londres,

17/12/2007

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RESOLUTION MEPC.84(44)
Adopted on 13 March 2000

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Amendments to the Appendix to Annex III of MARPOL 73/78)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the function of the Committee conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED the proposed amendments to the Appendix to Annex III of MARPOL 73/78,

1. ADOPTS, in accordance with article 16(2) (d) of the 1973 Convention, the amendments to the Appendix to Annex III of MARPOL 73/78, the text of which is set out at Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2001, unless prior to that date, not less than one-third of the Parties or the Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objections to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(i) of the 1973 Convention, the amendments shall enter into force on 1 January 2002 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex; and

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the resolution and its Annex.

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ANNEX

AMENDMENTS TO THE APPENDIX TO ANNEX III OF MARPOL 73/78

The clause "-liable to produce tainting of seafood (Hazard Rating "T" in column A*), or" is deleted from the Appendix to Annex III of MARPOL 73/78.

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RÉSOLUTION MEPC.84(44)
adoptée le 13 mars 2000

AMENDEMENT À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Amendement à l'appendice de l'Annexe III de MARPOL 73/78)

LE COMITÉ DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale qui a trait aux fonctions conférées au Comité aux termes de conventions internationales visant à prévenir et à combattre la pollution des mers,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973") et l'article VI du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé le "Protocole de 1978"), lesquels énoncent ensemble la procédure d'amendement du Protocole de 1978 et confèrent à l'organe compétent de l'Organisation les fonctions ayant trait à l'examen et à l'adoption d'amendements à la Convention de 1973, telle que modifiée par le Protocole de 1978 (MARPOL 73/78),

AYANT EXAMINÉ la proposition d'amendement à l'appendice de l'Annexe III de MARPOL 73/78,

1. ADOPTE, conformément à l'article 16 2) d) de la Convention de 1973, l'amendement à l'appendice de l'Annexe III de MARPOL 73/78 dont le texte figure en annexe à la présente résolution;

2. DÉCIDE, conformément à l'article 16 2) f) iii) de la Convention de 1973, que cet amendement sera réputé avoir été accepté le 1er juillet 2001 à moins que, avant cette date, une objection à cet amendement n'ait été communiquée à l'Organisation par un tiers au moins des Parties ou par des Parties dont les flottes marchandes représentent au total au moins 50 % du tonnage brut de la flotte mondiale des navires de commerce;

3. INVITE les Parties à noter que, en application de l'article 16 2) g) ii) de la Convention de 1973, l'amendement entrera en vigueur le 1er janvier 2002, après avoir été accepté conformément à la procédure décrite au paragraphe 2 ci-dessus;

4. PRIE le Secrétaire général, conformément à l'article 16 2) e) de la Convention de 1973, de communiquer à toutes les Parties à MARPOL 73/78 des copies certifiées conformes de la présente résolution et du texte de l'amendement qui y est annexé; et

5 PRIE EN OUTRE le Secrétaire général de communiquer des exemplaires de la résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à MARPOL 73/78.

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ANNEXE

AMENDEMENT À L'APPENDICE DE L'ANNEXE III DE MARPOL 73/78

L'alinéa "-substances qui sont susceptibles d'altérer les aliments d'origine marine (degré de risque "T" dans la colonne A*); ou" est retiré du texte de l'appendice de l'Annexe III de MARPOL 73/78.

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РЕЗОЛЮЦИЯ МЕРС.84(44)
Принята 13 марта 2000 года

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Поправки к дополнению к Приложению III к МАРПОЛ 73/78)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета, возложенных на него международными конвенциями по предотвращению загрязнения моря и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемой "Конвенция 1973 года") и статью VI Протокола 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемого "Протокол 1978 года"), которые совместно устанавливают процедуру внесения поправок в Протокол 1978 года и возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколом 1978 года (МАРПОЛ 73/78),

РАССМОТРЕВ предлагаемые поправки к дополнению к Приложению III к МАРПОЛ 73/78,

1 ОДОБРЯЕТ в соответствии со статьей 16 2) d) Конвенции 1973 года поправки к дополнению к Приложению III к МАРПОЛ 73/78, текст которых изложен в приложении к настоящей резолюции;

2. ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции 1973 года, что поправки считаются принятыми 1 июля 2001 года, если до этой даты Организации не будут сообщены возражения против поправок не менее одной трети Сторон или Сторон, общая валовая вместимость торговых судов которых составляет не менее 50 процентов валовой вместимости судов мирового торгового флота;

3. ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции 1973 года поправки вступают в силу 1 января 2002 года после их принятия в соответствии с пунктом 2, выше;

4. ПРОСИТ Генерального секретаря, в соответствии со статьей 16 2) e) Конвенции 1973 года, направить всем Сторонам МАРПОЛ 73/78 заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении; и

5. ПРОСИТ ДАЛЕЕ Генерального секретаря направить членам Организации, которые не являются Сторонами МАРПОЛ 73/78, копии резолюции и приложения к ней.

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ПРИЛОЖЕНИЕ

ПОПРАВКИ К ДОПОЛНЕНИЮ К ПРИЛОЖЕНИЮ III К МАРПОЛ 73/78

Из дополнения к Приложению III к МАРПОЛ 73/78 исключается положение "- способные приводить морские живые организмы в непригодность к употреблению в пищу (категория опасности "Г" в колонке А*); или".

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RESOLUCIÓN MEPC.84(44)

Aprobada el 13 de marzo de 2000

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973

(Enmiendas al apéndice del Anexo III del MARPOL 73/78)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, artículo que trata de las funciones que confieren al Comité los convenios internacionales relativos a la prevención y contención de la contaminación del mar,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Convenio de 1973"), y del artículo VI del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Protocolo de 1978"), en los que, conjuntamente, se especifica el procedimiento de enmienda del Protocolo de 1978 y se confiere al órgano competente de la Organización la función de examinar y aprobar las enmiendas al Convenio de 1973, modificado por el Protocolo de 1978 (MARPOL 73/78),

HABIENDO EXAMINADO la propuesta de enmienda al apéndice del Anexo III del MARPOL 73/78,

1. APRUEBA, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio de 1973, la enmienda al apéndice del Anexo III del MARPOL 73/78, cuyo texto figura en el anexo de la presente resolución;

2. DECIDE, de conformidad con lo dispuesto en el artículo 16 2) f) iii) del Convenio de 1973, que la enmienda se considerará aceptada el 1 de julio de 2001, salvo que, con anterioridad a esa fecha, un tercio cuando menos de las Partes, o las Partes cuyas flotas mercantes combinadas representen como mínimo el 50% del tonelaje bruto de la flota mercante mundial, notifiquen a la Organización que rechazan la enmienda;

3. INVITA a las Partes a que tomen nota de que, de conformidad con lo dispuesto en el artículo 16 2) g) ii) del Convenio de 1973, la enmienda entrará en vigor el 1 de enero de 2002 si se acepta con arreglo a lo dispuesto en el párrafo 2 *supra*;

4. PIDE al Secretario General que, de conformidad con el artículo 16 2) e) del Convenio de 1973, remita copias certificadas de la presente resolución y del texto de la enmienda que figura en el anexo a todas las Partes en el MARPOL 73/78; y

5. PIDE ADEMÁS al Secretario General que remita copias de la presente resolución y de su anexo a los Miembros de la Organización que no sean partes en el MARPOL 73/78.

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ANEXO

ENMIENDA AL APÉNDICE DEL ANEXO III DEL MARPOL 73/78

La cláusula "-sustancias que pueden contaminar los alimentos de origen marino (índice de peligrosidad "I" en la columna A*); o" se suprime del apéndice del Anexo III del MARPOL 73/78.

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Certified true copy of the text of resolution MEPC.84(44), to which are annexed the amendments to the Appendix to Annex III of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, adopted by the Marine Environment Protection Committee of the International Maritime Organization on 13 March 2000 in conformity with article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 and article VI of the Protocol of 1978 relating thereto, the original of which is deposited with the Secretary-General of the Organization.

Copie certifiée conforme du texte de la résolution MEPC.84(44), à laquelle est annexé l'amendement à l'appendice de l'Annexe III du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires, que le Comité de la protection du milieu marin de l'Organisation maritime internationale a adopté le 13 mars 2000 conformément à l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution des mers par les navires et à l'article VI du Protocole de 1978 y relatif, et dont l'original est déposé auprès du Secrétaire général de l'Organisation.

Заверенная копия текста резолюции MEPC.84(44), к которой прилагаются поправки к дополнению к Приложению III к Протоколу 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года, одобренные Комитетом по защите морской среды Международной морской организации 13 марта 2000 года в соответствии со статьей 16 Международной конвенции по предотвращению загрязнения с судов 1973 года и статьей VI Протокола 1978 года к ней, подлинник которого сдан на хранение Генеральному секретарю Организации.

COPIA AUTÉNTICA CERTIFICADA del texto de la resolución MEPC.84(44) al que se adjunta la enmienda al apéndice del Anexo III del Protocolo de 1978 relativo al Convenio internacional para la seguridad de la vida humana en el mar, 1973, aprobada por el Comité de Protección del Medio Marino el 13 de marzo de 2000 de conformidad con lo dispuesto en el artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 y en el artículo VI del Protocolo, y cuyo original ha sido depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General:

Pour le Sécrétaire générale:

За Генерального секретаря:

Por el Secretario General:

R. P. B

London

Londres

29/6/07

Лондон,

Londres

7777

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2006 AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Revised Annex III of MARPOL 73/78)

(Resolution MEPC.156(55))

AMENDEMENTS DE 2006 À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Annexe III révisée de MARPOL 73/78)

(Résolution MEPC.156(55))

ПОПРАВКИ 2006 ГОДА К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Пересмотренное Приложение III МАРПОЛ 73/78)

(Резолюция MEPC.156(55))

ENMIENDAS DE 2006 AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973

(Anexo III revisado del MARPOL 73/78)

(Resolución MEPC.156(55))

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RESOLUTION MEPC.156(55)
Adopted on 13 October 2006

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Revised Annex III of MARPOL 73/78)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

RECALLING further that, at its fifty-fourth session, it had endorsed the proposal by the DSC Sub-Committee regarding the timeframe leading to the entry into force of the revised MARPOL Annex III to make it coincide with the entry into force of amendment 34-08 to the International Maritime Dangerous Goods (IMDG) Code,

HAVING CONSIDERED the proposed amendments to Annex III of MARPOL 73/78 (revised Annex III),

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex III of MARPOL 73/78, the text of which is set out at Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2009, unless prior to that date, not less than one-third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 January 2010 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex; and

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5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the present resolution and its Annex.

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ANNEX

AMENDMENTS TO ANNEX III OF MARPOL 73/78

(Revised Annex III)

The existing text of MARPOL Annex III is replaced by the following:

"REGULATIONS FOR THE PREVENTION OF POLLUTION BY HARMFUL SUBSTANCES CARRIED BY SEA IN PACKAGED FORM

Regulation 1
Application

1 Unless expressly provided otherwise, the regulations of this Annex apply to all ships carrying harmful substances in packaged form.

.1 For the purpose of this Annex, "harmful substances" are those substances which are identified as marine pollutants in the International Maritime Dangerous Goods Code (IMDG Code) or which meet the criteria in the Appendix of this Annex.

.2 For the purposes of this Annex, "packaged form" is defined as the forms of containment specified for harmful substances in the IMDG Code.

2 The carriage of harmful substances is prohibited, except in accordance with the provisions of this Annex.

3 To supplement the provisions of this Annex, the Government of each Party to the Convention shall issue, or cause to be issued, detailed requirements on packing, marking, labelling, documentation, stowage, quantity limitations and exceptions for preventing or minimizing pollution of the marine environment by harmful substances.

4 For the purposes of this Annex, empty packagings which have been used previously for the carriage of harmful substances shall themselves be treated as harmful substances unless adequate precautions have been taken to ensure that they contain no residue that is harmful to the marine environment.

5 The requirements of this Annex do not apply to ship's stores and equipment.

Regulation 2
Packing

Packages shall be adequate to minimize the hazard to the marine environment, having regard to their specific contents.

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Regulation 3
Marking and labelling

1 Packages containing a harmful substance shall be durably marked with the correct technical name (trade names alone shall not be used) and, further, shall be durably marked or labelled to indicate that the substance is a marine pollutant. Such identification shall be supplemented where possible by any other means, for example, by use of the relevant United Nations number.

2 The method of marking the correct technical name and of affixing labels on packages containing a harmful substance shall be such that this information will still be identifiable on packages surviving at least three months' immersion in the sea. In considering suitable marking and labelling, account shall be taken of the durability of the materials used and of the surface of the package.

3 Packages containing small quantities of harmful substances may be exempted from the marking requirements.

Regulation 4
Documentation

1 In all documents relating to the carriage of harmful substances by sea where such substances are named, the correct technical name of each such substance shall be used (trade names alone shall not be used) and the substance further identified by the addition of the words "MARINE POLLUTANT".

2 The shipping documents supplied by the shipper shall include, or be accompanied by, a signed certificate or declaration that the shipment offered for carriage is properly packaged and marked, labelled or placarded as appropriate and in proper condition for carriage to minimize the hazard to the marine environment.

3 Each ship carrying harmful substances shall have a special list or manifest setting forth the harmful substances on board and the location thereof. A detailed stowage plan which sets out the location of the harmful substances on board may be used in place of such special list or manifest. Copies of such documents shall also be retained on shore by the owner of the ship or his representative until the harmful substances are unloaded. A copy of one of these documents shall be made available before departure to the person or organization designated by the port State authority.

4 At any stopover, where any loading or unloading operations, even partial, are carried out, a revision of the documents listing the harmful substances taken on board, indicating their location on board or showing a detailed stowage plan, shall be made available before departure to the person or organization designated by the port State authority.

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5 When the ship carries a special list or manifest or a detailed stowage plan required for the carriage of dangerous goods by the International Convention for the Safety of Life at Sea, 1974, as amended, the documents required by this regulation may be combined with those for dangerous goods. Where documents are combined, a clear distinction shall be made between dangerous goods and harmful substances covered by this Annex.

Regulation 5
Stowage

Harmful substances shall be properly stowed and secured so as to minimize the hazards to the marine environment without impairing the safety of the ship and persons on board.

Regulation 6
Quantity limitations

Certain harmful substances may, for sound scientific and technical reasons, need to be prohibited for carriage or be limited as to the quantity which may be carried aboard any one ship. In limiting the quantity, due consideration shall be given to size, construction and equipment of the ship, as well as the packaging and the inherent nature of the substances.

Regulation 7
Exceptions

1 Jettisoning of harmful substances carried in packaged form shall be prohibited, except where necessary for the purpose of securing the safety of the ship or saving life at sea.

2 Subject to the provisions of the present Convention, appropriate measures based on the physical, chemical and biological properties of harmful substances shall be taken to regulate the washing of leakages overboard, provided that compliance with such measures would not impair the safety of the ship and persons on board.

Regulation 8
Port State control on operational requirements

1 A ship when in a port or an offshore terminal of another Party is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of pollution by harmful substances.

2 In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as will ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.

3 Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.

4 Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

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APPENDIX TO ANNEX III

Criteria for the identification of harmful substances in packaged form

For the purposes of this Annex, substances identified by any one of the following criteria are harmful substances.

Category: Acute 1	
96 hr LC_{50} (for fish)	≤ 1 mg/l and/or
48 hr EC_{50} (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC_{50} (for algae or other aquatic plants)	≤ 1 mg/l

Category: Chronic 1	
96 hr LC_{50} (for fish)	< 1 mg/l and/or
48 hr EC_{50} (for crustacea)	≤ 1 mg/l and/or
72 or 96 hr ErC_{50} (for algae or other aquatic plants)	< 1 mg/l
and the substance is not rapidly degradable and/or the log K_{ow} ≥ 4 (unless the experimentally determined BCF < 500).	

Category: Chronic 2	
96 hr LC_{50} (for fish)	>1 to ≤ 10 mg/l and/or
48 hr EC_{50} (for crustacea)	>1 to ≤ 10 mg/l and/or
72 or 96 hr ErC_{50} (for algae or other aquatic plants)	>1 to ≤ 10 mg/l
and the substance is not rapidly degradable and/or the log K_{ow} ≥ 4 (unless the experimentally determined BCF <500), unless the chronic toxicity NOECs are > 1 mg/l.	

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RÉSOLUTION MEPC.156(55)

adoptée le 13 octobre 2006

AMENDEMENTS À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Annexe III révisée de MARPOL 73/78)

LE COMITÉ DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale, qui a trait aux fonctions conférées au Comité de la protection du milieu marin (le Comité) aux termes des conventions internationales visant à prévenir et combattre la pollution des mers,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973") et l'article VI du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé le "Protocole de 1978"), lesquels énoncent ensemble la procédure d'amendement du Protocole de 1978 et confèrent à l'organe compétent de l'Organisation la fonction d'examiner et d'adopter des amendements à la Convention de 1973, telle que modifiée par le Protocole de 1978 (MARPOL 73/78),

RAPPELANT en outre que, à sa cinquante-quatrième session, il avait souscrit à la proposition du Sous-comité DSC visant à ce que le calendrier relatif à l'entrée en vigueur de l'Annexe III révisée de MARPOL coïncide avec celui de l'entrée en vigueur de l'Amendement 34-08 au Code maritime international des marchandises dangereuses (Code IMDG),

AYANT EXAMINÉ les amendements qu'il était proposé d'apporter à l'Annexe III de MARPOL 73/78 (Annexe III révisée),

1. ADOPTE, conformément à l'article 16 2) d) de la Convention de 1973, les amendements à l'Annexe III de MARPOL 73/78 dont le texte figure en annexe à la présente résolution;

2. DÉCIDE, conformément à l'article 16 2) f) iii) de la Convention de 1973, que les amendements seront réputés avoir été acceptés le 1er juillet 2009 à moins que, avant cette date, un tiers au moins des Parties ou des Parties dont les flottes marchandes représentent au total au moins 50 % du tonnage brut de la flotte mondiale des navires de commerce n'aient notifié à l'Organisation qu'elles élèvent une objection à ces amendements,

3. INVITE les Parties à noter que, conformément à l'article 16 2) g) ii) de la Convention de 1973, lesdits amendements entreront en vigueur le 1er janvier 2010, après avoir été acceptés suivant la procédure décrite au paragraphe 2 ci-dessus;

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4. PRIE le Secrétaire général, en application de l'article 16 2) c) de la Convention de 1973, de communiquer à toutes les Parties à MARPOL 73/78 des copies certifiées conformes de la présente résolution et du texte des amendements qui y est annexé; et

5. PRIE EN OUTRE le Secrétaire général de communiquer des exemplaires de la présente résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à MARPOL 73/78.

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ANNEXE

AMENDEMENTS À L'ANNEXE III DE MARPOL 73//78

(Annexe III révisée)

Remplacer le texte actuel de l'Annexe III de MARPOL par ce qui suit :

"RÈGLES RELATIVES À LA PRÉVENTION DE LA POLLUTION PAR LES SUBSTANCES NUISIBLES TRANSPORTÉES PAR MER EN COLIS

Règle 1
Champ d'application

1 Sauf disposition expresse contraire, les règles de la présente Annexe s'appliquent à tous les navires transportant des substances nuisibles en colis.

.1 Aux fins de la présente Annexe, on entend par "substances nuisibles" les substances qui sont identifiées comme polluants marins dans le Code maritime international des marchandises dangereuses (Code IMDG), ou encore qui satisfont aux critères énoncés dans l'appendice de la présente Annexe.

.2 Aux fins de la présente Annexe, l'expression "en colis" désigne les formes d'emballage spécifiées dans le Code IMDG pour les substances nuisibles.

2 Le transport de substances nuisibles en colis est interdit, sauf s'il est effectué conformément aux dispositions de la présente Annexe.

3 Pour compléter les dispositions de la présente Annexe, le Gouvernement de chaque Partie à la Convention doit publier ou faire publier des prescriptions détaillées pour l'emballage, le marquage, l'étiquetage, les documents, l'arrimage, les limites quantitatives et les exceptions visant à prévenir ou à réduire au minimum la pollution du milieu marin par des substances nuisibles.

4 Aux fins de la présente Annexe, les emballages vides ayant déjà servi au transport de substances nuisibles doivent eux-mêmes être traités comme des substances nuisibles, à moins que des précautions suffisantes n'aient été prises pour s'assurer qu'ils ne contiennent aucun résidu dangereux pour le milieu marin.

5 Les dispositions de la présente Annexe ne s'appliquent pas aux provisions de bord ni au matériel d'armement du navire.

Règle 2
Emballage

Les emballages doivent être de nature à réduire au minimum les risques pour le milieu marin, compte tenu de leur contenu spécifique.

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Règle 3
Marquage et étiquetage

1 Les colis contenant une substance nuisible doivent porter une marque durable définissant cette substance par son appellation technique exacte (les appellations commerciales seules ne sont pas admises) et porter en outre de façon durable une marque ou une étiquette indiquant que la substance est un polluant marin. Cette identification doit être complétée, si possible, par un autre moyen, par exemple, par le numéro de référence des Nations Unies.

2 Le procédé de marquage de l'appellation technique exacte et le procédé d'étiquetage des colis contenant une substance nuisible doivent être tels que l'on puisse encore identifier les renseignements donnés lorsque les colis ont survécu à un séjour d'au moins trois mois dans la mer. Lorsque l'on envisage les procédés de marquage et d'étiquetage qui pourraient convenir, on doit tenir compte de la durabilité des matériaux utilisés et de la nature de la surface extérieure du colis.

3 Les colis contenant de faibles quantités de substances nuisibles peuvent être exemptés de l'application des prescriptions relatives au marquage.

Règle 4
Documents

1 Dans tous les documents relatifs au transport par mer de substances nuisibles qui font mention de ces substances, on doit utiliser l'appellation technique exacte de chacune de ces substances (l'appellation commerciale seule n'est pas admise) en la complétant par les mots "POLLUANT MARIN".

2 Les documents d'expédition fournis par le chargeur doivent soit comprendre un certificat ou une déclaration signés, soit être accompagnés d'un tel certificat ou d'une telle déclaration, attestant que le chargement présenté aux fins du transport est convenablement emballé et, selon le cas, marqué, étiqueté ou muni d'une étiquette-placard et qu'il est dans un état propre à réduire au minimum les risques que son transport présente pour le milieu marin.

3 Tout navire qui transporte des substances nuisibles doit posséder une liste ou un manifeste spécial énumérant les substances nuisibles embarquées et indiquant leur lieu d'arrimage à bord. Au lieu de cette liste ou de ce manifeste, on peut utiliser un plan d'arrimage détaillé indiquant l'emplacement des substances nuisibles à bord. Des copies de ces documents doivent également être conservées à terre par le propriétaire du navire ou son mandataire jusqu'à ce que les substances nuisibles aient été déchargées. Une copie de l'un de ces documents doit être remise avant le départ à la personne ou à l'organisme désigné par l'autorité de l'État du port.

4 À chaque escale au cours de laquelle une opération de chargement ou déchargement, même partielle, est effectuée, une version mise à jour des documents énumérant les substances nuisibles embarquées et indiquant leur lieu d'arrimage à bord, ou du plan d'arrimage détaillé, doit être remise avant le départ à la personne ou à l'organisme désigné par l'autorité de l'État du port.

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5 Si le navire possède à bord la liste ou le manifeste spécial ou le plan d'arrimage détaillé prescrit pour le transport des marchandises dangereuses aux termes de la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer, telle que modifiée, les documents exigés par la présente règle peuvent être combinés avec les documents relatifs aux marchandises dangereuses. Lorsque les documents sont combinés, il doit être établi une claire distinction entre les marchandises dangereuses et les substances nuisibles visées par la présente Annexe.

Règle 5
Arrimage

Les substances nuisibles doivent être convenablement arrimées et assujetties de manière à réduire au minimum les risques pour le milieu marin, sans porter atteinte à la sécurité du navire et des personnes à bord.

Règle 6
Limites quantitatives

Il peut être nécessaire, pour des raisons scientifiques et techniques valables, d'interdire le transport de certaines substances nuisibles ou de limiter la quantité de ces substances que peut transporter un même navire. En fixant ces limites, il convient de tenir dûment compte des dimensions, de la construction et de l'équipement du navire, ainsi que de l'emballage et des propriétés intrinsèques de ces substances.

Règle 7
Exceptions

1 Il est interdit de jeter à la mer de substances nuisibles transportées en colis, sauf si cela est nécessaire pour assurer la sécurité du navire ou pour sauver des vies humaines en mer.

2 Sous réserve des dispositions de la présente Convention, des mesures appropriées doivent être prises compte tenu des propriétés physiques, chimiques et biologiques des substances nuisibles, pour réglementer le rejet à la mer des eaux de nettoyage des fuites, pour autant que l'application de ces mesures ne compromette pas la sécurité du navire et des personnes à bord.

Règle 8
Contrôle des normes d'exploitation par l'État du port

1 Un navire qui se trouve dans un port ou une installation terminale au large d'une autre Partie est soumis à une inspection effectuée par des fonctionnaires dûment autorisés par ladite Partie en vue de vérifier l'application des normes d'exploitation prévues par la présente Annexe, lorsqu'il y a de bonnes raisons de penser que le capitaine ou les membres de l'équipage ne sont pas au fait des procédures essentielles à bord pour prévenir la pollution par les substances nuisibles.

2 Dans les circonstances visées au paragraphe 1) de la présente règle, la Partie prend les dispositions nécessaires pour empêcher le navire d'appareiller jusqu'à ce qu'il ait été remédié à la situation conformément aux prescriptions de la présente Annexe.

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3 Les procédures relatives au contrôle par l'État du port prévues à l'article 5 de la présente Convention s'appliquent dans le cas de la présente règle.

4 Aucune disposition de la présente règle ne doit être interprétée comme limitant les droits et obligations d'une Partie qui effectue le contrôle des normes d'exploitation expressément prévues dans la présente Convention.

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Appendice de l'Annexe III

Critères pour l'identification des substances nuisibles en colis

Aux fins de la présente Annexe, sont considérées comme nuisibles les substances qui satisfont à l'un des critères suivants :

Catégorie : Toxicité aiguë 1

CL_{50} 96 h (pour les poissons)	≤ 1 mg/l et/ou
CE_{50} 48 h (pour les crustacés)	≤ 1 mg/l et/ou
CEr_{50} 72 ou 96 h (pour les algues et d'autres plantes aquatiques)	≤ 1 mg/l

Catégorie : Toxicité chronique 1

CL_{50} 96 h (pour les poissons)	< 1 mg/l et/ou
CE_{50} 48 h (pour les crustacés)	≤ 1 mg/l et/ou
CEr_{50} 72 ou 96 h (pour les algues et d'autres plantes aquatiques)	< 1 mg/l

et la substance n'est pas rapidement dégradable et/ou le log K_{oe} ≥ 4 (sauf si le FBC déterminé par voie expérimentale est <500)

Catégorie : Toxicité chronique 2

CL_{50} 96 h (pour les poissons)	>1 à ≤ 10 mg/l et/ou
CE_{50} 48 h (pour les crustacés)	>1 à ≤ 10 mg/l et/ou
CEr_{50} 72 ou 96 h (pour les algues et d'autres plantes aquatiques)	>1 à ≤ 10 mg/l

et la substance n'est pas rapidement dégradable et/ou le log K_{oe} ≥ 4 (sauf si le FBC déterminé par voie expérimentale est < 500), sauf si les CSEO de la toxicité chronique sont > 1 mg/l.

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РЕЗОЛЮЦИЯ МЕРС.156(55)
Принята 13 октября 2006 года

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Пересмотренное Приложение III к МАРПОЛ 73/78)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета по защите морской среды (Комитет), возложенных на него международными конвенциями по предотвращению загрязнения моря и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемой «Конвенция 1973 года») и статью VI Протокола 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемого «Протокол 1978 года»), которые совместно устанавливают процедуру внесения поправок в Протокол 1978 года и возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколом 1978 года (МАРПОЛ 73/78),

ССЫЛАЯСЬ далее на то, что на своей пятьдесят четвертой сессии он утвердил предложение Подкомитета DSC относительно временных рамок вступления в силу пересмотренного Приложения III к Конвенции МАРПОЛ, с тем чтобы оно вступило в силу одновременно с поправкой 34-08 к Международному кодексу морской перевозки опасных грузов (МКМПОГ),

РАССМОТРЕВ предложенные поправки к Приложению III к МАРПОЛ 73/78 (пересмотренное Приложение III),

1. ОДОБРЯЕТ в соответствии со статьей 16 2) d) Конвенции 1973 года поправки к Приложению III к МАРПОЛ 73/78, текст которых изложен в приложении к настоящей резолюции;

2. ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции 1973 года, что поправки считаются принятыми 1 июля 2009 года, если до этой даты Организации не будут сообщены возражения против поправок не менее одной трети Сторон или Сторон, общая валовая вместимость торговых судов которых составляет не менее 50 процентов валовой вместимости судов мирового торгового флота;

3. ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции 1973 года вышеупомянутые поправки вступают в силу 1 января 2010 года после их принятия в соответствии с пунктом 2, выше;

4. ПРОСИТ Генерального секретаря, в соответствии со статьей 16 2) e) Конвенции 1973 года, направить всем Сторонам МАРПОЛ 73/78 заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении; и

5. ПРОСИТ ДАЛЕЕ Генерального секретаря направить членам Организации, которые не являются Сторонами МАРПОЛ 73/78, копии настоящей резолюции и приложения к ней.

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ПРИЛОЖЕНИЕ

ПОПРАВКИ К ПРИЛОЖЕНИЮ III К МАРПОЛ 73/78

(Пересмотренное Приложение III)

Существующий текст Приложения III к Конвенции МАРПОЛ заменяется следующим:

«ПРАВИЛА ПРЕДОТВРАЩЕНИЯ ЗАГРЯЗНЕНИЯ ВРЕДНЫМИ ВЕЩЕСТВАМИ, ПЕРЕВОЗИМЫМИ МОРЕМ В УПАКОВКЕ

Правило 1
Применение

1 Если специально не предусмотрено иное, правила настоящего Приложения применяются ко всем судам, перевозящим вредные вещества в упаковке.

.1 Для целей настоящего Приложения «вредными веществами» являются вещества, которые определены как загрязнители моря в Международном кодексе морской перевозки опасных грузов (МКМПОГ) или которые отвечают критериям, указанным в дополнении к настоящему Приложению.

.2 Для целей настоящего Приложения «упаковка» определяется как формы грузовых емкостей, указанные для вредных веществ в МКМПОГ.

2 Перевозка вредных веществ запрещена, за исключением той, которая соответствует положениям настоящего Приложения.

3 В дополнение к положениям настоящего Приложения правительство каждой Стороны Конвенции издает или поручает издать подробные требования по упаковке, маркировке, ярлыкам, документации, укладке, предельным количествам и исключениям в целях предотвращения или сведения к минимуму загрязнения морской среды вредными веществами.

4 Для целей настоящего Приложения порожние упаковки, ранее использовавшиеся для перевозки вредных веществ, сами рассматриваются как вредные вещества, если только не были приняты надлежащие предупредительные меры для того, чтобы обеспечить отсутствие в них какого-либо остатка, представляющего вред для морской среды.

5 Требования настоящего Приложения не применяются к судовым запасам и судовому оборудованию.

Правило 2
Упаковка

Упаковки должны отвечать требованиям сведения к минимуму опасности для морской среды с учетом их специфического содержимого.

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Правило 3
Маркировка и ярлыки

1 Грузовые места, содержащие вредное вещество, маркируются надежной долговечной маркировкой с правильным техническим наименованием (одни коммерческие названия применять нельзя) и маркируются надежной долговечной маркировкой или снабжаются надежным долговечным ярлыком, указывающими, что вещество является загрязнителем моря. Такое обозначение дополняется, где это возможно, также и любым другим способом, например указанием соответствующего номера вещества по списку опасных грузов ООН.

2 Метод маркировки правильного технического наименования или снабжения ярлыками грузовых мест, содержащих вредное вещество, является таковым, чтобы эта информация поддавалась распознанию на грузовых местах, находившихся в море в погруженном состоянии по меньшей мере в течение трех месяцев. При выборе подходящих маркировки и ярлыков учитывается долговечность применяемых материалов и поверхности грузового места.

3 На грузовые места, содержащие небольшие количества вредных веществ, требования по маркировке могут не распространяться.

Правило 4
Документация

1 Во всех документах, относящихся к морской перевозке вредных веществ, в которых перечисляются такие вещества, используется правильное техническое наименование каждого такого вещества (одни коммерческие названия применять нельзя), и вещество обозначается дополнительными словами «ЗАГРЯЗНИТЕЛЬ МОРЯ».

2 Транспортные документы, представленные грузоотправителем, должны включать подтвержденное подписью свидетельство или декларацию о том, что предъявляемый к перевозке груз надлежащим образом упакован, маркирован или снабжен ярлыками или плакатами и находится в пригодном к перевозке состоянии, обеспечивающем сведение к минимуму опасности для морской среды, либо сопровождаться такими свидетельством или декларацией.

3 Каждое судно, перевозящее вредные вещества, должно иметь специальный реестр или манифест с перечислением находящихся на борту вредных веществ и указанием их размещения на судне. Вместо такого специального реестра или манифеста может использоваться подробный грузовой план, на котором представлено расположение имеющихся на борту вредных веществ. Копии таких документов сохраняются также на берегу у судовладельца или его представителя до выгрузки этих вредных веществ. Копия одного из этих документов предоставляется перед отходом судна лицу или организации, назначенным властями государства порта.

4 При любой остановке в пути, если выполняются любые, даже частичные, операции по погрузке или выгрузке, перед отправлением судна лицу или организации, назначенным властями государства порта, предоставляется опись документов, перечисляющих принятые на борт вредные вещества с указанием их размещения на судне или подробного грузового плана.

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5 При наличии на судне специального реестра, манифеста или подробного грузового плана, предписываемых Международной конвенцией по охране человеческой жизни на море 1974 года с поправками для случая перевозки опасных грузов, документы, предписываемые настоящим правилом, могут быть объединены с документами, предписываемыми для перевозки опасных грузов. В случае объединения этих документов проводится четкое разграничение между опасными грузами и вредными веществами, на которые распространяется действие настоящего Приложения.

Правило 5
Размещение

Вредные вещества размещаются и закрепляются так, чтобы свести к минимуму опасность для морской среды без ухудшения безопасности судна и находящихся на борту людей.

Правило 6
Предельные количества

По обоснованным научным и техническим причинам может потребоваться запрещение перевозки некоторых вредных веществ или ограничение количества, которое может перевозиться на борту любого судна. При ограничении перевозимого количества учитываются должны образом размерения, конструкция и оборудование судна, а также характер упаковки и свойства веществ.

Правило 7
Исключения

1 Выбрасывание за борт вредных веществ, перевозимых в упаковке, запрещается, за исключением случаев, когда это необходимо в целях обеспечения безопасности судна или спасения человеческой жизни на море.

2 С учетом положений настоящей Конвенции принимаются соответствующие меры, основанные на физических, химических и биологических свойствах вредных веществ, для контролирования смыва за борт утечек при условии, что применение таких мер не ухудшает безопасности судна и находящихся на борту людей.

Правило 8
Контроль государства порта за выполнением эксплуатационных требований

1 Судно, находясь в порту или у удаленного от берега терминала другой Стороны, подлежит инспектированию должностными лицами, надлежащим образом уполномоченными этой Стороной, которое касается выполнения эксплуатационных требований согласно настоящему Приложению, если имеются явные основания полагать, что капитан или экипаж не знают важнейших судовых процедур, относящихся к предотвращению загрязнения вредными веществами.

2 При обстоятельствах, приведенных в пункте 1 настоящего правила, Сторона принимает меры, обеспечивающие, чтобы судно не отошло до тех пор, пока положение дел не будет исправлено в соответствии с требованиями настоящего Приложения.

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3 К настоящему правилу применяется предписанный в статье 5 настоящей Конвенции порядок проведения контроля государством порта.

4 Ничто в настоящем правиле не должно истолковываться как ограничивающее права и обязанности Стороны, осуществляющей контроль за выполнением эксплуатационных требований, специально предусмотренные в настоящей Конвенции.

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ДОПОЛНЕНИЕ К ПРИЛОЖЕНИЮ III

Критерии определения вредных веществ в упаковке

Для целей настоящего Приложения вредными веществами являются вещества, определенные по любому из следующих критериев.

Категория: Острая токсичность 1	
96 ч $ЛК_{50}$ (для рыб)	≤ 1 мг/л и/или
48 ч $ЭК_{50}$ (для ракообразных)	≤ 1 мг/л и/или
72 или 96 ч $ЭСК_{50}$ (для водорослей или других водных растений)	≤ 1 мг/л

Категория: Хроническая токсичность 1	
96 ч $ЛК_{50}$ (для рыб)	≤ 1 мг/л и/или
48 ч $ЭК_{50}$ (для ракообразных)	≤ 1 мг/л и/или
72 или 96 ч $ЭСК_{50}$ (для водорослей или других водных растений)	≤ 1 мг/л

и вещество не является быстроразлагающимся и/или $\log K_{ow} \geq 4$ (за исключением случаев, когда экспериментально установленная величина КБК < 500).

Категория: Хроническая токсичность 2	
96 ч $ЛК_{50}$ (для рыб)	>1 ≤ 10 мг/л и/или
48 ч $ЭК_{50}$ (для ракообразных)	>1 ≤ 10 мг/л и/или
72 или 96 ч $ЭСК_{50}$ (для водорослей или других водных растений)	>1 ≤ 10 мг/л

и вещество не является быстроразлагающимся и/или $\log K_{ow} \geq 4$ (за исключением случаев, когда экспериментально установленная величина КБК < 500), за исключением случаев, когда значения хронической токсичности NOEC > 1 мг/л.

6.

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E9370

RESOLUCIÓN MEPC.156 (55)
adoptada el 13 de octubre de 2006

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973

(Anexo III revisado del MARPOL 73/78)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, artículo que trata de las funciones conferidas al Comité de Protección del Medio Marino (el Comité) por los convenios internacionales relativos a la prevención y contención de la contaminación del mar,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Convenio de 1973") y del artículo VI del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Protocolo de 1978"), en los que conjuntamente se especifica el procedimiento para enmendar el Protocolo de 1978 y se confiere al órgano competente de la Organización la función de examinar y adoptar enmiendas al Convenio de 1973 modificado por el Protocolo de 1978 (MARPOL 73/78),

RECORDANDO además que, en su 54º período de sesiones, había refrendado la propuesta del Subcomité DSC relativa al calendario para la entrada en vigor del Anexo III revisado del MARPOL 73/78 de modo que ésta coincida con la entrada en vigor de la enmienda 34-08 al Código marítimo internacional de mercancías peligrosas (Código IMDG),

HABIENDO EXAMINADO la propuesta de enmiendas al Anexo III del MARPOL 73/78 (Anexo III revisado),

1. ADOPTA, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio de 1973, las enmiendas al Anexo III del MARPOL 73/78, cuyo texto figura en el anexo de la presente resolución;

2. DECIDE, de conformidad con lo dispuesto en el artículo 16 2) f) iii) del Convenio de 1973, que las enmiendas se considerarán aceptadas el 1 de julio de 2009, salvo que, con anterioridad a esa fecha, un tercio cuando menos de las Partes, o aquellas Partes cuyas flotas mercantes combinadas representen como mínimo el 50% del tonelaje bruto de la flota mercante mundial, hayan notificado a la Organización que rechazan las enmiendas;

3. INVITA a las Partes a que tomen nota de que, de conformidad con lo dispuesto en el artículo 16 2) g) ii) del Convenio de 1973, dichas enmiendas entrarán en vigor el 1 de enero de 2010, una vez aceptadas de conformidad con lo estipulado en el párrafo 2 anterior;

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4. PIDE al Secretario General que, de conformidad con lo dispuesto en el artículo 16 2) c) del Convenio de 1973, remita a todas las Partes en el MARPOL 73/78 copias certificadas de la presente resolución y del texto de las enmiendas que figura en el anexo; y

5. PIDE ADEMÁS al Secretario General que remita copias de la presente resolución y de su anexo a los Miembros de la Organización que no son partes en el MARPOL 73/78.

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ANEXO

ENMIENDAS AL ANEXO III DEL MARPOL 73/78

(Anexo III revisado)

Se sustituye el texto actual del Anexo III del MARPOL por el siguiente:

"REGLAS PARA PREVENIR LA CONTAMINACIÓN POR SUSTANCIAS PERJUDICIALES TRANSPORTADAS POR MAR EN BULTOS

Regla 1
Ámbito de aplicación

1 Salvo disposición expresa en otro sentido, las reglas del presente anexo son de aplicación a todos los buques que transporten sustancias perjudiciales en bultos.

.1 A los efectos del presente anexo, "sustancias perjudiciales" son las consideradas como contaminantes del mar en el Código marítimo internacional de mercancías peligrosas (Código IMDG) o las que cumplen los criterios que figuran en el Apéndice del presente Anexo.

.2 A los efectos del presente Anexo, la expresión "en bultos" remite a las formas de contención especificadas en el Código IMDG para las sustancias perjudiciales.

2 El transporte de sustancias perjudiciales está prohibido a menos que se realice de conformidad con las disposiciones del presente anexo.

3 Como complemento de las disposiciones del presente anexo, el Gobierno de cada Parte en el Convenio publicará o hará publicar prescripciones detalladas relativas al embalaje/envase, marcado, etiquetado, documentación, estiba, limitaciones cuantitativas y excepciones, con objeto de prevenir o reducir al mínimo la contaminación del medio marino ocasionada por las sustancias perjudiciales.

4 A los efectos del presente anexo, los embalajes/envases vacíos que hayan sido utilizados previamente para transportar sustancias perjudiciales serán considerados a su vez como sustancias perjudiciales, a menos que se hayan tomado precauciones adecuadas para garantizar que no contienen ningún residuo perjudicial para el medio marino.

5 Las prescripciones del presente Anexo no son aplicables a los pertrechos ni al equipo de a bordo.

Regla 2
Embalaje y envasado

Los bultos serán de tipo idóneo para que, habida cuenta de su contenido específico, sea mínimo el riesgo de dañar el medio marino.

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Regla 3
Marcado y etiquetado

1 Los bultos que contengan alguna sustancia perjudicial irán marcados de forma duradera con el nombre técnico correcto de dicha sustancia (no se admitirán sólo nombres comerciales) y, además, irán marcados o etiquetados de forma duradera para indicar que la sustancia es un contaminante del mar. Cuando sea posible, se complementará esa identificación utilizando otros medios, por ejemplo el número correspondiente de las Naciones Unidas.

2 El método de marcar el nombre técnico correcto y de fijar etiquetas en los bultos que contengan alguna sustancia perjudicial será tal que los datos en ellos consignados sigan siendo identificables tras un periodo de tres meses por lo menos de inmersión en el mar. Al estudiar qué métodos de marcado y etiquetado conviene adoptar, se tendrán en cuenta la durabilidad de los materiales utilizados y la naturaleza de la superficie del bulto.

3 Los bultos que contengan cantidades pequeñas de sustancias perjudiciales podrán quedar exentos de las prescripciones sobre marcado.

Regla 4
Documentación

1 En todos los documentos relativos al transporte de sustancias perjudiciales por mar en los que haya que nombrar tales sustancias, éstas serán designadas por su nombre técnico correcto (no se admitirán sólo nombres comerciales), consignándose además, a efectos de identificación, las palabras "CONTAMINANTE DEL MAR".

2 Los documentos de embarque presentados por el expedidor incluirán o llevarán adjunta una certificación o una declaración firmada en la que se haga constar que la carga que se presenta para el transporte ha sido adecuadamente embalada/envasada y, según sea el caso, marcada, etiquetada o rotulada, y que se halla en condiciones de ser transportada de modo que sea mínimo el riesgo de dañar el medio marino.

3 Todo buque que transporte sustancias perjudiciales llevará una lista o un manifiesto especial en los que se indiquen las sustancias perjudiciales embarcadas y el emplazamiento de éstas a bordo. En lugar de tal lista o manifiesto cabrá utilizar un plano detallado de estiba que muestre el emplazamiento a bordo de las sustancias perjudiciales. De tales documentos retendrán también copias en tierra el propietario del buque o su agente hasta que las sustancias perjudiciales hayan sido desembarcadas. Antes de salir de puerto, se entregará copia de uno de esos documentos a la persona u organización designada por la autoridad del Estado rector del puerto.

4 En cualquier escala en la que se lleven a cabo operaciones de carga o descarga, incluso parciales, se facilitará antes de salir de puerto, a la persona u organización designada por la autoridad del Estado rector del puerto, una versión actualizada de los documentos en los que se enumeren las sustancias perjudiciales embarcadas, se indique su emplazamiento a bordo o figure un plano detallado de estiba.

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5 En el caso de que el buque lleve una lista o un manifiesto especial o un plano detallado de estiba, de acuerdo con lo prescrito para el transporte de mercancías peligrosas en el Convenio internacional para la seguridad de la vida humana en el mar, 1974, enmendado, los documentos prescritos en la presente regla podrán combinarse con los correspondientes a las mercancías peligrosas. Cuando se combinen dichos documentos, se establecerá en ellos una clara distinción entre las mercancías peligrosas y las sustancias perjudiciales regidas por el presente anexo.

Regla 5
Estiba

Las sustancias perjudiciales irán adecuadamente estibadas y sujetas para que sea mínimo el riesgo de dañar el medio marino, sin menoscabar por ello la seguridad del buque y de las personas a bordo.

Regla 6
Limitaciones cuantitativas

Por fundadas razones científicas y técnicas, podrá ser necesario prohibir el transporte de ciertas sustancias perjudiciales o limitar la cantidad que de ellas se permita transportar en un solo buque. Al establecer esa limitación cuantitativa se tendrán en cuenta las dimensiones, la construcción y el equipo del buque, así como el embalaje/envase y la naturaleza de la sustancia de que se trate.

Regla 7
Excepciones

1 La echazón de las sustancias perjudiciales transportadas en bultos estará prohibida, a menos que sea necesaria para salvaguardar la seguridad del buque o la vida humana en la mar.

2 A reserva de lo dispuesto en el presente Convenio, se tomarán medidas basadas en las propiedades físicas, químicas y biológicas de las sustancias perjudiciales para reglamentar el lanzamiento al mar, mediante baldeo, de los derrames, a condición de que la aplicación de tales medidas no menoscabe la seguridad del buque y de las personas a bordo.

Regla 8
Supervisión de las prescripciones operacionales por el Estado rector del puerto

1 Un buque que se halle en un puerto o en una terminal mar adentro de otra Parte estará sujeto a inspección por funcionarios debidamente autorizados de dicha Parte en lo que concierne a las prescripciones operacionales en virtud del presente anexo, cuando existan claros indicios para suponer que el capitán o la tripulación no están familiarizados con los procedimientos esenciales de a bordo relativos a la prevención de la contaminación por sustancias perjudiciales.

2 Si se dan las circunstancias mencionadas en el párrafo 1 de la presente regla, la Parte tomará las medidas necesarias para que el buque no zarpe hasta que se haya resuelto la situación de conformidad con lo prescrito en el presente anexo.

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3 Los procedimientos relacionados con la supervisión por el Estado rector del puerto estipulados en el artículo 5 del presente Convenio se aplicarán a la presente regla

4 Nada de lo dispuesto en la presente regla se interpretará de manera que se limiten los derechos y obligaciones de una Parte que lleve a cabo la supervisión de las prescripciones operacionales expresamente establecidas en el presente Convenio.

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APÉNDICE del Anexo III

CRITERIOS PARA DETERMINAR SI LAS SUSTANCIAS QUE SE TRANSPORTAN EN BULTOS SON PERJUDICIALES

A los efectos del presente anexo, son perjudiciales las sustancias a las que se aplique uno cualquiera de los siguientes criterios:

Categoría: Toxicidad aguda 1

CL_{50} 96 h (para peces)	≤ 1 mg/l y/o
CE_{50} 48 h (para crustáceos)	≤ 1 mg/l y/o
CEr_{50} 72 ó 96 h (para algas u otras plantas acuáticas)	≤ 1 mg/l

Categoría: Toxicidad crónica 1

CL_{50} 96 h (para peces)	≤ 1 mg/l y/o
CE_{50} 48 h (para crustáceos)	≤ 1 mg/l y/o
CEr_{50} 72 ó 96 h (para algas u otras plantas acuáticas)	≤ 1 mg/l

y la sustancia no sea rápidamente degradable y/o el .og K_{OA} ≥ 4 (a menos que el FBC, determinado experimentalmente, sea < 500)

Categoría: Toxicidad crónica 2

CL_{50} 96 h (para peces)	>1 a ≤ 10 mg/l y/o
CE_{50} 48 h (para crustáceos)	>1 a ≤ 10 mg/l y/o
CEr_{50} 72 ó 96 h(para algas u otras plantas acuáticas)	>1 a ≤ 10 mg/l

y la sustancia no sea rápidamente degradable y/o el log K_{OA} ≥ 4 (a menos que el FBC, determinado experimentalmente, sea < 500), y que las concentraciones sin efecto observado (NOEC) de la toxicidad crónica sean > 1 mg/l.

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CERTIFIED TEUE COPY of the text of the amendments to the Annex of the Protocol of 1978 relating to the International Convention for the prevention of Pollution from Ships, 1973, (Revised Annex III of MARPOL 73/78) adopted at the fifty-fifth session of the Marine Environment Protection Committee of the International Maritime Organization on 13 October 2006, in accordance with article 16 of the International Convention for the Prevention of Pollution from Ships 1973, and set out in the annex to resolution MEPC.156(55), the original text of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du texte des amendements à l'Annexe du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires, (Annexe III révisée de MARPOL 73/78) adoptés par la résolution MEPC.156(55) le 13 octobre 2006 lors de la cinquante-cinquième session du Comité de la protection du milieu marin de l'Organisation maritime internationale, conformément aux dispositions de l'article 16 de la Convention internationale pour la prévention de la pollution par les navires,1973 dont l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ поправок к Приложению к Протоколу 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (Пересмотренное Приложение III МАРПОЛ 73/78) доброенных на пятьдесят пятой сессии Комитета по защите морской среды Международной морской организации, 13 октября 2006 года, в соответствии со статьей 16 Международной конвенции по предотвращению загрязнения с судов 1973 года и изложенных в приложении к резолюции МЕРС.156(55), подлинный текст которых сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTÉNTICA CERTIFICADA de las enmiendas al Anexo del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (Anexo III revisado del MARPOL 73/78) adoptadas por el Comité de Protección del Medio Marino de la Organización Marítima Internacional en su 55º período de sesiones, de conformidad con lo dispuesto en el artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973, mediante la resolución MEPC.156(55), cuyo texto original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General of the International Maritime Organization:
Pour le Secrétaire général de l'Organisation maritime internationale:
За Генерального секретаря Международной морской организации:
Por el Secretario General de la Organización Marítima Internacional:

R. J. Ball

London,
Londres, le
Лондон,
Londres,

17/11/2007

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RESOLUTION MEPC.84(44)
Adopted on 13 March 2000

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Amendments to the Appendix to Annex III of MARPOL 73/78)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING article 38(a) of the Convention on the International Maritime Organization concerning the function of the Committee conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED the proposed amendments to the Appendix to Annex III of MARPOL 73/78,

1. ADOPTS, in accordance with article 16(2) (d) of the 1973 Convention, the amendments to the Appendix to Annex III of MARPOL 73/78, the text of which is set out at Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 July 2001, unless prior to that date, not less than one-third of the Parties or the Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objections to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the amendments shall enter into force on 1 January 2002 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the Annex; and

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to MARPOL 73/78 copies of the resolution and its Annex.

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ANNEX

AMENDMENTS TO THE APPENDIX TO ANNEX III OF MARPOL 73/78

The clause "liable to produce tainting of seafood (Hazard Rating "T" in column A*); or" s deleted from the Appendix to Annex III of MARPOL 73/78.

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RÉSOLUTION MEPC.84(44)
adoptée le 13 mars 2000

AMENDEMENT À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Amendement à l'appendice de l'Annexe III de MARPOL 73/78)

LE COMITÉ DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale qui a trait aux fonctions conférées au Comité aux termes de conventions internationales visant à prévenir et à combattre la pollution des mers,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973") et l'article VI du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé le "Protocole de 1978"), lesquels énoncent ensemble la procédure d'amendement du Protocole de 1978 et confèrent à l'organe compétent de l'Organisation les fonctions ayant trait à l'examen et à l'adoption d'amendements à la Convention de 1973, telle que modifiée par le Protocole de 1978 (MARPOL 73/78),

AYANT EXAMINÉ la proposition d'amendement à l'appendice de l'Annexe III de MARPOL 73/78,

1. ADOPTE, conformément à l'article 16 2) d) de la Convention de 1973, l'amendement à l'appendice de l'Annexe III de MARPOL 73/78 dont le texte figure en annexe à la présente résolution;

2. DÉCIDE, conformément à l'article 16 2) f) iii) de la Convention de 1973, que cet amendement sera réputé avoir été accepté le 1er juillet 2001 à moins que, avant cette date, une objection à cet amendement n'ait été communiquée à l'Organisation par un tiers au moins des Parties ou par des Parties dont les flottes marchandes représentent au total au moins 50 % du tonnage brut de la flotte mondiale des navires de commerce;

3. INVITE les Parties à noter que, en application de l'article 16 2) g) ii) de la Convention de 1973, l'amendement entrera en vigueur le 1er janvier 2002, après avoir été accepté conformément à la procédure décrite au paragraphe 2 ci-dessus;

4. PRIE le Secrétaire général, conformément à l'article 16 2) e) de la Convention de 1973, de communiquer à toutes les Parties à MARPOL 73/78 des copies certifiées conformes de la présente résolution et du texte de l'amendement qui y est annexé; et

5. PRIE EN OUTRE le Secrétaire général de communiquer des exemplaires de la résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à MARPOL 73/78.

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ANNEXE

AMENDEMENT À L'APPENDICE DE L'ANNEXE III DE MARPOL 73/78

L'alinéa "-substances qui sont susceptibles d'altérer les aliments d'origine marine (degré de risque "T" dans la colonne A*); ou" est retiré du texte de l'appendice de l'Annexe III de MARPOL 73/78.

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РЕЗОЛЮЦИЯ МЕРС.84(44)
Принята 13 марта 2000 года

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Поправки к дополнению к Приложению III к МАРПОЛ 73/78)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета, возложенных на него международными конвенциями по предотвращению загрязнения моря и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемой "Конвенция 1973 года") и статью VI Протокола 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемого "Протокол 1978 года"), которые совместно устанавливают процедуру внесения поправок в Протокол 1978 года и возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколом 1978 года (МАРПОЛ 73/78),

РАССМОТРЕВ предлагаемые поправки к дополнению к Приложению III к МАРПОЛ 73/78,

1. ОДОБРЯЕТ в соответствии со статьей 16 2) d) Конвенции 1973 года поправки к дополнению к Приложению III к МАРПОЛ 73/78, текст которых изложен в приложении к настоящей резолюции;

2. ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции 1973 года, что поправки считаются принятыми 1 июля 2001 года, если до этой даты Организации не будут сообщены возражения против поправок не менее одной трети Сторон или Сторон, общая валовая вместимость торговых судов которых составляет не менее 50 процентов валовой вместимости судов мирового торгового флота;

3 ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции 1973 года поправки вступают в силу 1 января 2002 года после их принятия в соответствии с пунктом 2, выше;

4. ПРОСИТ Генерального секретаря, в соответствии со статьей 16 2) e) Конвенции 1973 года, направить всем Сторонам МАРПОЛ 73/78 заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении; и

5. ПРОСИТ ДАЛЕЕ Генерального секретаря направить членам Организации, которые не являются Сторонами МАРПОЛ 73/78, копии резолюции и приложения к ней.

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ПРИЛОЖЕНИЕ

ПОПРАВКИ К ДОПОЛНЕНИЮ К ПРИЛОЖЕНИЮ III К МАРПОЛ 73/78

Из дополнения к Приложению III к МАРПОЛ 73/78 исключается положение "- способные приводить морские живые организмы в непригодность к употреблению в пищу (категория опасности "T" в колонке A*); или".

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RESOLUCIÓN MEPC.84(44)

Aprobada el 13 de marzo de 2000

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973

(Enmiendas al apéndice del Anexo III del MARPOL 73/78)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, artículo que trata de las funciones que confieren al Comité los convenios internacionales relativos a la prevención y contención de la contaminación del mar,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Convenio de 1973"), y del artículo VI del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Protocolo de 1978"), en los que, conjuntamente, se especifica el procedimiento de enmienda del Protocolo de 1978 y se confiere al órgano competente de la Organización la función de examinar y aprobar las enmiendas al Convenio de 1973, modificado por el Protocolo de 1978 (MARPOL 73/78),

HABIENDO EXAMINADO la propuesta de enmienda al apéndice del Anexo III del MARPOL 73/78,

1. APRUEBA, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio de 1973, la enmienda al apéndice del Anexo III del MARPOL 73/78, cuyo texto figura en el anexo de la presente resolución;

2. DECIDE, de conformidad con lo dispuesto en el artículo 16 2) f) iii) del Convenio de 1973, que la enmienda se considerará aceptada el 1 de julio de 2001, salvo que, con anterioridad a esa fecha, un tercio cuando menos de las Partes, o las Partes cuyas flotas mercantes combinadas representen como mínimo el 50% del tonelaje bruto de la flota mercante mundial, notifiquen a la Organización que rechazan la enmienda;

3. INVITA a las Partes a que tomen nota de que, de conformidad con lo dispuesto en el artículo 16 2) g) ii) del Convenio de 1973, la enmienda entrará en vigor el 1 de enero de 2002 si se acepta con arreglo a lo dispuesto en el párrafo 2 *supra*;

4. PIDE al Secretario General que, de conformidad con el artículo 16 2) e) del Convenio de 1973, remita copias certificadas de la presente resolución y del texto de la enmienda que figura en el anexo a todas las Partes en el MARPOL 73/78; y

5. PIDE ADEMÁS al Secretario General que remita copias de la presente resolución y de su anexo a los Miembros de la Organización que no sean partes en el MARPOL 73/78.

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ANEXO

ENMIENDA AL APÉNDICE DEL ANEXO III DEL MARPOL 73/78

La cláusula "-sustancias que pueden contaminar los alimentos de origen marino (índice de peligrosidad "T" en la columna A*); o" se suprime del apéndice del Anexo III del MARPOL 73/78.

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Certified true copy of the text of resolution MEPC.84(44), to which are annexed the amendments to the Appendix to Annex III of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, adopted by the Marine Environment Protection Committee of the International Maritime Organization on 13 March 2000 in conformity with article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 and article VI of the Protocol of 1978 relating thereto, the original of which is deposited with the Secretary-General of the Organization.

Copie certifiée conforme du texte de la résolution MEPC.84(44), à laquelle est annexé l'amendement à l'appendice de l'Annexe III du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires, que le Comité de la protection du milieu marin de l'Organisation maritime internationale a adopté le 13 mars 2000 conformément à l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution des mers par les navires et à l'article VI du Protocole de 1978 y relatif, et dont l'original est déposé auprès du Secrétaire général de l'Organisation.

Заверенная копия текста резолюции MEPC.84(44), к которой прилагаются поправки к дополнению к Приложению III к Протоколу 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года, одобренные Комитетом по защите морской среды Международной морской организации 13 марта 2000 года в соответствии со статьей 16 Международной конвенции по предотвращению загрязнения с судов 1973 года и статьей VI Протокола 1978 года к ней, подлинник которого сдан на хранение Генеральному секретарю Организации.

COPIA AUTÉNTICA CERTIFICADA del texto de la resolución MEPC.84(44) al que se adjunta la enmienda al apéndice del Anexo III del Protocolo de 1978 relativo al Convenio internacional para la seguridad de la vida humana en el mar, 1973, aprobada por el Comité de Protección del Medio Marino el 13 de marzo de 2000 de conformidad con lo dispuesto en el artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 y en el artículo VI del Protocolo, y cuyo original ha sido depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General:

R. P. B

Pour le Secrétaire général:

За Генерального секретаря:

Por el Secretario General:

London

Londres

29/6/07

Лондон,

Londres

7777

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2004 AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973 (amendments to the Appendix to Annex V of MARPOL 73/78)

Resolution MEPC.116(51)

AMENDEMENTS DE 2004 À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES
(Amendements à l'appendice de l'Annexe V de MARPOL 73/78)

(Résolution MEPC.116(51))

ПОПРАВКИ 2004 ГОДА К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА
(Поправки к дополнению к Приложению V к МАРПОЛ 73/78)

Резолюция MEPC.116(51)

ENMIENDAS DE 2004 AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973 (Enmiendas al apéndice del Anexo V del MARPOL 73/78)

Resolución MEPC.116(51)

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RESOLUTION MEPC.116(51)

Adopted on 1 April 2004

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Amendments to the Appendix to Annex V of MARPOL 73/78)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED the proposed amendments to the Appendix to Annex V of MARPOL 73/78,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to the Appendix to Annex V of MARPOL 73/78, the text of which is set out at annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 February 2005, unless, prior to that date, not less than one third of the Parties to MARPOL 73/78 or by the Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have notified to the Organization their objections to the amendments;

3. INVITES Parties to MARPOL 73/78 to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 August 2005 upon their acceptance in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in the annex;

5. REQUESTS FURTHER the Secretary-General to transmit copies of this resolution and its annex to Members of the Organization which are not Parties to MARPOL 73/78.

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ANNEX

AMENDMENTS TO THE APPENDIX TO ANNEX V OF MARPOL 73/78

1 Garbage category "4" in Section 3 of the Form of Garbage Record Book is amended as follows:

"4 Cargo residues, paper products, rags, glass, metal, bottles, crockery, etc."

2 Paragraph 4.1(a)(ii) of Section 4 in the Form of Garbage Record Book is amended as follows:

"(ii) Position of the ship (latitude and longitude). Note for cargo residue discharges, include discharge start and stop positions."

3 The **NOTE** included in the Record of Garbage Discharges is amended by adding the following sentence:

"DISCHARGES OF CARGO RESIDUES REQUIRE START AND STOP POSITIONS TO BE RECORDED."

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RÉSOLUTION MEPC.116(51)

adoptée le 1er avril 2004

AMENDEMENTS À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Amendements à l'appendice de l'Annexe V de MARPOL 73/78)

LE COMITÉ DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale, qui a trait aux fonctions conférées au Comité de la protection du milieu marin (le Comité) aux termes des conventions internationales visant à prévenir et combattre la pollution des mers,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973") et l'article VI du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé le "Protocole de 1978"), lesquels énoncent ensemble la procédure d'amendement du Protocole de 1978 et confèrent à l'organe compétent de l'Organisation la fonction d'examiner et d'adopter des amendements à la Convention de 1973, telle que modifiée par le Protocole de 1978 (MARPOL 73/78),

AYANT EXAMINÉ les amendements qu'il est proposé d'apporter à l'appendice de l'Annexe V de MARPOL 73/78,

1 ADOPTE, conformément à l'article 16 2) d) de la Convention de 1973, les amendements à l'appendice de l'Annexe V de MARPOL 73/78 dont le texte figure en annexe à la présente résolution;

2. DÉCIDE, conformément à l'article 16 2) f) iii) de la Convention de 1973, que ces amendements seront réputés avoir été acceptés le 1er février 2005 à moins que, avant cette date, plus d'un tiers des Parties à MARPOL 73/78 ou des Parties dont les flottes marchandes représentent au total 50 % au moins du tonnage brut de la flotte mondiale des navires de commerce n'aient notifié à l'Organisation qu'elles élèvent une objection à ces amendements;

3. INVITE les Parties à MARPOL 73/78 à noter que, conformément à l'article 16 2) g) ii) de la Convention de 1973, lesdits amendements entreront en vigueur le 1er août 2005, après avoir été acceptés suivant la procédure décrite au paragraphe 2 ci-dessus,

4. PRIE le Secrétaire général, en application de l'article 16 2) e) de la Convention de 1973, de transmettre à toutes les Parties à MARPOL 73/78 des copies certifiées conformes de la présente résolution et du texte des amendements qui y est annexé;

5 PRIE EN OUTRE le Secrétaire général de communiquer des exemplaires de la présente résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à MARPOL 73/78,

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ANNEXE

AMENDEMENTS À L'APPENDICE DE L'ANNEXE V DE MARPOL 73/78

1 Dans la section3 du Modèle de registre des ordures, la catégorie d'ordures "4" est modifiée comme suit :

"4 Résidus de cargaison, papier, chiffons, verre, métaux, bouteilles, vaisselle, etc."

2 Le paragraphe 4.1 a) ii) de la section4 du Modèle de registre des ordures est modifié comme suit :

"ii) Position du navire (latitude et longitude). Note pour les rejets de résidus de cargaison : inclure la position du navire au début et à la fin du rejet."

3 Dans la **NOTE** qui figure sur la fiche des rejets d'ordures, ajouter la phrase suivante :

"IL FAUT CONSIGNER LA POSITION DU NAVIRE AU DÉBUT ET À LA FIN DES REJETS DE RÉSIDUS DE CARGAISON."

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РЕЗОЛЮЦИЯ МЕРС.116(51)

Принята 1 апреля 2004 года

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Поправки к дополнению к Приложению V к МАРПОЛ 73/78)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета по защите морской среды (Комитет), возложенных на него международными конвенциями по предотвращению загрязнения моря и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (именуемой далее "Конвенция 1973 года") и статью VI Протокола 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (именуемого далее "Протокол 1978 года"), которые совместно устанавливают процедуру внесения поправок в Протокол 1978 года и возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколом
1978 года (МАРПОЛ 73/78),

РАССМОТРЕВ предложенные поправки к дополнению к Приложению V к МАРПОЛ 73/78,

1. ОДОБРЯЕТ в соответствии со статьей 16 2) d) Конвенции 1973 года поправки к дополнению к Приложению V к МАРПОЛ 73/78, текст которых изложен в приложении к настоящей резолюции;

2. ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции 1973 года, что поправки считаются принятыми 1 февраля 2005 года, если до этой даты Организации не будут сообщены возражения против поправок не менее одной трети Сторон МАРПОЛ 73/78 или Сторон, общая валовая вместимость торговых судов которых составляет не менее 50% валовой вместимости судов мирового торгового флота;

3. ПРЕДЛАГАЕТ Сторонам МАРПОЛ 73/78 принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции 1973 года вышеупомянутые поправки вступают в силу 1 августа 2005 года после их принятия в соответствии с пунктом 2, выше;

4. ПРОСИТ Генерального секретаря, в соответствии со статьей 16 2) e) Конвенции 1973 года, направить всем Сторонам МАРПОЛ 73/78 заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении;

5. ПРОСИТ ДАЛЕЕ Генерального секретаря направить членам Организации, которые не являются Сторонами МАРПОЛ 73/78, копии настоящей резолюции и приложения к ней.

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ПРИЛОЖЕНИЕ

ПОПРАВКИ К ДОПОЛНЕНИЮ К ПРИЛОЖЕНИЮ V К МАРПОЛ 73/78

1 В разделе 3 Формы Журнала операций с мусором категория мусора "4" изменяется следующим образом:

"4 Остатки груза, изделия из бумаги, ветошь, стекло, металл, бутылки, черепки и т.д.".

2 Пункт 4.1 a) ii) раздела 4 Формы Журнала операций с мусором изменяется следующим образом:

"ii) Местонахождение судна (широта и долгота). Примечание относительно сброса остатков груза включает сведения о местах начала и окончания сброса.".

3 **ПРИМЕЧАНИЕ** в Реестре операций с мусором изменяется путем добавления следующего предложения:

"ПРИ СБРОСЕ ОСТАТКОВ ГРУЗА ТРЕБУЕТСЯ РЕГИСТРАЦИЯ МЕСТ НАЧАЛА И ОКОНЧАНИЯ СБРОСА.".

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RESOLUCIÓN MEPC.116(51)

Adoptada el 1 de abril de 2004

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973

(Enmiendas al apéndice del Anexo V del MARPOL 73/78)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional que trata de las funciones del Comité de Protección del Medio Marino (el Comité) conferidas por los convenios internacionales relativos a la prevención y contención de la contaminación del mar,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Convenio de 1973") y el artículo VI del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Protocolo de 1978"), que juntos especifican el procedimiento para enmendar el Protocolo de 1978 y confieren al órgano correspondiente de la Organización la función de considerar y adoptar enmiendas al Convenio de 1973, modificado por el Protocolo de 1978 (MARPOL 73/78),

HABIENDO EXAMINADO las propuestas de enmienda al Apéndice del Anexo V del MARPOL 73/78,

1. ADOPTA, de conformidad con el artículo 16 2) d) del Convenio de 1973, las enmiendas al apéndice del Anexo V del MARPOL 73/78, cuyo texto figura en el anexo de la presente resolución;

2. DETERMINA, de conformidad con el artículo 16 2) f) iii) del Convenio de 1973, que las enmiendas se considerarán aceptadas el 1 de febrero de 2005, salvo que, con anterioridad a esa fecha, un tercio cuando menos de las Partes en el MARPOL 73/78, o aquellas Partes cuyas flotas mercantes combinadas representen como mínimo el 50% del tonelaje bruto de la flota mercante mundial, hayan notificado a la Organización que rechazan las enmiendas;

3. INVITA a las Partes en el MARPOL 73/78 a que observen que, de conformidad con el artículo 16 2) g) iii) del Convenio de 1973, dichas enmiendas entrarán en vigor el 1 de agosto de 2005 una vez aceptadas, de acuerdo con lo estipulado en el párrafo 2 anterior;

4. PIDE al Secretario General que, de conformidad con el artículo 16 2) e) del Convenio de 1973, transmita a todas las Partes en el MARPOL 73/78 copias certificadas de la presente resolución y el texto de las enmiendas que figuran en el anexo;

5. PIDE TAMBIÉN al Secretario General que transmita copias de la presente resolución y de su anexo a los Miembros de la Organización que no son Partes en el MARPOL 73/78.

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ANEXO

ENMIENDAS AL APÉNDICE DEL ANEXO V
DEL MARPOL 73/78

1 En la sección 3 del Modelo de Libro registro de basuras, la categoría "4" de basuras se enmienda como sigue:

"4 residuos de la carga, productos de papel, trapos, vidrio, metales, botellas, loza, etc."

2 En la sección 4 del Modelo de Libro registro de basuras, el párrafo 4.1 a) ii) se enmienda como sigue:

"ii) situación del buque (latitud y longitud). Tómese nota de que para las descargas de residuos de la carga habrá que incluir la situación respecto del inicio y fin de la descarga."

3 La **NOTA** que figura en el Registro de descargas de basuras se enmienda añadiendo el texto siguiente:

"SE DEBE REGISTRAR LA SITUACIÓN AL INICIAR Y FINALIZAR LAS DESCARGAS DE RESIDUOS DE LA CARGA."

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CERTIFIED TRUE COPY of the text of the amendments to the Annex of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (amendments to the Appendix to Annex V of MARPOL 73/78) adopted at the fifty-first session of the Marine Environment Protection Committee of the International Maritime Organization on 1 April 2004 and set out in the Annex to resolution MEPC.116(51), the original text of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIEE CONFORME du texte des amendements à l'Annexe du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (Amendements à l'appendice de l'Annexe V de MARPOL 73/78), que le Comité de la protection du milieu marin de l'Organisation maritime internationale a adoptés le 1er avril 2004 à sa cinquantième et unième session et qui figurent dans l'annexe de la résolution MEPC.116(51); l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ текста поправок к Приложению к Протоколу 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (поправки к дополнению к Приложению V к МАРПОЛ 73/78), одобренных на пятьдесят первой сессии Комитета по защите морской среды Международной морской организации 1 апреля 2004 года и изложенных в приложении к резолюции MEPC.116(51), подлинный текст которых сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTÉNTICA CERTIFICADA del texto de las enmiendas al Anexo del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (Enmiendas al apéndice del Anexo V del MARPOL 73/78), adoptadas el 1 de abril de 2004 en el 51º periodo de sesiones del Comité de Protección del Medio Marino de la Organización Marítima Internacional, y que figuran en el anexo de la resolución MEPC.116(51), cuyo original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General of the International Maritime Organization:
Pour le Secrétaire général de l'Organisation maritime internationale :
За Генерального секретаря Международной морской организации:
Por el Secretario General de la Organización Marítima Internacional:

London,
Londres, le
Лондон,
Londres,

28th June, 2005

J/8924(E/T/R/S)

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1995 AMENDMENTS TO THE
ANNEX OF THE PROTOCOL OF 1978
RELATING TO THE INTERNATIONAL CONVENTION
FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973
(amendments to regulation 2 and new regulation 9 of Annex V)

AMENDEMENTS DE 1995
À L'ANNEXE DU PROTOCOLE DE 1978
RELATIF À LA CONVENTION INTERNATIONALE DE 1973
POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES
(Amendements à la règle 2 et nouvelle règle 9 de l'Annexe V)

ПОПРАВКИ 1995 ГОДА К ПРИЛОЖЕНИЮ
К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ
ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА
(поправки к правилу 2 и новое правило 9 Приложения V)

ENMIENDAS DE 1995
AL ANEXO DEL PROTOCOLO DE 1978
RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR
LA CONTAMINACIÓN POR LOS BUQUES, 1973
(enmiendas a la regla 2 y nueva regla 9 del Anexo V)

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RESOLUTION MEPC.65(37)
(adopted on 14 September 1995)

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973
(Amendments to Regulation 2 and new Regulation 9 of Annex V)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the function of the Committee conferred upon it by international conventions for the prevention and control of marine pollution.

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the 1973 Convention (hereinafter referred to as the "1978 Protocol") which together specify the amendment procedure of the 1978 Protocol and confers upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

NOTING ALSO that there is a need to provide for a more effective implementation of Annex V of MARPOL 73/78,

REQUIRING a more systematic approach to the enforcement and control of the requirements of Annex V, MARPOL 73/78,

HAVING CONSIDERED the amendments to Annex V of MARPOL 73/78, agreed at its thirty-sixth session and circulated in accordance with article 16(2)(a) of the 1973 Convention,

1. ADOPTS, in accordance with article 16(2)(b) of the 1973 Convention, amendments to Annex V of MARPOL 73/78, the text of which is set out in the annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 January 1997, unless prior to the date, not less than one-third of the Parties or the Parties, the combined merchant fleets of which constitute not less than fifty per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objections to the amendments;

3. INVITES the Parties to note that in accordance with article 16(2)(g)(ii) of the 1973 Convention the amendments shall enter into force on 1 July 1997 in accordance with paragraph 2 above;

4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to Annex V of the 1978 Protocol certified copies of the present resolution and the text of the amendments contained in the annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to Annex V of the 1978 Protocol copies of the resolution and its annex.

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ANNEX

TEXTS OF AMENDMENTS TO ANNEX V OF MARPOL 73/78

Regulation 2

Application

The existing text of regulation 2 is replaced by the following:

"Unless expressly provided otherwise, the provisions of this Annex shall apply to all ships."

New regulation 9 is added as follows:

Regulation 9

Placards, garbage management plans and garbage record-keeping

(1) (a) Every ship of 12 metres or more in length overall shall display placards which notify the crew and passengers of the disposal requirements of regulations 3 and 5 of this Annex, as applicable.

(b) The placards shall be written in the official language of the State whose flag the ship is entitled to fly and, for ships engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention, in English or French.

(2) Every ship of 400 tons gross tonnage and above, and every ship which is certified to carry 15 persons or more, shall carry a garbage management plan which the crew shall follow. This plan shall provide written procedures for collecting, storing, processing and disposing of garbage, including the use of the equipment on board. It shall also designate the person in charge of carrying out the plan. Such a plan shall be in accordance with the guidelines developed by the Organization and written in the working language of the crew.

(3) Every ship of 400 tons gross tonnage and above and every ship which is certified to carry 15 persons or more engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention and every fixed and floating platform engaged in exploration and exploitation of the sea-bed, shall be provided with a Garbage Record Book. The Garbage Record Book, whether as a part of the ship's official logbook or otherwise, shall be in the form specified in the Appendix to this Annex;

(a) each discharge operation, or completed incineration, shall be recorded in the Garbage Record Book and signed for on the date of the incineration or discharge by the officer in charge. Each completed page of the Garbage Record Book shall be signed by the master of the ship. The entries in the Garbage Record Book shall be both in an official language of the State whose flag the ship is entitled to fly, and in English or French. The entries in an official national language of the State whose flag the ship is entitled to fly shall prevail in case of a dispute or discrepancy;

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(b) the entry for each incineration or discharge shall include date and time, position of the ship, description of the garbage and the estimated amount incinerated or discharged;

(c) the Garbage Record Book shall be kept on board the ship and in such a place as to be available for inspection in a reasonable time. This document shall be preserved for a period of two years after the last entry is made on the record;

(d) in the event of discharge, escape or accidental loss referred to in regulation 5 of this Annex an entry shall be made in the Garbage Record Book of the circumstances of, and the reasons for, the loss.

(4) The Administration may waive the requirements for Garbage Record Books for:

(i) any ship engaged on voyages of 1 hour or less in duration which is certified to carry 15 persons or more; or

(ii) fixed or floating platforms while engaged in exploration and exploitation of the sea-bed.

(5) The competent authority of the Government of a Party to the Convention may inspect the Garbage Record Book on board any ship to which this regulation applies while the ship is in its ports or offshore terminals and may make a copy of any entry in that book, and may require the master of the ship to certify that the copy is a true copy of such an entry. Any copy so made, which has been certified by the master of the ship as a true copy of an entry in the ship's Garbage Record Book, shall be admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of a Garbage Record Book and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

(6) In the case of ships built before 1 July 1997, this regulation shall apply as from 1 July 1998.

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Appendix is added to the Annex as follows:

APPENDIX

FORM OF GARBAGE RECORD BOOK

Name of ship: _____

Distinctive number or letters _____

IMO No._____

Period: From:_____To:_____

1. Introduction

In accordance with Regulation 9 of Annex V of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) a record is to be kept of each discharge operation or completed incineration. This includes discharges at sea, to reception facilities, or to other ships.

2. Garbage and garbage management:

Garbage includes all kinds of food, domestic and operational waste excluding fresh fish and parts thereof, generated during the normal operation of the vessel and liable to be disposed of continuously or periodically except those substances which are defined or listed in other annexes to MARPOL 73/78 (such as oil, sewage or noxious liquid substances).

The Guidelines for the Implementation of Annex V of MARPOL 73/78 should also be referred to for relevant information.

3 Description of the garbage

The garbage is to be grouped into categories for the purposes of this record book as follows:

1. Plastics
2. Floating dunnage, lining, or packing material
3. Ground-down paper products, rags, glass, metal, bottles, crockery, etc.
4. Paper Products, rags, glass, metal, bottles, crockery, etc.
5. Food waste
6. Incinerator ash

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4. Entries in the Garbage Record Book

Entries in the Garbage Record Book shall be made on each of the following occasions:

(a) When garbage is discharged into the sea:

(i) Date and time of discharge
(ii) Position of the ship (latitude and longitude)
(iii) Category of garbage discharged
(iv) Estimated amount discharged for each category in m^3
(v) Signature of the officer in charge of the operation.

(b) When garbage is discharged to reception facilities ashore or to other ships.

(i) Date and time of discharge
(ii) Port or facility, or name of ship
(iii) Category of garbage discharged
(iv) Estimated amount discharged for each category in m^3
(v) Signature of officer in charge of the operation

(c) When garbage is incinerated:

(i) Date and time of start and stop of incineration
(ii) Position of the ship (latitude and longitude)
(iii) Estimated amount incinerated in m^3
(iv) Signature of the officer in charge of the operation.

(d) Accidental or other exceptional discharges of garbage

(i) Time of occurrence
(ii) Port or position of the ship at time of occurrence
(iii) Estimated amount and category of garbage
(iv) Circumstances of disposal, escape or loss, the reason therefore and general remarks.

4.2 Receipts

The master should obtain from the operator of port reception facilities, or from the master of the ship receiving the garbage, a receipt or certificate specifying the estimated amount of garbage transferred. The receipts or certificates must be kept on board the ship with the Garbage Record Book for two years.

4.3 Amount of garbage

The amount of garbage onboard should be estimated in m^3, if possible separately according to category. The Garbage Record Book contains many references to estimated amount of garbage. It is recognized that the accuracy of estimating amounts of garbage is left to interpretation. Volume estimates will differ before and after processing. Some processing procedures may not allow for a usable estimate of volume, e.g. the continuous processing of food waste. Such factors should be taken into consideration when making and interpreting entries made in a record.

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RECORD OF GARBAGE DISCHARGES

Ship's Name _____ Distinctive No., or letters _____ IMO No. _____

Garbage Categories:

1. Plastic.
2. Floating dunnage, lining, or packing materials
3. Ground-down paper products, rags, glass, metal, bottles, crockery, etc.
4. Paper products, rags, glass, metal, bottles, crockery, etc.
5. Food waste
6. Incinerator ash.

NOTE: THE DISCHARGE OF ANY GARBAGE OTHER THAN FOOD WASTE IS PROHIBITED IN SPECIAL AREAS ONLY. GARBAGE DISCHARGED INTO THE SEA MUST BE CATEGORIZED. GARBAGE OTHER THAN CATEGORY 1 DISCHARGED TO RECEPTION FACILITIES NEED ONLY BE LISTED AS A TOTAL ESTIMATED AMOUNT.

Date/Time	Position of the Ship	Estimated Amount Discharged into Sea (m^3)						Estimated Amount Discharged to Reception Facilities or to other ship (m^3)		Estimated Amount Incinerated (m^3)	Certificating Officer's Signature
		CAT.2	CAT.3	CAT.4	CAT.5	CAT.6		CAT.1	Other		

Master's Signature: _____ Date: _____

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RESOLUTION MEPC.65(37)
adoptée le 14 septembre 1995

AMENDEMENTS A L'ANNEXE DU PROTOCOLE DE 1978 RELATIF A LA CONVENTION INTERNATIONALE DE 1973 POUR LA PREVENTION DE LA POLLUTION PAR LES NAVIRES

(Amendements à la règle 2 et nouvelle règle 9 de l'Annexe V)

LE COMITE DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale qui a trait aux fonctions conférées au Comité en vertu des conventions internationales visant à prévenir et à combattre la pollution des mers,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973") et l'article VI du Protocole de 1978 relatif à la Convention de 1973 (ci-après dénommé le "Protocole de 1978"), lesquels énoncent ensemble la procédure d'amendement du Protocole de 1978 et confèrent à l'organe compétent de l'Organisation les fonctions ayant trait à l'examen et à l'adoption d'amendements à la Convention de 1973, telle que modifiée par le Protocole de 1978 (MARPOL 73/78),

NOTANT EGALEMENT qu'il est nécessaire d'assurer une mise en oeuvre plus efficace de l'Annexe V de MARPOL 73/78,

SOUHAITANT qu'une approche plus systématique soit adoptée pour la mise en application et le contrôle des prescriptions de l'Annexe V de MARPOL 73/78,

AYANT EXAMINE les amendements à l'Annexe V de MARPOL 73/78 qui avaient été arrêtés à sa trente-sixième session et diffusés conformément à l'article 16 2) a) de la Convention de 1973,

1. ADOPTE, conformément à l'article 16 2) b) de la Convention de 1973, les amendements à l'Annexe V de MARPOL 73/78, dont le texte figure à l'annexe de la présente résolution;

2. DECIDE, conformément à l'article 16 2) f) iii) de la Convention de 1973, que ces amendements seront réputés avoir été acceptés le 1er janvier 1997 à moins que, avant cette date, une objection à ces amendements n'ait été communiquée à l'Organisation par un tiers au moins des Parties ou par des Parties dont les flottes marchandes représentent au total au moins 50 % du tonnage brut de la flotte mondiale des navires de commerce;

3. INVITE les Parties à noter que, en application de l'article 16 2) g) ii) de la Convention de 1973, les amendements entreront en vigueur le 1er juillet 1997 conformément au paragraphe 2 ci-dessus;

4. PRIE le Secrétaire général, conformément à l'article 16 2) e) de la Convention de 1973, de communiquer à toutes les Parties à l'Annexe V du Protocole de 1978 des copies certifiées conformes de la présente résolution et du texte des amendements figurant en annexe;

5. PRIE EN OUTRE le Secrétaire général de communiquer des exemplaires de la résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à l'Annexe V du Protocole de 1978.

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ANNEXE

AMENDEMENTS A L'ANNEXE V DE MARPOL 73/78

Règle 2

Champ d'application

Remplacer le texte actuel de la règle 2 par ce qui suit :

"Sauf dispositions expresses contraires, les dispositions de la présente Annexe s'appliquent à tous les navires."

Ajouter une nouvelle règle 9 libellée comme suit :

Règle 9

Affiches, plans de gestion des ordures et tenue du registre des ordures

1) a) Tout navire d'une longueur hors tout égale ou supérieure à 12 mètres doit disposer à bord des affiches informant l'équipage et les passagers des prescriptions applicables des règles 3 et 5 de la présente Annexe relatives à l'évacuation des ordures.

b) Ces affiches doivent être rédigées dans une langue officielle de l'Etat dont le navire est autorisé à battre le pavillon et, dans le cas des navires qui effectuent des voyages à destination de ports ou de terminaux au large relevant de la juridiction d'autres Parties à la Convention, en anglais ou en français.

2) Tout navire d'une jauge brute égale ou supérieure à 400 tonneaux et tout navire autorisé à transporter 15 personnes ou davantage doivent avoir à bord un plan de gestion des ordures que l'équipage doit suivre. Ce plan doit comprendre des méthodes écrites de ramassage, de stockage, de traitement et d'évacuation des ordures, y compris l'utilisation du matériel de bord. La personne chargée d'exécuter le plan doit également y être désignée. Un plan de ce type doit être conforme aux directives établies par l'Organisation et être rédigé dans la langue de travail de l'équipage.

3) Tout navire d'une jauge brute égale ou supérieure à 400 tonneaux et tout navire autorisé à transporter 15 personnes ou davantage qui effectuent des voyages à destination de ports ou de terminaux au large relevant de la juridiction d'autres Etats Parties à la Convention et toute plate-forme fixe ou flottante se livrant à des opérations d'exploration et d'exploitation du fond des mers doivent tenir un registre des opérations d'évacuation et de rejet des ordures. Ce registre, qu'il soit ou non intégré dans le livre de bord réglementaire, doit être calqué sur le modèle décrit dans l'appendice de la présente Annexe;

a) chaque opération de rejet ou chaque incinération, lorsqu'elle est terminée, est consignée dans le registre des ordures et la mention correspondante est signée, le jour de l'incinération ou du rejet, par la personne responsable. Chaque page remplie est signée par le capitaine du navire. Les mentions sont écrites dans une langue officielle de l'Etat dont le navire est autorisé à battre le pavillon, et en anglais ou en français. En cas de différend ou de divergence, les mentions écrites dans une langue officielle de l'Etat dont un navire est autorisé à battre le pavillon font foi;

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b) il y a lieu de consigner la date et l'heure de chaque incinération ou rejet, ainsi que la position du navire, la description des ordures et une estimation de la quantité incinérée ou rejetée.

c) le registre des ordures est conservé à bord du navire dans un endroit où il est accessible aux fins d'inspection, dans un délai raisonnable. Il doit être conservé pendant une période de deux ans à compter de la dernière inscription.

d) en cas de rejet, de déversement ou de perte accidentelle, aux termes de la règle 6 de la présente Annexe, les circonstances et les motifs en sont consignés dans le registre des ordures.

4) L'Autorité peut dispenser de l'application des prescriptions relatives au registre des ordures :

i) tout navire effectuant des voyages d'une durée égale ou inférieure à 1 heure, qui est autorisé à transporter 15 personnes ou davantage, ou

ii) les plates-formes fixes ou flottantes se livrant à des opérations d'exploration et d'exploitation du fond des mers;

5) L'autorité compétente du Gouvernement d'une Partie à la Convention peut examiner le registre des ordures à bord de tout navire auquel la présente règle s'applique pendant que ce navire se trouve dans l'un de ses ports ou l'un de ses terminaux au large; elle peut en extraire des copies et en exiger la certification par le capitaine du navire. Toute copie ainsi certifiée par le capitaine du navire est, en cas de poursuite, admissible en justice comme preuve des faits relatés dans le registre des ordures. L'inspection du registre des ordures et l'établissement de copies certifiées par l'autorité compétente en vertu des dispositions du présent paragraphe doivent être effectués aussi rapidement que possible sans que le navire soit indûment retardé.

6) Dans le cas des navires construits avant le 1er juillet 1997, la présente règle s'applique à compter du 1er juillet 1998.

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Ajouter l'appendice ci-après à l'Annexe :

"APPENDICE

MODELE DE REGISTRE DES ORDURES

Nom du navire : .....

Numéros ou lettres distinctifs : .....

Numéro OMI : .....

Période : du ..... au .....

1 Introduction

Conformément à la règle 9 de l'Annexe V de la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 (MARPOL 73/78), il doit être tenu un registre dans lequel est consignée chaque opération de rejet, ou chaque incinération lorsqu'elle est terminée. Sont visés les rejets effectués en mer ou dans des installations à terre et les transferts à bord d'autres navires.

2 Ordures et gestion des ordures

Les ordures comprennent toutes sortes de déchets alimentaires, domestiques et d'exploitation, à l'exception du poisson frais entier ou non, qui proviennent de l'exploitation normale du navire, et dont il peut être nécessaire de se débarrasser de façon continue ou périodique; elles ne comprennent pas les substances qui sont définies ou énumérées dans les autres Annexes de MARPOL 73/78 (comme les hydrocarbures, les eaux usées ou les substances liquides nocives).

Il conviendrait également de se reporter aux Directives pour la mise en oeuvre de l'Annexe V de MARPOL 73/78 qui contiennent les renseignements pertinents.

3 Description des ordures

Aux fins de la tenue du registre, les ordures doivent être groupées selon les catégories suivantes :

1. Matières plastiques
2. Fardage, matériaux de revêtement ou d'emballage flottants
3. Papier, chiffons, verre, métaux, bouteilles, vaisselle, etc. concassés
4. Papier, chiffons, verre, métaux, bouteilles, vaisselle etc. non concassés
5. Déchets alimentaires
6. Cendres provenant d'incinérateurs

4 Mentions portées dans le registre des ordures

Des mentions doivent être portées dans le registre des ordures à chacune des occasions suivantes :

a) Lorsque des ordures sont rejetées en mer :

i) Date et heure du rejet;
ii) Position du navire (latitude et longitude)
iii) Catégorie des ordures rejetées

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iv) Estimation de la quantité rejetée pour chaque catégorie, en mètres cubes
v) Signature de l'officier chargé de l'opération

b) Lorsque des ordures sont rejetées dans des installations à terre ou transférées à bord d'autres navires :

i) Date et heure du rejet
ii) Port ou installation, ou nom du navire
iii) Catégorie des ordures rejetées
iv Estimation de la quantité rejetée, pour chaque catégorie, en mètres cubes
v) Signature de l'officier chargé de l'opération

c) Lorsque des ordures sont incinérées :

i) Date et heure du début et de la fin de l'incinération
ii) Position du navire (latitude et longitude)
iii) Estimation de la quantité incinérée, en mètres cubes
iv) Signature de l'officier chargé de l'opération.

d) Lorsque des ordures sont rejetées accidentellement ou dans des circonstances exceptionnelles :

i) Heure de l'incident
ii) Port ou position du navire au moment de l'incident
iii) Estimation de la quantité d'ordures et leur catégorie
iv) Circonstances de l'évacuation, du déversement ou de la perte, causes de l'incident et observations générales

4.2 Reçus

Le capitaine devrait obtenir de l'exploitant des installations de réception portuaires ou du capitaine du navire qui reçoit les ordures, un reçu ou un certificat indiquant la quantité estimative d'ordures transférées. Les reçus ou certificats doivent être conservés, pendant deux ans, à bord du navire avec le registre des ordures.

4.3 Quantités d'ordures

La quantité d'ordures à bord devrait être estimée en mètres cubes et si possible, par catégorie. Le registre des ordures se réfère souvent à la quantité estimative d'ordures. Il est reconnu que la précision avec laquelle cette quantité est estimée dépend de l'interprétation qui en est donnée. Les estimations du volume d'ordures seront différentes avant et après le traitement. Certaines méthodes de traitement ne permettent pas d'évaluer le volume d'ordures, par exemple dans le cas du traitement continu des déchets alimentaires. Il conviendrait de tenir compte de tels facteurs lorsqu'on porte des mentions dans le registre ou lorsqu'on interprète les mentions qui y sont inscrites.

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ENREGISTREMENT DES REJETS D'ORDURES

Nom du navire : _____ Numéro ou lettres distinctifs : _____ Numéro OMI : _____

Catégories d'ordures :

1 : Matières plastiques
2 : Fardage et matériaux de revêtement ou d'emballage flottants
3 : Papier, chiffons, verre, métaux, bouteilles, vaisselle, etc. concassés
4 : Papier, chiffons, verre, métaux, bouteilles, vaisselle, etc. non concassés
5 : Déchets alimentaires
6 : Cendres provenant d'incinérateurs

NOTE : **LES REJETS D'ORDURES AUTRES QUE LES DECHETS ALIMENTAIRES SONT INTERDITS DANS LES ZONES SPECIALES. SEULES LES ORDURES REJETEES EN MER SONT GROUPEES PAR CATEGORIE. POUR LES ORDURES AUTRES QUE CELLES DE LA CATEGORIE 1 QUI SONT REJETEES DANS DES INSTALLATIONS A TERRE, IL SUFFIT D'INDIQUER UNE QUANTITE ESTIMATIVE TOTALE.**

Date/heure	Position du navire	Quantité estimative rejetée en mer (m^3)					Quantité estimative rejetée dans des installations de réception ou transférée sur un autre navire (m^3)		Quantité estimative incinérée (m^3)	Attestation/ Signature
		CAT.2	CAT.3	CAT.4	CAT.5	CAT.6	CAT.1	Autres ordures		

Signature du capitaine :_____ Date : _____

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РЕЗОЛЮЦИЯ **MEPC.65(37)**
(принята 14 сентября 1995 года)

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА
(Поправки к правилу 2 и новое правило 9 Приложения V)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета, возложенных на него международными конвенциями по предотвращению загрязнения моря и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемой "Конвенция 1973 года") и статью VI Протокола 1978 года к Конвенции 1973 года (далее именуемого "Протокол 1978 года"), которые совместно устанавливают процедуру внесения поправок в Протокол 1978 года и возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколом 1978 года (Конвенция МАРПОЛ 73/78),

ОТМЕЧАЯ ТАКЖЕ, что существует необходимость обеспечения более эффективного осуществления Приложения V к Конвенции МАРПОЛ 73/78,

ТРЕБУЯ более систематического подхода к обеспечению выполнения и контролю требований Приложения V к Конвенции МАРПОЛ 73/78,

РАССМОТРЕВ поправки к Приложению V к Конвенции МАРПОЛ 73/78, согласованные на его тридцать шестой сессии и разосланные в соответствии со статьей 16 2) a) Конвенции 1973 года,

1 ОДОБРЯЕТ в соответствии со статьей 16 2) b) Конвенции 1973 года поправки к Приложению V к Конвенции МАРПОЛ 73/78, текст которых изложен в приложении к настоящей резолюции;

2 ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции 1973 года, что поправки считаются принятыми 1 января 1997 года, если до этой даты Организация не будут сообщены возражения против поправок не менее одной трети Сторон или Сторон, общая валовая вместимость торговых судов которых составляет не менее пятидесяти процентов валовой вместимости судов мирового торгового флота;

3 ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции 1973 года поправки вступают в силу 1 июля 1997 года в соответствии с пунктом 2, выше;

4 ПРОСИТ Генерального секретаря, в соответствии со статьей 16 2) e) Конвенции 1973 года, направить всем Сторонам Приложения V к Протоколу 1978 года заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении,

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5 ПРОСИТ ДАЛЕЕ Генерального секретаря направить членам Организации, которые не являются Сторонами Приложения V к Протоколу 1978 года, копии резолюции и приложения к ней

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ПРИЛОЖЕНИЕ

ТЕКСТЫ ПОПРАВОК К ПРИЛОЖЕНИЮ V К КОНВЕНЦИИ МАРПОЛ 73/78

Правило 2

Применение

Существующий текст правила 2 заменяется следующим.

"Если специально не предусмотрено иное, положения настоящего Приложения применяются ко всем судам."

Добавляется новое правило 9 следующего содержания:

Правило 9

Плакаты, планы управления ликвидацией мусора и регистрация операций с мусором

1) a) На каждом судне общей длиной 12 метров или более вывешиваются плакаты, которые уведомляют экипаж и пассажиров о применимых требованиях по удалению мусора, содержащихся в правилах 3 и 5 настоящего Приложения.

b) Плакаты составляются на официальном языке государства, под флагом которого судно имеет право плавать, и, в отношении судов, совершающих рейсы в порты или к прибрежным терминалам, находящимся под юрисдикцией других Сторон Конвенции, на английском или французском языках.

2) На каждом судне валовой вместимостью 400 рег. т и более и на каждом судне, на котором допускается перевозка 15 человек или более, имеется план управления ликвидацией мусора, выполняемый экипажем. Этот план предусматривает письменно оформленные процедуры сбора, хранения, обработки и удаления мусора, включая использование имеющегося на судне оборудования. В нем также указывается лицо, ответственное за выполнение плана. Такой план соответствует руководству, разработанному Организацией, и составляется на рабочем языке экипажа.

3) Каждое судно валовой вместимостью 500 рег. т и более и каждое судно, на котором допускается перевозка 15 человек или более, которые совершают рейсы в порты или к прибрежным терминалам, находящимся под юрисдикцией других Сторон Конвенции, и каждая стационарная и плавучая платформа, занятая разведкой и разработкой морского дна, снабжаются журналом операций с мусором. Журнал операций с мусором может быть частью официального судового журнала или отдельным журналом по форме, установленной Дополнением к настоящему Приложению.

a) каждая запланированная операция по сбросу или сжиганию регистрируется в журнале операций с мусором и подписывается в день сжигания или сброса ответственным лицом командного состава. Каждая заполненная страница журнала операций с мусором подписывается капитаном судна. Записи в журнале операций с мусором производятся как на официальном языке государства, под флагом которого судно имеет право плавать, так и на английском или французском языках. В случае спора

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или разночтения предпочтение отдается записям на официальном национальном языке государства, под флагом которого судно имеет право плавать;

b) запись о каждом сжигании или сбросе включает дату и время, местонахождение судна, описание и приблизительное количество сожженного или сброшенного мусора;

c) журнал операций с мусором хранится на борту судна в таком месте, которое легко доступно для проверки в разумное время. Этот документ сохраняется в течение двух лет после внесения в него последней записи;

d) в случае сброса, удаления или аварийной потери, упомянутых в правиле 6 настоящего Приложения, в журнале операций с мусором производится запись об обстоятельствах и причинах потери.

4) Администрация может освободить от выполнения требований относительно журнала операций с мусором:

i) любое судно, выполняющее рейсы продолжительностью 1 час или менее, на котором допускается перевозка 15 человек или более; или

ii) стационарные или плавучие платформы, занятые разведкой и разработкой морского дна.

5) Компетентные власти правительства Стороны Конвенции могут проверить журнал операций с мусором на борту любого судна, находящегося в ее портах или у прибрежных терминалов, к которому применяется настоящее правило, и снять копию с любой записи в этом журнале, а также потребовать, чтобы капитан судна заверил, что эта копия является подлинной копией такой записи. Любая такая копия, заверенная капитаном судна как подлинная копия записи в журнале операций с мусором, допускается в любом судебном процессе в качестве доказательства фактов, изложенных в записи. Проверка журнала операций с мусором и снятие заверенной копии компетентными властями в соответствии с настоящим пунктом осуществляются как можно быстрее, чтобы не вызвать чрезмерной задержки судна.

6) К судам, построенным до 1 июля 1997 года, настоящее правило применяется с 1 июля 1998 года

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К Приложению добавляется следующее дополнение.

ДОПОЛНЕНИЕ

ФОРМА ЖУРНАЛА ОПЕРАЦИЙ С МУСОРОМ

Название судна _____

Регистровый номер или позывной сигнал. _____
Номер ИМО. _____

Период: с: _____ по: _____

1. Введение

В соответствии с правилом 9 Приложения V к Международной конвенции по предотвращению загрязнения с судов 1973 года, измененной Протоколом 1978 года к ней (Конвенция МАРПОЛ 73/78), должна регистрироваться каждая выполненная операция по сбросу или сжиганию. Это включает сбросы в море, в приемные сооружения или на другие суда.

2. Мусор и управление ликвидацией мусора

Мусор включает все виды пищевых, бытовых и эксплуатационных отходов, за исключением свежей рыбы и ее отходов, которые образуются во время обычной эксплуатации судна и могут постоянно или периодически удаляться, кроме веществ, которые определены или перечислены в других Приложениях к Конвенции МАРПОЛ 73/78 (такие, как нефть, сточные воды или вредные жидкие вещества).

Соответствующая информация также содержится в Руководстве по осуществлению Приложения V к Конвенции МАРПОЛ 73/78.

3 Описание мусора

Для целей настоящего журнала мусор подразделяется на следующие категории:

1. Пластмассы
2. Обладающие плавучестью сепарационные, обшивочные или упаковочные материалы
3. Нижеперечисленные изделия из бумаги, ветоши, стекла, металл, бутылки, черепки и т.п.
4. Изделия из бумаги, ветоши, стекло, металл, бутылки, черепки и т.п.
5. Пищевые отходы
6. Зола из инсинераторов

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4. Записи в журнале операций с мусором

Записи в журнале операций с мусором производятся в каждом из следующих случаев:

a) Когда мусор сбрасывается в море:

i) Дата и время сброса
ii) Местонахождение судна (широта и долгота)
iii) Категория сброшенного мусора
iv) Приблизительное количество сброшенного мусора каждой категории в м³
v) Подпись лица командного состава, ответственного за операцию.

b) Когда мусор сбрасывается в приемные сооружения на берегу или на другие суда:

i) Дата и время сброса
ii) Порт или сооружение либо название судна
iii) Категория сброшенного мусора
iv) Приблизительное количество сброшенного мусора каждой категории в м³
v) Подпись лица командного состава, ответственного за операцию.

c) Когда мусор сжигается:

i) Дата и время начала и прекращения сжигания
ii) Местонахождение судна (широта и долгота)
iii) Приблизительное количество сожженного мусора в м³
iv) Подпись лица командного состава, ответственного за операцию.

d) Аварийные или другие исключительные сбросы мусора:

i) Время происшествия
ii) Порт или местонахождение судна во время происшествия
iii) Приблизительное количество и категория мусора
iv) Обстоятельства сброса, удаления или потери, их причина и общие замечания.

4.2 Квитанции

Капитан должен получить от оператора портовых приемных сооружений или от капитана судна, принимающего мусор, квитанцию или справку, в которой указывается приблизительное количество переданного мусора. Квитанции или справки должны сохраняться на борту судна вместе с журналом операций с мусором в течение двух лет.

4.3 Количество мусора

Количество мусора на борту судна следует исчислять в м³, по возможности - отдельно по категориям. Журнал операций с мусором содержит много ссылок на приблизительное количество мусора. Признается, что точность исчисления количества мусора зависит от толкования. Приблизительные оценки объема будут отличаться до и после обработки. Некоторые методы обработки, например постоянная переработка пищевых отходов, не позволяют оценить объем мусора. При внесении в журнал и толковании записей следует учитывать такие факторы:

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РЕЕСТР ОПЕРАЦИЙ С МУСОРОМ

Название судна: _____ Регистровый номер или позывной сигнал: _____ Номер ИМО: _____

Категории мусора:

1: Пластмассы.
2: Обращающие плавучесть сепарационные, обтирочные или упаковочные материалы.
3: Изделия из бумаги, ветоши, стекла, металл, бутылки, черепки и т.д.
4: Изделия из бумаги, ветоши, стекла, металл, бутылки, черепки и т.д.
5: Пищевые отходы.
6: Золы от инсинераторов.

ПРИМЕЧАНИЕ: СБРОС ЛЮБОГО МУСОРА, ЗА ИСКЛЮЧЕНИЕМ ПИЩЕВЫХ ОТХОДОВ, В ОСОБЫХ РАЙОНАХ ЗАПРЕЩАЕТСЯ. ДОЛЖЕН КЛАССИФИЦИРОВАТЬСЯ ТОЛЬКО МУСОР, СБРАСЫВАЕМЫЙ В МОРЕ. В ОТНОШЕНИИ МУСОРА, ИНОГО ЧЕМ МУСОР КАТЕГОРИИ 1, СБРАСЫВАЕМОГО В ПРИЕМНЫЕ СООРУЖЕНИЯ, ДОСТАТОЧНО УКАЗАТЬ ТОЛЬКО ОБЩЕЕ ПРИБЛИЗИТЕЛЬНОЕ КОЛИЧЕСТВО.

Дата/время	Местонахождение судна	Приблизительное количество мусора, сброшенного в море (м3)					Приблизительное количество мусора, сброшенного в приемные сооружения или на другое судно (м3)		Приблизительное количество сожженного мусора (м3)	Подтверждение/подпись
		КАТ.2	КАТ.3	КАТ.4	КАТ.5	КАТ.6	КАТ.1	Прочий		

Подпись капитана: _____ Дата: _____

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RESOLUCIÓN MEPC.65(37)
aprobada el 14 de septiembre de 1995

ENMIENDAS DEL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973 (MARPOL 73/78)
(Enmiendas de la regla 2 y nueva regla 9 del Anexo V)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, artículo que trata de las funciones que confieren al Comité los convenios internacionales relativos a la prevención y contención de la contaminación del mar,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Convenio de 1973") y del artículo VI del Protocolo de 1978 relativo al Convenio de 1973 (en adelante denominado "Protocolo de 1978"), que especifican conjuntamente el procedimiento de enmienda del Protocolo de 1978 y confieren al órgano competente de la Organización la función de examinar y aprobar las enmiendas al Convenio de 1973, modificado por el Protocolo de 1978 (MARPOL 73/78),

TOMANDO NOTA ADEMÁS de que es necesario tomar disposiciones para aplicar de manera más eficaz el Anexo V del MARPOL 73/78,

CONSIDERANDO NECESARIO un enfoque más sistemático del cumplimiento y control de las prescripciones del Anexo V del MARPOL 73/78,

HABIENDO EXAMINADO las enmiendas del Anexo V del MARPOL 73/78, acordadas en su 36º período de sesiones y distribuidas de conformidad con lo dispuesto en el artículo 16 2) a) del Convenio de 1973,

1. APRUEBA, de conformidad con el artículo 16 2) b) del Convenio de 1973, las enmiendas del Anexo V del MARPOL 73/78, cuyo texto figura en el anexo de la presente resolución;

2. DECIDE, de conformidad con el artículo 16 2) f) iii) del Convenio de 1973, que las enmiendas se considerarán aceptadas el 1 de enero de 1997, a no ser que, con anterioridad a esa fecha, un tercio cuando menos de las Partes, o un número de Partes cuyas flotas mercantes combinadas representen como mínimo el 50% del tonelaje bruto de la flota mercante mundial, hayan notificado a la Organización objeciones con respecto a las enmiendas;

3. INVITA a las Partes a que tomen nota de que, de conformidad con el artículo 16 2) g) ii) del Convenio de 1973, las enmiendas entrarán en vigor el 1 de julio de 1997 con arreglo al párrafo 2 *supra*;

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4. PIDE al Secretario General que, de conformidad con el artículo 16 2) e) del Convenio de 1973, envíe copias certificadas de la presente resolución y del texto de las enmiendas que figuran en el anexo a todas las Partes en el Anexo V del Protocolo de 1978;

5. PIDE ADEMÁS al Secretario General que envíe copias de la resolución y de su anexo a los Miembros de la Organización que no sean Partes en el Anexo V del Protocolo de 1978.

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ANEXO

TEXTOS DE LAS ENMIENDAS DEL ANEXO V DEL MARPOL 73/78

Regla 2

Ámbito de aplicación

El texto actual de la regla 2 se sustituye por el siguiente:

"A menos que se prescriba expresamente otra cosa, las disposiciones del presente anexo se aplicarán a todos los buques."

Se añade la nueva regla 9 siguiente :

"**Regla 9**

Rótulos, planes de gestión de basuras y mantenimiento de registros de basuras

1) a) En todo buque de eslora igual o superior a 12 m, se colocarán rótulos en los que se notifiquen a la tripulación y a los pasajeros las prescripciones sobre eliminación de basuras que figuran en las reglas 3 y 5 del presente anexo, según proceda;

b) los rótulos estarán redactados en el idioma oficial del Estado cuyo pabellón el buque esté autorizado a enarbolar, y, en el caso de los buques que realicen viajes a puertos o terminales mar adentro que estén bajo la jurisdicción de otras Partes en el Convenio, en francés o inglés.

2) Todo buque de arqueo bruto igual o superior a 400 toneladas y todo buque que esté autorizado a transportar 15 personas o más tendrá un plan de gestión de basuras que la tripulación deberá cumplir. Dicho plan incluirá procedimientos escritos para la recogida, el almacenamiento el tratamiento y la evacuación de basuras, incluida la manera de utilizar el equipo de a bordo. También se designará en él a la persona encargada de su cumplimiento. Dicho plan se ajustará a las directrices que elabore la Organización y estará escrito en el idioma de trabajo de la tripulación.

3) Todo buque de arqueo bruto igual o superior a 400 toneladas y todo buque que esté autorizado a transportar 15 personas o más, que realice viajes a puertos o terminales mar adentro que estén bajo la jurisdicción de otras Partes en el Convenio, y toda plataforma fija o flotante empleada en la exploración y explotación del fondo marino llevará un Libro registro de basuras. Este Libro, sea o no sea parte del diario oficial de navegación, se ajustará al modelo especificado en el apéndice del presente anexo:

a) todas las operaciones de descarga o incineración que se hayan llevado a término se anotarán en el Libro registro de basuras y llevarán la firma de un oficial del buque en la fecha en que se realizó la incineración o descarga. Cuando se complete una página del Libro registro de basuras, el capitán del buque la firmará. Las anotaciones en el Libro registro de basuras se harán en un idioma oficial del Estado cuyo pabellón el buque está

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autorizado a enarbolar, y en inglés o francés. Las anotaciones en un idioma oficial del Estado cuyo pabellón el buque esté autorizado a enarbolar prevalecerán en caso de controversia o discrepancia.

b) cada anotación de incineración o descarga incluirá la fecha, la hora, la situación del buque, la descripción de las basuras y la cantidad estimada de basuras incineradas o descargadas.

c) el Libro registro de basuras se conservará a bordo del buque en un lugar que permita su inspección en un tiempo razonable. Dicho documento se conservará durante un período de dos años después de que se haya hecho la última anotación en el registro;

d) en los casos de eliminación, derrame o pérdida accidental a los que se hace referencia en la regla 6 de este anexo, se anotarán en el Libro registro de basuras las circunstancias y motivos de la descarga.

4) La Administración podrá eximir de las prescripciones relativas a. Libro registro de basuras:

i) a los buques que realicen viajes de una hora como máximo y que estén autorizados a transportar 15 personas o más ; o

ii) las plataformas fijas o flotantes que estén dedicadas a la exploración y explotación del fondo marino.

5) La autoridad competente del Gobierno de una Parte en el Convenio podrá inspeccionar el Libro registro de basuras a bordo de cualquier buque al que se aplique el presente anexo mientras el buque esté en uno de sus puertos o terminales mar adentro y podrá sacar copia de cualquier anotación que figure en dicho Libro y exigir al capitán del buque que certifique que es una copia auténtica. Toda copia que haya sido certificada por el capitán del buque como copia auténtica de una anotación de. Libro registro de basuras será admisible en cualquier procedimiento judicial como prueba de los hechos consignados en la misma. La inspección del Libro registro de basuras y la extracción de copias certificadas por la autoridad competente con arreglo a lo dispuesto en este párrafo se harán con toda la diligencia posible y sin causar demoras innecesarias al buque.

6) En el caso de los buques construidos antes del 1 de julio de 1997, esta regla se aplicará a partir del 1 de julio de 1998.

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Se añade el siguiente apéndice al anexo:

APÉNDICE

MODELO DE LIBRO REGISTRO DE BASURAS

Nombre del buque: .....

Números o letras distintivo: .....

Número IMO: .....

Periodo: desde: ..... hasta: .....

1 Introducción

Conforme a lo prescrito en la regla 9 del Anexo V del Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978 (MARPOL 73/78), debe mantenerse un registro de todas las operaciones de descarga o incineración de basuras realizadas, incluidas las descargas en el mar, en instalaciones de recepción o en otros buques.

2 Basuras y gestión de basuras

Por basuras se entiende toda clase de restos de alimentos, así como los desechos resultantes de las faenas domésticas y de las operaciones normales del buque, salvo el pescado fresco y sus partes, que pueda ser necesario eliminar continua o periódicamente, con excepción de las sustancias que se definen o enumeran en otros anexos del MARPOL 73/78 (tales como hidrocarburos, aguas sucias o sustancias nocivas líquidas).

Para la correspondiente información se consultarán las Directrices para la implantación del Anexo V del MARPOL 73/78.

3 Descripción de las basuras

Para los efectos del presente libro registro, las basuras se agruparán en las siguientes categorías:

.1 plásticos;
.2 tablas de estiba, soleras y materiales de embalaje flotantes;
.3 productos de papel, trapos, vidrio, metales, botellas, loza, etc., triturados;
.4 productos de papel, trapos, vidrio, metales, botellas, loza, etc.;
.5 restos de alimentos;
.6 cenizas del incinerador;

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4.1 Anotaciones en el Libro registro de basuras

Se hará una anotación en el Libro registro de basuras en cada una de las ocasiones siguientes:

a) Cuando se descarguen basuras en el mar:

i) fecha y hora de la descarga;
ii) situación del buque (latitud y longitud);
iii) categoría de basuras descargadas;
iv) volumen estimado de la descarga de cada categoría, en m^3;
v) firma del oficial encargado de la operación.

b) Cuando se descarguen basuras en instalaciones receptoras o en otros buques:

i) fecha y hora de la descarga;
ii) puerto o instalación, o nombre del buque;
iii) categoría de basuras descargadas;
iv) volumen estimado de la descarga de cada categoría, en m^3;
v) firma del oficial encargado de la operación.

c) Cuando se incineren basuras:

i) fecha y hora de la incineración;
ii) situación del buque (latitud y longitud);
iii) volumen estimado de basuras incineradas, en m^3;
iv) firma del oficial encargado de la operación.

d) Descargas accidentales u otras descargas excepcionales de basuras:

i) hora del acaecimiento;
ii) puerto o situación del buque en el momento del acaecimiento;
iii) volumen estimado y categoría de basuras descargadas;
iv) circunstancias de la eliminación, derrame o pérdida, sus razones, y observaciones generales.

4.2 Recibos

El capitán obtendrá del operador de las instalaciones de recepción en puerto, o del capitán del buque que recibe las basuras, un recibo o certificado en el que se indique la cantidad de basuras trasvasadas. Los recibos o certificados se deben conservar a bordo del buque, junto con el Libro registro de basuras, durante dos años.

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4.3 Volumen de basuras

El volumen de basuras a bordo se estimará en m^3, si es posible por categorías. En el Libro registro de basuras se hacen numerosas referencias a al volumen estimado de basuras. Se reconoce que la exactitud del volumen estimado de basuras está sujeta a interpretación. El volumen estimado será distinto antes y después del tratamiento de las basuras. Es posible que determinados procedimientos de tratamiento no permitan una estimación útil del volumen, como en el caso del tratamiento continuo de restos de alimentos. Estos factores se tendrán en cuenta tanto al hacer anotaciones en el registro como al interpretarlas.

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REGISTRO DE DESCARGAS DE BASURAS

Nombre del buque: ..... Número o letras distintivos: ....., Número IMO: .....

Categorías de basuras:

1 Plásticos.
2 Labias de estiba, soleras y materiales de embalaje flotantes.
3 Productos de papel, trapos, vidrio, metales, botellas, loza, etc., triturados.
4 Productos de papel, trapos, vidrio, metales, botellas, loza, etc.
5 Restos de alimentos.
6 Cenizas de incineradores.

NOTA: LA DESCARGA DE CUALQUIER TIPO DE BASURAS QUE NO SEAN RESTOS DE ALIMENTOS ESTÁ PROHIBIDA EN LAS ZONAS ESPECIALES. SÓLO SE DEBEN AGRUPAR POR CATEGORÍAS LAS BASURAS DESCARGADAS EN EL MAR. EN EL CASO DE LAS BASURAS QUE NO SEAN DE LA CATEGORÍA 1 DESCARGADAS EN INSTALACIONES RECEPTORAS, ÚNICAMENTE ES NECESARIO ESPECIFICAR SU VOLUMEN TOTAL ESTIMADO.

Fecha/hora	Situación del buque	Volumen estimado de basuras descargadas en el mar (m^3)					Volumen estimado de basuras descargadas en instalaciones receptoras o en otro buque (m^3)		Volumen estimado de basuras incineradas (m^3)	Certificación/ Firma
		CAT. 2	CAT. 3	CAT. 4	CAT. 5	CAT. 6	CAT. 1	Otras		

Firma del capitán: ..... Fecha: .....

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CERTIFIED TRUE COPY of text of the amendments to the annex of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (amendments to regulation 2 and new regulation 9 of Annex V) adopted at the thirty-seventh session of the Marine Environment Protection Committee of the International Maritime Organization on 14 September 1995 in conformity with article VI of the Protocol and article 16 of the Convention by resolution MEPC.65(37), the original text of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du texte des amendements à l'annexe du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (amendements à la règle 2 et nouvelle règle 9 de l'Annexe V), adoptés par la résolution MEPC.65(37), le 14 septembre 1995 lors de la trente-septième session du Comité de la protection du milieu marin de l'Organisation maritime internationale, conformément aux dispositions de l'article VI du Protocole et de l'article 16 de la Convention, dont l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ текста поправок к Приложению к Протоколу 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (поправки к правилу 2 и новое правило 9 Приложения V), одобренных на тридцать седьмой сессии Комитета по защите морской среды Международной морской организации 14 сентября 1995 года в соответствии со статьей VI Протокола и статьей 16 Конвенции резолюцией MEPC.65(37), подлинный текст которых сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTÉNTICA CERTIFICADA del texto de las enmiendas al anexo del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (enmiendas a la regla 2 y nueva regla 9 del Anexo V), aprobadas el 14 de septiembre de 1995 por el Comité de Protección del Medio Marino de la Organización Marítima Internacional en su 37° período de sesiones mediante la resolución MEPC.65(37), de conformidad con lo dispuesto en el artículo VI del Protocolo y el artículo 16 del Convenio, cuyo original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General of the International Maritime Organization:

Pour le Secrétaire général de l'Organisation maritime internationale :

За Генерального секретаря Международной морской организации:

Por el Secretario General de la Organización Marítima Internacional:

London, 11 XI 1996

Londres, le

Лондон,

Londres,

J/6457 (E/F/R/S)

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PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

PROTOCOLE DE 1997 MODIFIANT LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES, TELLE QUE MODIFIÉE PAR LE PROTOCOLE DE 1978 Y RELATIF

PROTOCOLO DE 1997 QUE ENMIENDA EL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973, MODIFICADO POR EL PROTOCOLO DE 1978

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PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

THE PARTIES TO THE PRESENT PROTOCOL,

BEING Parties to the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973,

RECOGNIZING the need to prevent and control air pollution from ships,

RECALLING Principle 15 of the Rio Declaration on Environment and Development which calls for the application of a precautionary approach,

CONSIDERING that this objective could best be achieved by the conclusion of a Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto,

HAVE AGREED as follows:

Article 1

Instrument to be amended

The instrument which the present Protocol amends is the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as the "Convention").

Article 2

Addition of Annex VI to the Convention

Annex VI entitled Regulations for the Prevention of Air Pollution from Ships, the text of which is set out in the annex to the present Protocol, is added.

Article 3

General Obligations

1 The Convention and the present Protocol shall, as between the Parties to the present Protocol, be read and interpreted together as one single instrument.

2 Every reference to the present Protocol constitutes at the same time a reference to the Annex hereto.

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Article 4

Amendment procedure

In applying article 16 of the Convention to an amendment to Annex VI and its appendices, the reference to "a Party to the Convention" shall be deemed to mean the reference to a Party bound by that Annex.

FINAL CLAUSES

Article 5

Signature, ratification, acceptance, approval and accession

1 The present Protocol shall be open for signature at the Headquarters of the International Maritime Organization (hereinafter referred to as the "Organization") from 1 January 1998 until 31 December 1998 and shall thereafter remain open for accession. Only Contracting States to the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") may become Parties to the present Protocol by:

(a) signature without reservation as to ratification, acceptance or approval; or

(b) signature, subject to ratification, acceptance or approval, followed by ratification, acceptance or approval; or

(c) accession.

2 Ratification, acceptance, approval or accession shall be effected by the deposit of an instrument to that effect with the Secretary-General of the Organization (hereinafter referred to as the "Secretary-General").

Article 6

Entry into force

1 The present Protocol shall enter into force twelve months after the date on which not less than fifteen States, the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant shipping, have become Parties to it in accordance with article 5 of the present Protocol.

2 Any instrument of ratification, acceptance, approval or accession deposited after the date on which the present Protocol enters into force shall take effect three months after the date of deposit.

3 After the date on which an amendment to the present Protocol is deemed to have been accepted in accordance with article 16 of the Convention, any instrument of ratification, acceptance, approval or accession deposited shall apply to the present Protocol as amended.

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Article 7

Denunciation

1 The present Protocol may be denounced by any Party to the present Protocol at any time after the expiry of five years from the date on which the Protocol enters into force for that Party.

2 Denunciation shall be effected by the deposit of an instrument of denunciation with the Secretary-General.

3 A denunciation shall take effect twelve months after receipt of the notification by the Secretary-General or after the expiry of any other longer period which may be indicated in the notification.

4 A denunciation of the 1978 Protocol in accordance with article VII thereof shall be deemed to include a denunciation of the present Protocol in accordance with this article. Such denunciation shall take effect on the date on which denunciation of the 1978 Protocol takes effect in accordance with article VII of that Protocol.

Article 8

Depositary

1 The present Protocol shall be deposited with the Secretary-General (hereinafter referred to as the "Depositary").

2 The Depositary shall:

(a) inform all States which have signed the present Protocol or acceded thereto of:

(i) each new signature or deposit of an instrument of ratification, acceptance, approval or accession, together with the date thereof;

(ii) the date of entry into force of the present Protocol, and

(iii) the deposit of any instrument of denunciation of the present Protocol together with the date on which it was received and the date on which the denunciation takes effect; and

(b) transmit certified true copies of the present Protocol to all States which have signed the present Protocol or acceded thereto.

3 As soon as the present Protocol enters into force, a certified true copy thereof shall be transmitted by the Depositary to the Secretariat of the United Nations for registration and publication in accordance with Article 102 of the Charter of the United Nations.

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Article 9

Languages

The present Protocol is established in a single copy in the Arabic, Chinese, English, French, Russian and Spanish languages, each text being equally authentic.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments for that purpose, have signed the present Protocol.

DONE AT LONDON this twenty-sixth day of September, one thousand nine hundred and ninety-seven.

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ANNEX

ADDITION OF ANNEX VI TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

The following new Annex VI is added after the existing Annex V:

"ANNEX VI

REGULATIONS FOR THE PREVENTION OF AIR POLLUTION FROM SHIPS

CHAPTER I - GENERAL

REGULATION 1

Application

The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in regulations 3, 5, 6, 13, 15, 18 and 19 of this Annex.

REGULATION 2

Definitions

For the purpose of this Annex:

(1) "A similar stage of construction" means the stage at which:

(a) construction identifiable with a specific ship begins; and

(b) assembly of that ship has commenced comprising at least 50 tonnes or one per cent of the estimated mass of all structural material, whichever is less.

(2) "Continuous feeding" is defined as the process whereby waste is fed into a combustion chamber without human assistance while the incinerator is in normal operating conditions with the combustion chamber operative temperature between 850°C and 1200°C.

(3) "Emission" means any release of substances subject to control by this Annex from ships into the atmosphere or sea.

(4) "New installations", in relation to regulation 12 of this Annex, means the installation of systems, equipment, including new portable fire extinguishing units, insulation, or other material on a ship after the date on which this Annex enters into force, but excludes repair or recharge of previously installed systems, equipment, insulation, or other material or recharge of portable fire extinguishing units.

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(5) "NOx Technical Code" means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by Conference resolution 2, as may be amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention concerning amendment procedures applicable to an appendix to an Annex.

(6) "Ozone depleting substances" means controlled substances defined in paragraph 4 of article 1 of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in Annexes A, B, C or E to the said Protocol in force at the time of application or interpretation of this Annex.

"Ozone depleting substances" that may be found on board ship include, but are not limited to:

Halon 1211 Bromochlorodifluoromethane
Halon 1301 Bromotrifluoromethane
Halon 2402 1,2-Dibromo-1,1,2,2-tetrafluoroethane (also known as Halon 114B21
CFC-11 Trichlorofluoromethane
CFC-12 Dichlorodifluoromethane
CFC-113 1,1,2-Trichloro-1,2,2-trifluoroethane
CFC-114 1,2-Dichloro-1,1,2,2-tetrafluoroethane
CFC-115 Chloropentafluoroethane

(7) "Sludge oil" means sludge from the fuel or lubricating oil separators, waste lubricating oil from main or auxiliary machinery, or waste oil from bilge water separators, oil filtering equipment or drip trays.

(8) "Shipboard incineration" means the incineration of wastes or other matter on board a ship, if such wastes or other matter were generated during the normal operation of that ship.

(9) "Shipboard incinerator" means a shipboard facility designed for the primary purpose of incineration.

(10) "Ships constructed" means ships the keels of which are laid or which are at a similar stage of construction.

(11) "SOx Emission Control Area" means an area where the adoption of special mandatory measures for SOx emissions from ships is required to prevent, reduce and control air pollution from SOx and its attendant adverse impacts on land and sea areas. SOx Emission Control Areas shall include those listed in regulation 14 of this Annex.

(12) "Tanker" means an oil tanker as defined in regulation 1(4) of Annex I or a chemical tanker as defined in regulation 1(1) of Annex II of the present Convention.

(13) "The Protocol of 1997" means the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978 relating thereto.

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REGULATION 3

General Exceptions

Regulations of this Annex shall not apply to:

(a) any emission necessary for the purpose of securing the safety of a ship or saving life at sea, or

(b) any emission resulting from damage to a ship or its equipment:

(i) provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the emission for the purpose of preventing or minimizing the emission, and

(ii) except if the owner or the master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result

REGULATION 4

Equivalents

(1) The Administration may allow any fitting, material, appliance or apparatus to be fitted in a ship as an alternative to that required by this Annex if such fitting, material, appliance or apparatus is at least as effective as that required by this Annex.

(2) The Administration which allows a fitting, material, appliance or apparatus as an alternative to that required by this Annex shall communicate to the Organization for circulation to the Parties to the present Convention particulars thereof, for their information and appropriate action, if any.

CHAPTER II - SURVEY, CERTIFICATION AND MEANS OF CONTROL

REGULATION 5

Surveys and Inspections

(1) Every ship of 400 gross tonnage or above and every fixed and floating drilling rig and other platforms shall be subject to the surveys specified below:

(a) an initial survey before the ship is put into service or before the certificate required under regulation 6 of this Annex is issued for the first time. This survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of this Annex;

(b) periodical surveys at intervals specified by the Administration, but not exceeding five years, which shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the requirements of this Annex, and

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(c) a minimum of one intermediate survey during the period of validity of the certificate which shall be such as to ensure that the equipment and arrangements fully comply with the requirements of this Annex and are in good working order. In cases where only one such intermediate survey is carried out in a single certificate validity period, and where the period of the certificate exceeds 2½ years, it shall be held within six months before or after the halfway date of the certificate's period of validity. Such intermediate surveys shall be endorsed on the certificate issued under regulation 6 of this Annex.

(2) In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of this Annex are complied with.

(3) Surveys of ships as regards the enforcement of the provisions of this Annex shall be carried out by officers of the Administration. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it. Such organizations shall comply with the guidelines adopted by the Organization. In every case the Administration concerned shall fully guarantee the completeness and efficiency of the survey.

(4) The survey of engines and equipment for compliance with regulation 13 of this Annex shall be conducted in accordance with the NOx Technical Code.

(5) The Administration shall institute arrangements for unscheduled inspections to be carried out during the period of validity of the certificate. Such inspections shall ensure that the equipment remains in all respects satisfactory for the service for which the equipment is intended. These inspections may be carried out by their own inspection service, nominated surveyors, recognized organizations, or by other Parties upon request of the Administration. Where the Administration, under the provisions of paragraph (1) of this regulation, establishes mandatory annual surveys, the above unscheduled inspections shall not be obligatory.

(6) When a nominated surveyor or recognized organization determines that the condition of the equipment does not correspond substantially with the particulars of the certificate, they shall ensure that corrective action is taken and shall in due course notify the Administration. If such corrective action is not taken, the certificate should be withdrawn by the Administration. If the ship is in a port of another Party, the appropriate authorities of the port State shall also be notified immediately. When an officer of the Administration, a nominated surveyor or recognized organization has notified the appropriate authorities of the port State, the Government of the port State concerned shall give such officer, surveyor or organization any necessary assistance to carry out their obligations under this regulation.

(7) The equipment shall be maintained to conform with the provisions of this Annex and no changes shall be made in the equipment, systems, fittings, arrangements, or material covered by the survey without the express approval of the Administration. The direct replacement of such equipment and fittings with equipment and fittings that conform with the provisions of this Annex is permitted.

(8) Whenever an accident occurs to a ship or a defect is discovered, which substantially affects the efficiency or completeness of its equipment covered by this Annex, the master or owner of the ship shall report at the earliest opportunity to the Administration, a nominated surveyor, or recognized organization responsible for issuing the relevant certificate.

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REGULATION 6

Issue of International Air Pollution Prevention Certificate

(1) An International Air Pollution Prevention Certificate shall be issued, after survey in accordance with the provisions of regulation 5 of this Annex, to:

(a) any ship of 400 gross tonnage or above engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties, and

(b) platforms and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of other Parties to the Protocol of 1997.

(2) Ships constructed before the date of entry into force of the Protocol of 1997 shall be issued with an International Air Pollution Prevention Certificate in accordance with paragraph (1) of this regulation no later than the first scheduled drydocking after entry into force of the Protocol of 1997, but in no case later than 3 years after entry into force of the Protocol of 1997.

(3) Such certificate shall be issued either by the Administration or by any person or organization duly authorized by it. In every case the Administration assumes full responsibility for the certificate.

REGULATION 7

Issue of a Certificate by another Government

(1) The Government of a Party to the Protocol of 1997 may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the provisions of this Annex are complied with, issue or authorize the issuance of an International Air Pollution Prevention Certificate to the ship in accordance with this Annex.

(2) A copy of the certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

(3) A certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as a certificate issued under regulation 6 of this Annex.

(4) No International Air Pollution Prevention Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party to the Protocol of 1997.

REGULATION 8

Form of Certificate

The International Air Pollution Prevention Certificate shall be drawn up in an official language of the issuing country in the form corresponding to the model given in appendix I to this Annex. If the language used is not English, French, or Spanish, the text shall include a translation into one of these languages.

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REGULATION 9

Duration and Validity of Certificate

(1) An International Air Pollution Prevention Certificate shall be issued for a period specified by the Administration, which shall not exceed five years from the date of issue.

(2) No extension of the five-year period of validity of the International Air Pollution Prevention Certificate shall be permitted, except in accordance with paragraph (3).

(3) If the ship, at the time when the International Air Pollution Prevention Certificate expires, is not in a port of the State whose flag it is entitled to fly or in which it is to be surveyed, the Administration may extend the certificate for a period of no more than 5 months. Such extension shall be granted only for the purpose of allowing the ship to complete its voyage to the State whose flag it is entitled to fly or in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so. After arrival in the State whose flag it is entitled to fly or in which it is to be surveyed, the ship shall not be entitled by virtue of such extension to leave the port or State without having obtained a new International Air Pollution Prevention Certificate.

(4) An International Air Pollution Prevention Certificate shall cease to be valid in any of the following circumstances:

(a) if the inspections and surveys are not carried out within the periods specified under regulation 5 of this Annex.

(b) if significant alterations have taken place to the equipment, systems, fittings, arrangements or material to which this Annex applies without the express approval of the Administration, except the direct replacement of such equipment or fittings with equipment or fittings that conform with the requirements of this Annex. For the purpose of regulation 13, significant alteration shall include any change or adjustment to the system, fittings, or arrangement of a diesel engine which results in the nitrogen oxide limits applied to that engine no longer being complied with; or

(c) upon transfer of the ship to the flag of another State. A new certificate shall be issued only when the Government issuing the new certificate is fully satisfied that the ship is in full compliance with the requirements of regulation 5 of this Annex. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration of the other Party a copy of the International Air Pollution Prevention Certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports.

REGULATION 10

Port State Control on Operational Requirements

(1) A ship, when in a port or an offshore terminal under the jurisdiction of another Party to the Protocol of 1997, is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of air pollution from ships.

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(2) In the circumstances given in paragraph (1) of this regulation, the Party shall take such steps as will ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.

(3) Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.

(4) Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

REGULATION 11

Detection of Violations and Enforcement

(1) Parties to this Annex shall co-operate in the detection of violations and the enforcement of the provisions of this Annex, using all appropriate and practicable measures of detection and environmental monitoring, adequate procedures for reporting and accumulation of evidence.

(2) A ship to which the present Annex applies may, in any port or offshore terminal of a Party, be subject to inspection by officers appointed or authorized by that Party for the purpose of verifying whether the ship has emitted any of the substances covered by this Annex in violation of the provision of this Annex. If an inspection indicates a violation of this Annex, a report shall be forwarded to the Administration for any appropriate action.

(3) Any Party shall furnish to the Administration evidence, if any, that the ship has emitted any of the substances covered by this Annex in violation of the provisions of this Annex. If it is practicable to do so, the competent authority of the former Party shall notify the master of the ship of the alleged violation.

(4) Upon receiving such evidence, the Administration so informed shall investigate the matter, and may request the other Party to furnish further or better evidence of the alleged contravention. If the Administration is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken in accordance with its law as soon as possible. The Administration shall promptly inform the Party which has reported the alleged violation, as well as the Organization, of the action taken.

(5) A Party may also inspect a ship to which this Annex applies when it enters the ports or offshore terminals under its jurisdiction, if a request for an investigation is received from any Party together with sufficient evidence that the ship has emitted any of the substances covered by the Annex in any place in violation of this Annex. The report of such investigation shall be sent to the Party requesting it and to the Administration so that the appropriate action may be taken under the present Convention.

(6) The international law concerning the prevention, reduction, and control of pollution of the marine environment from ships, including that law relating to enforcement and safeguards, in force at the time of application or interpretation of this Annex, applies, *mutatis mutandis*, to the rules and standards set forth in this Annex.

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CHAPTER III - REQUIREMENTS FOR CONTROL OF EMISSIONS FROM SHIPS

REGULATION 12

Ozone Depleting Substances

(1) Subject to the provisions of regulation 3, any deliberate emissions of ozone depleting substances shall be prohibited. Deliberate emissions include emissions occurring in the course of maintaining, servicing, repairing or disposing of systems or equipment, except that deliberate emissions do not include minimal releases associated with the recapture or recycling of an ozone depleting substance. Emissions arising from leaks of an ozone depleting substance, whether or not the leaks are deliberate, may be regulated by Parties to the Protocol of 1997.

(2) New installations which contain ozone depleting substances shall be prohibited on all ships, except that new installations containing hydro-chlorofluorocarbons (HCFCs) are permitted until 1 January 2020.

(3) The substances referred to in this regulation, and equipment containing such substances, shall be delivered to appropriate reception facilities when removed from ships.

REGULATION 13

Nitrogen Oxides (NOx)

(1) (a) This regulation shall apply to:

(i) each diesel engine with a power output of more than 130 kW which is installed on a ship constructed on or after 1 January 2000; and

(ii) each diesel engine with a power output of more than 130 kW which undergoes a major conversion on or after 1 January 2000.

(b) This regulation does not apply to:

(i) emergency diesel engines, engines installed in lifeboats and any device or equipment intended to be used solely in case of emergency; and

(ii) engines installed on ships solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly, provided that such engines are subject to an alternative NOx control measure established by the Administration.

(c) Notwithstanding the provisions of sub-paragraph (a) of this paragraph, the Administration may allow exclusion from the application of this regulation to any diesel engine which is installed on a ship constructed, or on a ship which undergoes a major conversion, before the date of entry into force of the present Protocol, provided that the ship is solely engaged in voyages to ports or offshore terminals within the State the flag of which the ship is entitled to fly.

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(2) (a) For the purpose of this regulation, "major conversion" means a modification of an engine where

(i) the engine is replaced by a new engine built on or after 1 January 2000, or

(ii) any substantial modification, as defined in the NOx Technical Code, is made to the engine, or

(iii) the maximum continuous rating of the engine is increased by more than 10%

(b) The NOx emission resulting from modifications referred to in the sub-paragraph (a) of this paragraph shall be documented in accordance with the NOx Technical Code for approval by the Administration.

(3) (a) Subject to the provision of regulation 3 of this Annex, the operation of each diesel engine to which this regulation applies is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits:

(i)	17.0g/kWh	when n is less than 130 rpm
(ii)	$45.0*n^{(-0.2)}$ g/kWh	when n is 130 or more but less than 2000 rpm
(iii)	9.8 g/kWh	when n is 2000 rpm or more

where n = rated engine speed (crankshaft revolutions per minute).

When using fuel composed of blends from hydrocarbons derived from petroleum refining, test procedure and measurement methods shall be in accordance with the NOx Technical Code, taking into consideration the Test Cycles and Weighting Factors outlined in appendix II to this Annex.

(b) Notwithstanding the provisions of sub-paragraph (a) of this paragraph, the operation of a diesel engine is permitted when

(i) an exhaust gas cleaning system, approved by the Administration in accordance with the NOx Technical Code, is applied to the engine to reduce onboard NOx emissions at least to the limits specified in sub-paragraph (a), or

(ii) any other equivalent method, approved by the Administration taking into account relevant guidelines to be developed by the Organization, is applied to reduce onboard NOx emissions at least to the limit specified in sub-paragraph (a) of this paragraph.

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REGULATION 14

Sulphur Oxides (SOx)

General requirements

(1) The sulphur content of any fuel oil used on board ships shall not exceed 4.5% m/m.

(2) The worldwide average sulphur content of residual fuel oil supplied for use on board ships shall be monitored taking into account guidelines to be developed by the Organization.

Requirements within SOx Emission Control Areas

(3) For the purpose of this regulation, SOx Emission Control Areas shall include:

(a) the Baltic Sea area as defined in regulation 10(1)(b) of Annex I; and

(b) any other sea area, including port areas, designated by the Organization in accordance with criteria and procedures for designation of SOx Emission Control Areas with respect to the prevention of air pollution from ships contained in appendix III to this Annex.

(4) While ships are within SOx Emission Control Areas, at least one of the following conditions shall be fulfilled:

(a) the sulphur content of fuel oil used on board ships in a SOx Emission Control Area does not exceed 1.5% m/m;

(b) an exhaust gas cleaning system, approved by the Administration taking into account guidelines to be developed by the Organization, is applied to reduce the total emission of sulphur oxides from ships, including both auxiliary and main propulsion engines, to 6.0 g SOx/kWh or less calculated as the total weight of sulphur dioxide emission. Waste streams from the use of such equipment shall not be discharged into enclosed ports, harbours and estuaries unless it can be thoroughly documented by the ship that such waste streams have no adverse impact on the ecosystems of such enclosed ports, harbours and estuaries, based upon criteria communicated by the authorities of the port State to the Organization. The Organization shall circulate the criteria to all Parties to the Convention; or

(c) any other technological method that is verifiable and enforceable to limit SOx emissions to a level equivalent to that described in sub-paragraph (b) is applied. These methods shall be approved by the Administration taking into account guidelines to be developed by the Organization.

(5) The sulphur content of fuel oil referred to in paragraph (1) and paragraph (4)(a) of this regulation shall be documented by the supplier as required by regulation 18 of this Annex.

(6) Those ships using separate fuel oils to comply with paragraph (4)(a) of this regulation shall allow sufficient time for the fuel oil service system to be fully flushed of all fuels exceeding 1.5% m/m sulphur content prior to entry into a SOx Emission Control Area. The volume of low sulphur fuel oils (less than or equal to 1.5% sulphur content) in each tank as well as the date, time, and position of the ship when any fuel changeover operation is completed, shall be recorded in such log-book as prescribed by the Administration.

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(7) During the first twelve months immediately following entry into force of the present Protocol or of an amendment to the present Protocol designating a specific SOx Emission Control Area under paragraph (3)(b) of this regulation, ships entering a SOx Emission Control Area referred to in paragraph (3)(a) of this regulation or designated under paragraph (3)(b) of this regulation are exempted from the requirements in paragraphs (4) and (6) of this regulation and from the requirements of paragraph (5) of this regulation insofar as they relate to paragraph (4)(a) of this regulation.

REGULATION 15

Volatile Organic Compounds

(1) If the emissions of volatile organic compounds (VOCs) from tankers are to be regulated in ports or terminals under the jurisdiction of a Party to the Protocol of 1997, they shall be regulated in accordance with the provisions of this regulation.

(2) A Party to the Protocol of 1997 which designates ports or terminals under its jurisdiction in which VOCs emissions are to be regulated, shall submit a notification to the Organization. This notification shall include information on the size of tankers to be controlled, on cargoes requiring vapour emission control systems, and the effective date of such control. The notification shall be submitted at least six months before the effective date.

(3) The Government of each Party to the Protocol of 1997 which designates ports or terminals at which VOCs emissions from tankers are to be regulated shall ensure that vapour emission control systems, approved by that Government taking into account the safety standards developed by the Organization, are provided in ports and terminals designated, and are operated safely and in a manner so as to avoid undue delay to the ship.

(4) The Organization shall circulate a list of the ports and terminals designated by the Parties to the Protocol of 1997 to other Parties to the Protocol of 1997 and Member States of the Organization for their information.

(5) All tankers which are subject to vapour emission control in accordance with the provisions of paragraph (2) of this regulation shall be provided with a vapour collection system approved by the Administration taking into account the safety standards developed by the Organization, and shall use such system during the loading of such cargoes. Terminals which have installed vapour emission control systems in accordance with this regulation may accept existing tankers which are not fitted with vapour collection systems for a period of three years after the effective date identified in paragraph (2).

(6) This regulation shall only apply to gas carriers when the type of loading and containment systems allow safe retention of non-methane VOCs on board, or their safe return ashore.

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REGULATION 16

Shipboard Incineration

(1) Except as provided in paragraph (5), shipboard incineration shall be allowed only in a shipboard incinerator.

(2) (a) Except as provided in sub-paragraph (b) of this paragraph, each incinerator installed on board a ship on or after 1 January 2000 shall meet the requirements contained in appendix IV to this Annex. Each incinerator shall be approved by the Administration taking into account the standard specifications for shipboard incinerators developed by the Organization.

(b) The Administration may allow exclusion from the application of sub-paragraph (a) of this paragraph to any incinerator which is installed on board a ship before the date of entry into force of the Protocol of 1997, provided that the ship is solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly.

(3) Nothing in this regulation affects the prohibition in, or other requirements of, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as amended, and the 1996 Protocol thereto.

(4) Shipboard incineration of the following substances shall be prohibited:

(a) Annex I, II and III cargo residues of the present convention and related contaminated packing materials,

(b) polychlorinated biphenyls (PCBs);

(c) garbage, as defined in Annex V of the present Convention, containing more than traces of heavy metals, and

(d) refined petroleum products containing halogen compounds.

(5) Shipboard incineration of sewage sludge and sludge oil generated during the normal operation of a ship may also take place in the room or auxiliary power plant or boilers, but in those cases, shall not take place inside ports, harbours and estuaries.

(6) Shipboard incineration of polyvinyl chlorides (PVCs) shall be prohibited, except in shipboard incinerators for which IMO Type Approval Certificates have been issued.

(7) All ships with incinerators subject to this regulation shall possess a manufacturer's operating manual which shall specify how to operate the incinerator within the limits described in paragraph 2 of appendix IV to this Annex.

(8) Personnel responsible for operation of any incinerator shall be trained and capable of implementing the guidance provided in the manufacturer's operating manual.

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(9) Monitoring of combustion flue gas outlet temperature shall be required at all times and waste shall not be fed into a continuous-feed shipboard incinerator when the temperature is below the minimum allowed temperature of 850°C. For batch-loaded shipboard incinerators, the unit shall be designed so that the temperature in the combustion chamber shall reach 600°C within 5 minutes after start-up

(10) Nothing in this regulation precludes the development, installation and operation of alternative design shipboard thermal waste treatment devices that meet or exceed the requirements of this regulation

REGULATION 17

Reception Facilities

(1) The Government of each Party to the Protocol of 1997 undertakes to ensure the provision of facilities adequate to meet the:

(a) needs of ships using its repair ports for the reception of ozone depleting substances and equipment containing such substances when removed from ships;

(b) needs of ships using its ports, terminals or repair ports for the reception of exhaust gas cleaning residues from an approved exhaust gas cleaning system when discharge into the marine environment of these residues is not permitted under regulation 14 of this Annex,

without causing undue delay to ships, and

(c) needs of ship breaking facilities for the reception of ozone depleting substances and equipment containing such substances when removed from ships.

(2) Each Party to the Protocol of 1997 shall notify the Organization for transmission to the Members of the Organization of all cases where the facilities provided under this regulation are unavailable or alleged to be inadequate.

REGULATION 18

Fuel Oil Quality

(1) Fuel oil for combustion purposes delivered to and used on board ships to which this Annex applies shall meet the following requirements:

(a) except as provided in sub-paragraph (b):

(i) the fuel oil shall be blends of hydrocarbons derived from petroleum refining. This shall not preclude the incorporation of small amounts of additives intended to improve some aspects of performance;

(ii) the fuel oil shall be free from inorganic acid;

(iii) the fuel oil shall not include any added substance or chemical waste which either

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(1) jeopardizes the safety of ships or adversely affects the performance of the machinery, or

(2) is harmful to personnel, or

(3) contributes overall to additional air pollution; and

(b) fuel oil for combustion purposes derived by methods other than petroleum refining shall not:

(i) exceed the sulphur content set forth in regulation 14 of this Annex;

(ii) cause an engine to exceed the NOx emission limits set forth in regulation 13(3)(a) of this Annex;

(iii) contain inorganic acid; and

(iv) (1) jeopardize the safety of ships or adversely affect the performance of the machinery, or

(2) be harmful to personnel, or

(3) contribute overall to additional air pollution.

(2) This regulation does not apply to coal in it's solid form or nuclear fuels.

(3) For each ship subject to regulations 5 and 6 of this Annex, details of fuel oil for combustion purposes delivered to and used on board shall be recorded by means of a bunker delivery note which shall contain at least the information specified in appendix V to this Annex.

(4) The bunker delivery note shall be kept on board the ship in such a place as to be readily available for inspection at all reasonable times. It shall be retained for a period of three years after the fuel oil has been delivered on board.

(5) (a) The competent authority of the Government of a Party to the Protocol of 1997 may inspect the bunker delivery notes on board any ship to which this Annex applies while the ship is in its port or offshore terminal, may make a copy of each delivery note, and may require the master or person in charge of the ship to certify that each copy is a true copy of such bunker delivery note. The competent authority may also verify the contents of each note through consultations with the port where the note was issued.

(b) The inspection of the bunker delivery notes and the taking of certified copies by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

(6) The bunker delivery note shall be accompanied by a representative sample of the fuel oil delivered taking into account guidelines to be developed by the Organization. The sample is to be sealed and signed by the supplier's representative and the master or officer in charge of the bunker operation on completion of bunkering operations and retained under the ship's control until the fuel oil is substantially consumed, but in any case for a period of not less than twelve months from the time of delivery.

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(7) Parties to the Protocol of 1997 undertake to ensure that appropriate authorities designated by them:

(a) maintain a register of local suppliers of fuel oil;

(b) require local suppliers to provide the bunker delivery note and sample as required by this regulation, certified by the fuel oil supplier that the fuel oil meets the requirements of regulations 14 and 18 of this Annex;

(c) require local suppliers to retain a copy of the bunker delivery note for at least 3 years for inspection and verification by the port State as necessary;

(d) take action as appropriate against fuel oil suppliers that have been found to deliver fuel oil that does not comply with that stated on the bunker delivery note;

(e) inform the Administration of any ship receiving fuel oil found to be noncompliant with the requirements of regulations 14 or 18 of this Annex; and

(f) inform the Organization for transmission to Parties to the Protocol of 1997 of all cases where fuel oil suppliers have failed to meet the requirements specified in regulations 14 or 18 of this Annex.

(8) In connection with port State inspections carried out by Parties to the Protocol of 1997, the Parties further undertake to:

(a) inform the Party or non-Party under whose jurisdiction bunker delivery note was issued of cases of delivery of noncompliant fuel oil, giving all relevant information; and

(b) ensure that remedial action as appropriate is taken to bring noncompliant fuel oil discovered into compliance.

REGULATION 19

Requirements for Platforms and Drilling Rigs

(1) Subject to the provisions of paragraphs (2) and (3) of this regulation, fixed and floating platforms and drilling rigs shall comply with the requirements of this Annex.

(2) Emissions directly arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources are, consistent with article 2(3)(b)(ii) of the present Convention, exempt from the provisions of this Annex. Such emissions include the following:

(a) emissions resulting from the incineration of substances that are solely and directly the result of exploration, exploitation and associated offshore processing of sea-bed mineral resources, including but not limited to the flaring of hydrocarbons and the burning of cuttings muds, and/or stimulation fluids during well completion and testing operations; and flaring arising from upset conditions;

(b) the release of gases and volatile compounds entrained in drilling fluids and cuttings

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(c) emissions associated solely and directly with the treatment, handling, or storage of sea-bed minerals; and

(d) emissions from diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of sea-bed mineral resources.

(3) The requirements of regulation 18 of this Annex shall not apply to the use of hydrocarbons which are produced and subsequently used on site as fuel, when approved by the Administration.

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APPENDIX I

Form of IAPP Certificate
(Regulation 8)

INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified of the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of.

.....
(full designation of the country)

by.....
(full designation of the competent person or organization authorized under the provisions of the Convention)

Name of ship	Distinctive number or letters	IMO number	Port of registry	Gross tonnage

Type of ship: ☐ tanker
☐ ships other than a tanker

THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with regulation 5 of Annex VI of the Convention, and

2. That the survey shows that the equipment, systems, fittings, arrangements and materials fully comply with the applicable requirements of Annex VI of the Convention

This certificate is valid until .....
subject to surveys in accordance with regulation 5 of Annex VI of the Convention.

Issued at .....
(Place of issue of certificate)

.....
(Date of issue)

.....
(signature of duly authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

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ENDORSEMENT FOR ANNUAL AND INTERMEDIATE SURVEYS

THIS IS TO CERTIFY that at a survey required by regulation 5 of Annex VI of the Convention the ship was found to comply with the relevant provisions of the Convention:

Annual survey:

Signed.....
(Signature of duly authorized official)

Place.....

Date.....

(Seal or stamp of the authority, as appropriate)

Annual*/Intermediate* survey:

Signed.....
(Signature of duly authorized official)

Place.....

Date.....

(Seal or stamp of the authority, as appropriate)

Annual*/Intermediate* survey:

Signed.....
(Signature of duly authorized official)

Place.....

Date.....

(Seal or stamp of the authority, as appropriate)

Annual survey:

Signed.....
(Signature of duly authorized official)

Place.....

Date.....

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate

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Supplement to International Air Pollution Prevention Certificate
(IAPP Certificate)

RECORD OF CONSTRUCTION AND EQUIPMENT

In respect of the provisions of Annex VI of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (hereinafter referred to as 'the Convention').

Notes:

1 This Record shall be permanently attached to the IAPP Certificate. The IAPP Certificate shall be available on board the ship at all times.

2 If the language of the original Record is not English, French or Spanish, the text shall include a translation into one of these languages.

3 Entries in boxes shall be made by inserting either a cross (x) for the answer "yes" and "applicable" or a (-) for the answers "no" and "not applicable" as appropriate.

4 Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship .....

1.2 Distinctive number or letters .....

1.3 IMO number .....

1.4 Port of registry .....

1.5 Gross tonnage .....

1.6 Date on which keel was laid or ship was at a similar stage of construction .....

1.7 Date of commencement of major engine conversion (if applicable)(regulation 13) :

.....

2 Control of emissions from ships

2.1 Ozone depleting substances (regulation 12)

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2.1.1 The following fire extinguishing systems and equipment containing halons may continue in service: . . . . . □

System Equipment	Location on board

2.1.2 The following systems and equipment containing CFCs may continue in service:

. . . . . □

System Equipment	Location on board

2.1.3 The following systems containing hydro-chlorofluorocarbons (HCFCs) installed before 1 January 2020 may continue in service. . . . . □

System Equipment	Location on board

2.2 Nitrogen oxides (NOx) (regulation 13)

2.2.1 The following diesel engines with power output greater than 130 kW, and installed on a ship constructed on or after 1 January 2000, comply with the emission standards of regulation 13(3)(a) in accordance with the NOx Technical Code: . . . . . □

Manufacturer and Model	Serial Number	Use	Power Output (kW)	Rated Speed (RPM)

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2.2.2 The following diesel engines with power output greater than 130 kW, and which underwent major conversion per regulation 13(2) on or after 1 January 2000, comply with the emission standards of regulation 13(3)(a) in accordance with the NOx Technical Code. . . . . ☐

Manufacturer and Model	Serial number	Use	Power Output (kW)	Rated Speed (RPM)

2.2.3 The following diesel engines with a power output greater than 130 kW and installed on a ship constructed on or after 1 January 2000, or with a power output greater than 130 kW and which underwent major conversion per regulation 13(2) on or after 1 January 2000, are fitted with an exhaust gas cleaning system or other equivalent methods in accordance with regulation 13(3), and the NOx Technical Code. . . . . ☐

Manufacturer and Model	Serial Number	Use	Power Output (kW)	Rated Speed (RPM)

2.2.4 The following diesel engines from 2.2.1, 2.2.2 and 2.2.3 above are fitted with NOx emission monitoring and recording devices in accordance with the NOx Technical Code. . . . . ☐

Manufacturer and Model	Serial Number	Use	Power Output (kW)	Rated Speed (RPM)

2.3 Sulphur oxides (SOx) (regulation 14)

2.3.1 When the ship operates within an SOx Emission Control Area specified in regulation 14(3), the ship uses:

.1 fuel oil with a sulphur content that does not exceed 1.5% m/m as documented by bunker delivery notes; or . . . . . ☐

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.2 an approved exhaust gas cleaning system to reduce SOx emissions below 6.0g SOx/kWh; or ☐

.3 other approved technology to reduce SOx emissions below 6.0g SOx/kWh ☐

2.4 Volatile organic compounds (VOCs) (regulation 15)

2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ. 585 ☐

2.5 The ship has an incinerator:

.1 which complies with resolution MEPC.76(40) as amended ☐

.2 installed before 1 January 2000 which does not comply with resolution MEPC.76(40) as amended ☐

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....
(Place of issue of the Record)

....
Date of Issue (Signature of duly authorized official issuing the Record)

Seal or Stamp of the authority, as appropriate

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APPENDIX II

TEST CYCLES AND WEIGHTING FACTORS
(Regulation 13)

The following test cycles and weighing factors should be applied for verification of compliance of marine diesel engines with the NO_x limits in accordance with regulation 13 of this Annex using the test procedure and calculation method as specified in the NO_x Technical Code

.1 For constant speed marine engines for ship main propulsion, including diesel electric drive, test cycle E2 should be applied.
.2 For variable pitch propeller sets test cycle E2 should be applied.
.3 For propeller law operated main and propeller law operated auxiliary engines the test cycle E3 should be applied.
.4 For constant speed auxiliary engines test cycle D2 should be applied.
.5 For variable speed, variable load auxiliary engines, not included above, test cycle C1 should be applied.

Test cycle for "Constant Speed Main Propulsion" Application
(incl. Diesel Electric Drive or Variable Pitch Propeller Installations)

Test cycle type E2	Speed	100 %	100 %	100 %	100 %
	Power	100 %	75 %	50 %	25 %
	Weighting Factor	0.2	0.5	0.15	0.15

Test cycle for "Propeller Law operated Main and Propeller Law operated Auxiliary Engine" Application

Test cycle type E3	Speed	100 %	91 %	80 %	63 %
	Power	100 %	75 %	50 %	25 %
	Weighting Factor	0.2	0.5	0.15	0.15

Test cycle for "Constant Speed Auxiliary Engine" Application

Test cycle type D2	Speed	100 %	100 %	100 %	100 %	100 %
	Power	100 %	75 %	50 %	25 %	10 %
	Weighting Factor	0.05	0.25	0.3	0.3	0.1

Test cycle for "Variable Speed and Load Auxiliary Engine" Application

Test cycle type C1	Speed	Rated				Intermediate			Idle
	Torque %	100 %	75 %	50 %	10 %	100 %	75 %	50 %	0 %
	Weighting Factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

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APPENDIX III

CRITERIA AND PROCEDURES FOR DESIGNATION OF SO_X EMISSION CONTROL AREAS
(Regulation 14)

1 OBJECTIVES

1.1 The purpose of this appendix is to provide the criteria and procedures for the designation of SOx Emission Control Areas. The objective of SOx Emission Control Areas is to prevent, reduce, and control air pollution from SOx emissions from ships and their attendant adverse impacts on land and sea areas.

1.2 A SOx Emission Control Area should be considered for adoption by the Organization if supported by a demonstrated need to prevent, reduce, and control air pollution from SOx emissions from ships.

2 PROPOSAL CRITERIA FOR DESIGNATION OF A SOx EMISSION CONTROL AREA

2.1 A proposal to the Organization for designation of a SOx Emission Control Area may be submitted only by contracting States to the Protocol of 1997. Where two or more contracting States have a common interest in a particular area, they should formulate a coordinated proposal.

2.2 The proposal shall include:

.1 a clear delineation of the proposed area of application of controls on SOx emissions from ships, along with a reference chart on which the area is marked;

.2 a description of the land and sea areas at risk from the impacts of ship SOx emissions;

.3 an assessment that SOx emissions from ships operating in the proposed area of application of the SOx emission controls are contributing to air pollution from SOx, including SOx deposition, and their attendant adverse impacts on the land and sea areas under consideration. Such assessment shall include a description of the impacts of SOx emissions on terrestrial and aquatic ecosystems, areas of natural productivity, critical habitats, water quality, human health, and areas of cultural and scientific significance, if applicable. The sources of relevant data including methodologies used, shall be identified;

.4 relevant information pertaining to the meteorological conditions in the proposed area of application of the SOx emission controls and the land and sea areas at risk, in particular prevailing wind patterns, or to topographical, geological, oceanographic, morphological, or other conditions that may lead to an increased probability of higher localized air pollution or levels of acidification;

.5 the nature of the ship traffic in the proposed SOx Emission Control Area, including the patterns and density of such traffic; and

.6 a description of the control measures taken by the proposing contracting State or contracting States addressing land-based sources of SOx emissions affecting the area at risk that are in place and operating concurrent with the consideration of measures to be adopted in relation to provisions of regulation 14 of Annex VI of the present Convention.

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2.3 The geographical limits of an SOx Emission Control Area will be based on the relevant criteria outlined above, including SOx emission and deposition from ships navigating in the proposed area, traffic patterns and density, and wind conditions.

2.4 A proposal to designate a given area as an SOx Emission Control Area should be submitted to the Organization in accordance with the rules and procedures established by the Organization.

3 PROCEDURES FOR THE ASSESSMENT AND ADOPTION OF SOx EMISSION CONTROL AREAS BY THE ORGANIZATION

3.1 The Organization shall consider each proposal submitted to it by a contracting State or contracting States.

3.2 A SOx Emission Control Area shall be designated by means of an amendment to this Annex, considered, adopted and brought into force in accordance with article 16 of the present Convention.

3.3 In assessing the proposal, the Organization shall take into account the criteria which are to be included in each proposal for adoption as set forth in section 2 above, and the relative costs of reducing sulphur depositions from ships when compared with land-based controls. The economic impacts on shipping engaged in international trade should also be taken into account.

4 OPERATION OF SOx EMISSION CONTROL AREAS

4.1 Parties which have ships navigating in the area are encouraged to bring to the Organization any concerns regarding the operation of the area.

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APPENDIX IV

TYPE APPROVAL AND OPERATING LIMITS FOR SHIPBOARD INCINERATORS (Regulation 16)

(1) Shipboard incinerators described in regulation 16(2) shall possess an IMO type approval certificate for each incinerator. In order to obtain such certificate, the incinerator shall be designed and built to an approved standard as described in regulation 16(2). Each model shall be subject to a specified type approval test operation at the factory or an approved test facility, and under the responsibility of the Administration, using the following standard fuel/waste specification for the type approval test for determining whether the incinerator operates within the limits specified in paragraph (2) of this appendix.

Sludge Oil Consisting of:	75% SLUDGE OIL FROM HFO; 5% WASTE LUBRICATING OIL; and 20% EMULSIFIED WATER.
Solid Waste consisting of:	50% Food Waste 50% Rubbish Containing Approx. 30% Paper, " 40% Cardboard, " 10% Rags, " 20% Plastic The mixture will have up to 50% moisture and 7% incombustible solids.

(2) Incinerators described in regulation 16(2) shall operate within the following limits:

O_2 in Combustion Chamber:	6 - 12 %
CO in Flue Gas Maximum Average	200 mg/MJ
Soot Number Maximum Average:	BACHARACH 2 or RINGELMAN 1 (20% opacity) (A higher soot number is acceptable only during very short periods such as starting up)
Unburned Components in Ash Residues:	Maximum 10% by Weight
Combustion Chamber Flue Gas Outlet Temperature Range:	850 - 1200 degrees Celsius

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APPENDIX V

INFORMATION TO BE INCLUDED IN THE BUNKER DELIVERY NOTE

(Regulation 18(3))

Name and IMO Number of receiving ship

Port

Date of commencement of delivery

Name, address, and telephone number of marine fuel oil supplier

Product name(s)

Quantity in metric tons

Density at 15°C, kg/m^3

Sulphur content (%m/m)

A declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with regulation 14 (1) or (4)(a) and regulation 18(1) of this Annex.

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PROTOCOLE DE 1997 MODIFIANT LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES, TELLE QUE MODIFIÉE PAR LE PROTOCOLE DE 1978 Y RELATIF

LES PARTIES AU PRÉSENT PROTOCOLE,

ÉTANT Parties au Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires,

RECONNAISSANT qu'il est nécessaire de prévenir et de contrôler la pollution de l'atmosphère par les navires,

RAPPELANT le principe 15 de la Déclaration de Rio sur l'environnement et le développement qui préconise d'appliquer une approche de précaution,

ESTIMANT que le meilleur moyen d'atteindre cet objectif est de conclure un Protocole de 1997 modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif,

SONT CONVENUES de ce qui suit :

Article premier

Instrument devant être modifié

L'instrument qui est modifié par le présent Protocole est la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif (ci-après dénommée "la Convention").

Article 2

Adjonction d'une Annexe VI à la Convention

Une Annexe VI, intitulée "Règles relatives à la prévention de la pollution de l'atmosphère par les navires", dont le texte figure en annexe au présent Protocole, est ajoutée.

Article 3

Obligations générales

1 La Convention et le présent Protocole sont, entre les Parties au présent Protocole, considérés et interprétés comme formant un seul instrument.

2 Toute référence au présent Protocole constitue en même temps une référence à son Annexe.

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Article 4

Procédure d'amendement

Aux fins de l'application de l'article 16 de la Convention à un amendement à l'Annexe VI et à ses appendices, l'expression "une Partie à la Convention" désigne une Partie liée par ladite annexe.

CLAUSES FINALES

Article 5

Signature, ratification, acceptation, approbation et adhésion

1 Le présent Protocole est ouvert à la signature, au Siège de l'Organisation maritime internationale (ci-après dénommée "l'Organisation"), du 1er janvier 1998 au 31 décembre 1998 et reste ensuite ouvert à l'adhésion. Seuls les Etats contractants au Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé "le Protocole de 1978") peuvent devenir Parties au présent Protocole par :

a) signature sans réserve quant à la ratification, l'acceptation ou l'approbation; ou

b) signature sous réserve de ratification, d'acceptation ou d'approbation, suivie de ratification, d'acceptation ou d'approbation, ou

c) adhésion.

2 La ratification, l'acceptation, l'approbation ou l'adhésion s'effectuent par le dépôt d'un instrument à cet effet auprès du Secrétaire général de l'Organisation (ci-après dénommé "le Secrétaire général").

Article 6

Entrée en vigueur

1 Le présent Protocole entre en vigueur douze mois après la date à laquelle au moins quinze États dont les flottes marchandes représentent au total au moins 50 pour cent du tonnage brut de la flotte mondiale des navires de commerce sont devenus Parties à ce protocole conformément aux dispositions de son article 5.

2 Tout instrument de ratification, d'acceptation, d'approbation ou d'adhésion déposé après la date d'entrée en vigueur du présent Protocole prend effet trois mois après la date du dépôt.

3 Après la date à laquelle un amendement au présent Protocole est réputé avoir été accepté conformément à l'article 16 de la Convention, tout instrument de ratification, d'acceptation, d'approbation ou d'adhésion déposé s'applique au présent Protocole tel que modifié.

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Article 7

Dénonciation

1 Le présent Protocole peut être dénoncé par l'une quelconque des Parties au présent Protocole à tout moment après l'expiration d'une période de cinq ans à compter de la date de son entrée en vigueur à l'égard de cette Partie.

2 La dénonciation s'effectue par le dépôt d'un instrument de dénonciation auprès du Secrétaire général.

3 La dénonciation prend effet douze mois après la date à laquelle le Secrétaire général en a reçu notification ou à l'expiration de toute autre période plus longue qui pourrait être spécifiée dans la notification.

4 La dénonciation du Protocole de 1978 en vertu de son article VII est considérée comme une dénonciation du présent Protocole en vertu du présent article. Cette dénonciation prend effet à la date à laquelle la dénonciation du Protocole de 1978 prend effet conformément à l'article VII de ce protocole.

Article 8

Dépositaire

1 Le présent Protocole est déposé auprès du Secrétaire général (ci-après dénommé "le Dépositaire").

2 Le Dépositaire

a) informe tous les États qui ont signé le présent Protocole ou y ont adhéré :

i) de toute signature nouvelle ou de tout dépôt d'instrument nouveau de ratification, d'acceptation, d'approbation ou d'adhésion, et de la date de cette signature ou de ce dépôt,

ii) de la date d'entrée en vigueur du présent Protocole, et

iii) du dépôt de tout instrument dénonçant le présent Protocole, de la date à laquelle cet instrument a été reçu et de la date à laquelle la dénonciation prend effet, et

b) transmet des copies certifiées conformes du présent Protocole à tous les États qui ont signé le présent Protocole ou y ont adhéré.

3 Dès l'entrée en vigueur du présent Protocole, le Dépositaire en transmet une copie certifiée conforme au Secrétaire général de l'Organisation des Nations Unies en vue de son enregistrement et de sa publication conformément à l'Article 102 de la Charte des Nations Unies.

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Article 9

Langues

Le présent Protocole est établi en un seul exemplaire en langues anglaise, arabe, chinoise, espagnole, française et russe, chaque texte faisant également foi

EN FOI DE QUOI les soussignés, dûment autorisés à cet effet par leurs gouvernements respectifs, ont signé le présent Protocole.

FAIT À LONDRES, ce vingt-six septembre mil neuf cent quatre-vingt-dix-sept.

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ANNEXE

ADJONCTION D'UNE ANNEXE VI À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES, TELLE QUE MODIFIÉE PAR LE PROTOCOLE DE 1978 Y RELATIF

Ajouter la nouvelle Annexe VI ci-après à la suite de l'Annexe V actuelle :

"ANNEXE VI

RÈGLES RELATIVES À LA PRÉVENTION DE LA POLLUTION DE L'ATMOSPHÈRE PAR LES NAVIRES

CHAPITRE I - GÉNÉRALITÉS

RÈGLE 1

Application

Les dispositions de la présente Annexe s'appliquent à tous les navires, sauf disposition expresse contraire des règles 3, 5, 6, 13, 15, 18 et 19 de la présente Annexe.

RÈGLE 2

Définitions

Aux fins de la présente Annexe :

1) L'expression "dont la construction se trouve à un stade équivalent" désigne le stade auquel :

   a) une construction identifiable à un navire particulier commence, et

   b) le montage du navire considéré a commencé, employant au moins 50 tonnes ou un pour cent de la masse estimée de tous les matériaux de structure, si cette dernière valeur est inférieure.

2) "Chargement continu" désigne le processus par lequel des déchets sont chargés dans une chambre de combustion sans intervention humaine, l'incinérateur étant dans des conditions normales d'exploitation et la chambre de combustion fonctionnant à une température située entre 850°C et 1200°C.

3) "Émission" désigne toute libération, dans l'atmosphère ou dans la mer, par les navires de substances soumises à un contrôle en vertu de la présente Annexe.

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4) "Nouvelle installation", dans le contexte de la règle 12 de la présente Annexe, désigne l'installation de systèmes, d'équipement, y compris de nouveaux extincteurs d'incendie portatifs, d'isolation ou d'autres matériaux à bord d'un navire après la date d'entrée en vigueur de la présente Annexe mais ne vise pas la réparation ni la recharge de systèmes, d'équipement, d'isolation ou d'autres matériaux installés avant cette date, ni la recharge d'extincteurs portatifs.

5) "Code technique sur les NOx" désigne le Code technique sur le contrôle des émissions d'oxydes d'azote provenant des moteurs diesel marins que la Conférence a adopté par la résolution 2, y compris les amendements qui pourraient y être apportés par l'Organisation, à condition que ces amendements soient adoptés et mis en vigueur conformément aux dispositions de l'article 16 de la présente Convention relatives aux procédures d'amendement applicables aux appendices des Annexes.

6) "Substance qui appauvrit la couche d'ozone" désigne une substance réglementée, telle que définie au paragraphe 4 de l'article premier du Protocole de Montréal relatif à des substances qui appauvrissent la couche d'ozone, 1987, qui figure dans la liste de l'Annexe A, B, C ou E dudit Protocole en vigueur à la date d'application ou d'interprétation de la présente Annexe.

Les "substances qui appauvrissent la couche d'ozone" que l'on peut trouver à bord des navires comprennent, sans toutefois s'y limiter, les substances suivantes :

Halon 1211 Bromochlorodifluorométhane
Halon 1301 Bromotrifluorométhane
Halon 2402 1,2-Dibromo-1,1,2,2-tétrafluoréthane (également appelé Halon 114B2)
CFC-11 Trichlorofluorométhane
CFC-12 Dichlorodifluorométhane
CFC-113 1,1,2-Trichloro-1,1,2-trifluoréthane
CFC-114 1,2-Dichloro-1,1,2,2-tétrafluoréthane
CFC-115 Chloropentafluoréthane

7) "Boues d'hydrocarbures" désigne les boues provenant des séparateurs de combustible ou d'huile de graissage, les huiles de graissage usées provenant des machines principales ou auxiliaires, ou les huiles de vidange provenant des séparateurs d'eau de cale, du matériel de filtrage des hydrocarbures ou des gattes.

8) "Incinération à bord" désigne l'incinération de déchets ou autres matières à bord d'un navire, lorsque ces déchets ou autres matières sont produits pendant l'exploitation normale du navire.

9) "Incinérateur de bord" désigne une installation de bord conçue essentiellement pour l'incinération.

10) "Navire construit" désigne un navire dont la quille est posée ou dont la construction se trouve à un stade équivalent.

11) "Zone de contrôle des émissions de SOx" désigne une zone dans laquelle il est nécessaire d'adopter des mesures obligatoires particulières concernant les émissions de SOx par les navires pour prévenir, réduire et contrôler la pollution de l'atmosphère par les SOx et ses effets préjudiciables sur les zones terrestres et maritimes. Les zones de contrôle des émissions de SOx sont celles qui sont mentionnées à la règle 14 de la présente Annexe.

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12) "Navire-citerne" désigne un pétrolier tel que défini à la règle 1 4) de l'Annexe I ou un navire-citerne pour produits chimiques tel que défini à la règle 1 1) de l'Annexe II de la présente Convention

13) "Le Protocole de 1997" désigne le Protocole de 1997 modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif

RÈGLE 3

Exceptions générales

Les règles de la présente Annexe ne s'appliquent pas :

a) aux émissions nécessaires pour assurer la sécurité d'un navire ou pour sauver des vies humaines en mer; ou

b) aux émissions résultant d'une avarie survenue au navire ou à son équipement :

i) à condition que toutes les précautions raisonnables aient été prises après l'avarie ou la découverte des émissions pour empêcher ou réduire au minimum ces émissions; et

ii) sauf si le propriétaire ou le capitaine a agi soit avec l'intention de provoquer un dommage, soit témérairement et avec conscience qu'un dommage en résulterait probablement.

RÈGLE 4

Équivalences

1) L'Administration peut autoriser la mise en place à bord d'un navire d'installations, de matériaux, de dispositifs ou d'appareils en remplacement de ceux qui sont prescrits par la présente Annexe, à condition que ces installations, matériaux, dispositifs ou appareils soient au moins aussi efficaces que ceux qui sont prescrits par la présente Annexe

2) L'Administration qui autorise une installation, un matériau, un dispositif ou un appareil en remplacement de ceux qui sont prescrits par la présente Annexe doit en communiquer les détails à l'Organisation, qui les diffuse aux Parties à la présente Convention pour information et pour qu'il y soit donné suite, le cas échéant

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CHAPITRE II - VISITES, DÉLIVRANCE DES CERTIFICATS ET MESURES DE CONTRÔLE

RÈGLE 5

Visites et inspections

1) Tout navire d'une jauge brute égale ou supérieure à 400 et toute installation de forage ou autre plate-forme fixe ou flottante doivent être soumis aux visites spécifiées ci-après :

a) une visite initiale avant sa mise en service ou avant que le certificat prescrit par la règle 6 de la présente Annexe ne lui soit délivré pour la première fois. Cette visite doit permettre de s'assurer que l'équipement, les systèmes, les installations, les aménagements et les matériaux satisfont pleinement aux prescriptions applicables de la présente Annexe;

b) des visites périodiques à intervalles spécifiés par l'Administration, mais n'excédant pas cinq ans, qui permettent de s'assurer que l'équipement, les systèmes, les installations, les aménagements et les matériaux satisfont pleinement aux prescriptions de la présente Annexe, et

c) une visite intermédiaire au minimum pendant la période de validité du certificat; cette visite doit permettre de s'assurer que l'équipement et les aménagements satisfont pleinement aux prescriptions de la présente Annexe et sont en bon état de marche. Dans les cas où une seule visite intermédiaire est effectuée pendant une seule période de validité du certificat et où la période de validité de ce certificat excède 2 ans et demi, elle doit avoir lieu dans les six mois qui précèdent ou qui suivent la date à laquelle le certificat parvient à la moitié de sa période de validité. Ces visites intermédiaires doivent être portées sur le certificat délivré en vertu de la règle 6 de la présente Annexe.

2) En ce qui concerne les navires d'une jauge brute inférieure à 400, l'Administration peut déterminer les mesures à prendre pour que soient respectées les dispositions applicables de la présente Annexe.

3) Les visites de navires, en ce qui concerne l'application des dispositions de la présente Annexe, doivent être effectuées par des fonctionnaires de l'Administration. Toutefois, l'Administration peut confier les visites soit à des inspecteurs désignés à cet effet, soit à des organismes reconnus par elle. Ces organismes doivent satisfaire aux Directives adoptées par l'Organisation. Dans tous les cas, l'Administration intéressée doit se porter pleinement garante de l'exécution complète et de l'efficacité de la visite.

4) La visite des moteurs et de l'équipement destinée à s'assurer que ceux-ci satisfont aux dispositions de la règle 13 de la présente Annexe doit se faire de la façon prévue par le Code technique sur les NOx.

5) L'Administration doit prendre les mesures nécessaires pour que des inspections inopinées soient effectuées pendant la période de validité du certificat. Ces inspections doivent permettre de s'assurer que l'équipement reste à tous égards satisfaisant pour le service auquel il est destiné. Ces inspections peuvent être effectuées par ses propres services d'inspection, par des inspecteurs désignés, par des organismes reconnus ou par d'autres Parties à la demande de l'Administration.

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Lorsque l'Administration, en vertu des dispositions du paragraphe 1) de la présente règle, institue des visites annuelles obligatoires, les inspections inopinées ne sont pas obligatoires.

6) Lorsqu'un inspecteur désigné ou un organisme reconnu détermine que l'état de l'équipement ne correspond pas en substance aux indications du certificat, l'inspecteur ou l'organisme doit veiller à ce que des mesures correctives soient prises et doit en informer l'Administration en temps utile. Si ces mesures correctives ne sont pas prises, le certificat devrait être retiré par l'Administration. Si le navire se trouve dans un port d'une autre Partie, les autorités compétentes de l'État du port doivent aussi être informées immédiatement. Lorsqu'un fonctionnaire de l'Administration, un inspecteur désigné ou un organisme reconnu a informé les autorités compétentes de l'État du port, le gouvernement de l'État du port intéressé doit accorder au fonctionnaire, à l'inspecteur ou à l'organisme en question toute l'assistance nécessaire pour lui permettre de s'acquitter de ses obligations en vertu de la présente règle.

7) L'équipement doit être maintenu dans un état conforme aux dispositions de la présente Annexe et aucun changement ne doit être apporté à l'équipement, aux systèmes, aux installations, aux aménagements ou aux matériaux ayant fait l'objet de la visite, sans l'approbation expresse de l'Administration. Le simple remplacement de cet équipement et de ces installations par un équipement et des installations conformes aux dispositions de la présente Annexe est autorisé.

8) Lorsqu'un accident survenu à un navire ou un défaut constaté à bord compromet fondamentalement l'efficacité ou l'intégralité de son équipement visé par la présente Annexe, le capitaine ou le propriétaire du navire doit faire rapport dès que possible à l'Administration, à un inspecteur désigné ou à un organisme reconnu chargé de délivrer le certificat pertinent.

RÈGLE 6

Délivrance du Certificat international de prévention de la pollution de l'atmosphère

1) Un Certificat international de prévention de la pollution de l'atmosphère doit être délivré, après une visite effectuée conformément aux dispositions de la règle 5 de la présente Annexe,

a) à tout navire d'une jauge brute égale ou supérieure à 400 qui effectue des voyages à destination de ports ou de terminaux au large relevant de la juridiction d'autres Parties, et

b) aux installations de forage et plates-formes qui effectuent des voyages à destination d'eaux relevant de la souveraineté ou de la juridiction d'autres Parties au Protocole de 1997.

2) Un Certificat international de prévention de la pollution de l'atmosphère doit être délivré aux navires construits avant la date d'entrée en vigueur du Protocole de 1997 conformément au paragraphe 1) de la présente règle, au plus tard lors de la première mise en cale sèche prévue après la date d'entrée en vigueur du Protocole de 1997 mais en tout cas dans un délai maximal de trois ans après l'entrée en vigueur du Protocole de 1997.

3) Ce certificat doit être délivré soit par l'Administration, soit par toute personne ou tout organisme dûment autorisé par elle. Dans tous les cas, l'Administration assume l'entière responsabilité du certificat.

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RÈGLE 7

Délivrance d'un certificat par un autre gouvernement

1) Le Gouvernement d'une Partie au Protocole de 1997 peut, à la demande de l'Administration, faire visiter un navire et, s'il estime que les dispositions de la présente Annexe sont observées, il délivre au navire un Certificat international de prévention de la pollution de l'atmosphère ou en autorise la délivrance conformément à la présente Annexe.

2) Une copie du certificat et une copie du rapport de visite doivent être adressées dès que possible à l'Administration qui a fait la demande.

3) Un certificat ainsi délivré doit comporter une déclaration établissant qu'il a été délivré à la demande de l'Administration; il a la même valeur et est accepté dans les mêmes conditions qu'un certificat délivré conformément à la règle 6 de la présente Annexe.

4) Il ne doit pas être délivré de Certificat international de prévention de la pollution de l'atmosphère à un navire qui est autorisé à battre le pavillon d'un État qui n'est pas Partie au Protocole de 1997.

RÈGLE 8

Forme du Certificat

Le Certificat international de prévention de la pollution de l'atmosphère doit être établi dans une langue officielle du pays qui le délivre, conformément au modèle qui figure à l'appendice I de la présente Annexe. Si la langue utilisée n'est ni l'anglais ni l'espagnol ni le français, le texte doit comprendre une traduction dans l'une de ces langues.

RÈGLE 9

Durée et validité du Certificat

1) Un Certificat international de prévention de la pollution de l'atmosphère doit être délivré pour une période dont la durée est fixée par l'Administration, sans que cette durée puisse excéder cinq ans à compter de la date de délivrance.

2) Aucune prorogation de la durée de validité de cinq ans du Certificat international de prévention de la pollution de l'atmosphère n'est autorisée, sauf conformément au paragraphe 3).

3) Si, à la date d'expiration du Certificat international de prévention de la pollution de l'atmosphère, le navire ne se trouve pas dans un port de l'État dont il est autorisé à battre le pavillon ou dans lequel il doit subir une visite, l'Administration peut proroger la validité du certificat pour une période n'excédant pas cinq mois. Cette prorogation ne doit être accordée que pour permettre au navire d'achever son voyage vers l'État dont il est autorisé à battre le pavillon ou dans lequel il doit être visité, et ce, uniquement dans le cas où cette mesure apparaît comme opportune et raisonnable. Après son arrivée dans l'État dont il est autorisé à battre le pavillon ou dans lequel il doit être visité, le navire n'est pas en droit, en vertu de cette prorogation, d'en repartir sans avoir obtenu un nouveau Certificat international de prévention de la pollution de l'atmosphère.

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4) Le Certificat international de prévention de la pollution de l'atmosphère cesse d'être valable dans l'un quelconque des cas suivants :

a) si les inspections et visites n'ont pas été effectuées dans les délais spécifiés à la règle 5 de la présente Annexe;

b) si l'équipement, les systèmes, les installations, les aménagements ou les matériaux auxquels s'applique la présente Annexe ont subi des modifications importantes de nature autre que le simple remplacement de l'équipement ou des installations par un équipement ou des installations conformes aux prescriptions de la présente Annexe, sans l'approbation expresse de l'Administration. Aux fins de la règle 13, une modification importante est tout changement ou ajustage du système, de l'installation ou de l'agencement d'un moteur diesel à la suite duquel ce moteur ne satisfait plus aux limites d'émission d'oxydes d'azote qui lui sont applicables, ou

c) si le navire passe sous le pavillon d'un autre Etat. Un nouveau certificat ne doit être délivré que si le gouvernement délivrant le nouveau certificat a la certitude que le navire satisfait pleinement aux prescriptions de la règle 5 de la présente Annexe. Dans le cas d'un transfert de pavillon entre Parties, si la demande lui en est faite dans un délai de trois mois à compter du transfert, le Gouvernement de la Partie dont le navire était autorisé précédemment à battre le pavillon adresse, dès que possible, à l'Administration de l'autre Partie une copie du Certificat international de prévention de la pollution de l'atmosphère dont le navire était pourvu avant le transfert, ainsi que des copies des rapports de visite pertinents, le cas échéant.

RÈGLE 10

Contrôle des normes d'exploitation par l'État du port

1) Un navire qui se trouve dans un port ou un terminal au large relevant de la juridiction d'une autre Partie au Protocole de 1997 est soumis à une inspection effectuée par des fonctionnaires dûment autorisés par cette Partie en vue de vérifier l'application des normes d'exploitation prévues par la présente Annexe, lorsqu'il existe de bonnes raisons de penser que le capitaine ou les membres de l'équipage ne sont pas au fait des procédures essentielles à appliquer à bord pour prévenir la pollution de l'atmosphère par les navires.

2) Dans les circonstances visées au paragraphe 1) de la présente règle, la Partie doit prendre les dispositions nécessaires pour empêcher le navire d'appareiller jusqu'à ce qu'il ait été remédié à la situation conformément aux prescriptions de la présente Annexe.

3) Les procédures relatives au contrôle par l'État du port prévues à l'article 5 de la présente Convention doivent s'appliquer dans le cas de la présente règle.

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4) Aucune disposition de la présente règle ne doit être interprétée comme limitant les droits et obligations d'une Partie qui effectue le contrôle des normes d'exploitation expressément prévues dans la présente Convention.

RÈGLE 11

Recherche des infractions et mise en application des dispositions

1) Les Parties à la présente Annexe doivent coopérer à la recherche des infractions et à la mise en application des dispositions de la présente Annexe en utilisant tous les moyens pratiques appropriés de recherche et de surveillance continue du milieu ainsi que des méthodes satisfaisantes de transmission des renseignements et de rassemblement des preuves.

2) Tout navire auquel s'applique la présente Annexe peut être soumis, dans tout port ou terminal au large d'une Partie, à une inspection effectuée par des fonctionnaires désignés ou autorisés par ladite Partie, en vue de vérifier s'il a émis l'une quelconque des substances visées par la présente Annexe en infraction aux dispositions de celle-ci. Au cas où l'inspection fait apparaître une infraction aux dispositions de la présente Annexe, un rapport doit être communiqué à l'Administration pour que celle-ci prenne des mesures appropriées.

3) Toute Partie doit fournir à l'Administration la preuve, si elle existe, que ce navire a émis l'une quelconque des substances visées par la présente Annexe en infraction aux dispositions de celle-ci. Dans toute la mesure du possible, l'infraction présumée doit être portée à la connaissance du capitaine du navire par l'autorité compétente de cette Partie.

4) Dès réception de cette preuve, l'Administration doit enquêter sur l'affaire et peut demander à l'autre Partie de lui fournir des éléments complémentaires ou plus concluants sur l'infraction présumée. Si l'Administration estime que la preuve est suffisante pour lui permettre d'intenter une action, elle doit engager des poursuites dès que possible et conformément à sa législation. L'Administration doit informer rapidement la Partie qui lui a signalé l'infraction présumée, ainsi que l'Organisation, des poursuites engagées.

5) Une Partie peut aussi inspecter un navire auquel s'applique la présente Annexe lorsqu'il fait escale dans un port ou un terminal au large relevant de sa juridiction, si une autre Partie lui demande de procéder à une enquête et fournit des preuves suffisantes attestant que le navire a émis, dans un lieu quelconque, l'une quelconque des substances visées par la présente Annexe en infraction à celle-ci. Le rapport de cette enquête doit être envoyé à la Partie qui l'a demandée ainsi qu'à l'Administration afin que des mesures appropriées soient prises conformément aux dispositions de la présente Convention.

6) La législation internationale concernant la prévention, la réduction et le contrôle de la pollution du milieu marin par les navires, y compris la législation relative à la mise en application des dispositions et aux garanties, qui est en vigueur au moment de l'application ou de l'interprétation de la présente Annexe, s'applique, *mutatis mutandis*, aux règles et aux normes énoncées dans la présente Annexe.

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CHAPITRE III - PRESCRIPTIONS RELATIVES AU CONTRÔLE DES ÉMISSIONS PROVENANT DES NAVIRES

RÈGLE 12

Substances qui appauvrissent la couche d'ozone

1) Sous réserve des dispositions de la règle 3, toute émission délibérée de substances qui appauvrissent la couche d'ozone est interdite. Il faut considérer comme délibérées les émissions qui se produisent au cours de l'entretien, de la révision, de la réparation ou de la mise au rebut de systèmes ou de matériel, à l'exception des émissions de quantités minimes qui accompagnent la récupération ou le recyclage d'une substance qui appauvrit la couche d'ozone. Les émissions dues à des fuites de substances qui appauvrissent la couche d'ozone, qu'elles soient délibérées ou non, peuvent être réglementées par les Parties au Protocole de 1997.

2) De nouvelles installations contenant des substances qui appauvrissent la couche d'ozone sont interdites à bord de tous les navires; toutefois, les nouvelles installations contenant des hydrochlorofluorocarbones (HCFC) sont autorisées jusqu'au 1er janvier 2020.

3) Les substances visées par la présente règle et le matériel contenant de telles substances, lorsqu'ils sont enlevés des navires, doivent être livrés à des installations de réception appropriées.

RÈGLE 13

Oxydes d'azote (NOx)

1) a) La présente règle s'applique :

i) à chaque moteur diesel d'une puissance de sortie supérieure à 130 kW qui est installé à bord d'un navire construit le 1er janvier 2000 ou après cette date; et

ii) à chaque moteur diesel d'une puissance de sortie supérieure à 130 kW qui subit une transformation importante le 1er janvier 2000 ou après cette date.

b) La présente règle ne s'applique pas :

i) aux moteurs diesel de secours, aux moteurs installés à bord d'embarcations de sauvetage ou aux dispositifs ou équipements destinés à être utilisés uniquement en cas d'urgence; ni

ii) aux moteurs installés à bord des navires qui effectuent uniquement des voyages dans des eaux relevant de la souveraineté ou de la juridiction de l'Etat dont le navire est autorisé à battre le pavillon, sous réserve que les moteurs en question fassent l'objet d'une autre mesure de contrôle des NOx établie par l'Administration.

c) Nonobstant les dispositions de l'alinéa a) du présent paragraphe, l'Administration peut exempter de l'application de la présente règle tout moteur diesel qui est installé à bord d'un navire construit ou ayant subi une transformation importante avant la date d'entrée en vigueur du présent Protocole, à condition que ce navire effectue uniquement des

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voyages à destination de ports ou de terminaux au large à l'intérieur de l'Etat dont le navire est autorisé à battre le pavillon

2) a) Aux fins de la présente règle, "transformation importante" désigne une transformation d'un moteur par laquelle :

i) le moteur est remplacé par un moteur neuf construit le 1er janvier 2000 ou après cette date, ou

ii) une modification importante, telle que définie dans le Code technique sur les NOx, est apportée au moteur, ou

iii) la puissance maximale continue du moteur est accrue de plus de 10 %

b) Les émissions de NOx qui résultent de modifications visées à l'alinéa a) du présent paragraphe doivent être documentées conformément au Code technique sur les NOx aux fins d'approbation par l'Administration.

3) a) Sous réserve des dispositions de la règle 3 de la présente Annexe, il est interdit de faire fonctionner un moteur diesel auquel s'applique la présente règle lorsque la quantité d'oxydes d'azote émise par le moteur (calculée comme étant l'émission totale pondérée de NO_2) dépasse les limites suivantes :

i)	17,0 g/kWh	lorsque n est inférieur à 130 t/m
ii)	$45,0*n^{(-0,2)}$ g/kWh	lorsque n est égal ou supérieur à 130 t/m mais inférieur à 2000 t/m
iii)	9,8 g/kWh	lorsque n est égal ou supérieur à 2000 t/m

n représentant le régime nominal du moteur (tours du vilebrequin par minute).

Si le combustible utilisé est composé de mélanges d'hydrocarbures résultant du raffinage du pétrole, la procédure d'essai et les méthodes de mesure doivent être conformes au Code technique sur les NOx, compte tenu des cycles d'essai et des coefficients de pondération indiqués à l'appendice II de la présente Annexe.

b) Nonobstant les dispositions de l'alinéa a) du présent paragraphe, il est permis de faire fonctionner un moteur diesel lorsque :

i) le moteur comporte un dispositif d'épuration des gaz d'échappement, approuvé par l'Administration conformément au Code technique sur les NOx, pour ramener les émissions de NOx à bord au moins aux limites spécifiées à l'alinéa a), ou

ii) une autre méthode équivalente, approuvée par l'Administration compte tenu des directives pertinentes que doit élaborer l'Organisation, est utilisée pour ramener les émissions de NOx à bord, au moins aux limites spécifiées à l'alinéa a) du présent paragraphe.

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RÈGLE 14

Oxydes de soufre (SOx)

Prescriptions générales

1) La teneur en soufre de tout fuel-oil utilisé à bord des navires ne doit pas dépasser 4,5 % m/m.

2) La teneur en soufre moyenne mondiale des fuel-oils résiduaires livrés en vue de leur utilisation à bord des navires doit être contrôlée compte tenu des directives que doit élaborer l'Organisation.

Prescriptions applicables dans les zones de contrôle des émissions de SOx

3) Aux fins de la présente règle, les zones de contrôle des émissions de SOx sont :

   a) la zone de la mer Baltique, telle que définie à la règle 10 1) b) de l'Annexe I; et

   b) toute autre zone maritime, y compris les zones portuaires, désignée par l'Organisation conformément aux critères et procédures pour la désignation de zones de contrôle des émissions de SOx aux fins de la prévention de la pollution de l'atmosphère par les navires, lesquels figurent à l'appendice III de la présente Annexe.

4) Pendant que les navires se trouvent dans une zone de contrôle des émissions de SOx, l'une au moins des conditions suivantes doit être remplie :

   a) la teneur en soufre du fuel-oil utilisé à bord des navires dans une zone de contrôle des émissions de SOx ne dépasse pas 1,5 % m/m;

   b) un dispositif d'épuration des gaz d'échappement, approuvé par l'Administration compte tenu des directives que doit élaborer l'Organisation, est utilisé pour réduire la quantité totale d'oxydes de soufre émise par les appareils propulsifs principaux et auxiliaires du navire, et la ramener à 6,0 g SOx/kWh ou moins, calculée comme étant l'émission totale pondérée de dioxyde de soufre. Les flux de déchets résultant de l'utilisation d'un tel dispositif ne doivent pas être rejetés dans des ports et estuaires fermés, à moins que le navire puisse établir avec précision et documents à l'appui que ces flux n'ont aucun effet préjudiciable sur les écosystèmes de ces ports ou estuaires fermés, d'après les critères communiqués à l'Organisation par les autorités de l'Etat du port. L'Organisation doit diffuser ces critères à toutes les Parties à la Convention; ou

   c) toute autre technique vérifiable et dont il est possible d'assurer l'application est utilisée pour limiter les émissions de SOx à un niveau équivalant à celui qui est spécifié à l'alinéa b). Ces techniques doivent être approuvées par l'Administration compte tenu des directives que doit élaborer l'Organisation.

5) La teneur en soufre du fuel-oil visé au paragraphe 1) et au paragraphe 4) a) de la présente règle doit être attestée par le fournisseur, de la façon prescrite par la règle 18 de la présente Annexe.

6) Les navires qui utilisent des fuel-oils distincts pour satisfaire au paragraphe 4) a) de la présente règle doivent, avant d'entrer dans une zone de contrôle des émissions de SOx, prévoir suffisamment de temps pour que le circuit de distribution du fuel-oil se vide entièrement de tous

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les combustibles dont la teneur en soufre dépasse 1,5 % m/m. Le volume des fuel-ols à faible teneur en soufre (inférieure ou égale à 1,5 %) dans chaque citerne ainsi que la date, l'heure et la position du navire au moment où l'opération de changement de combustible a été achevée doivent être consignés dans le livre de bord prescrit par l'Administration.

7) Durant les douze premiers mois suivant immédiatement l'entrée en vigueur du présent Protocole, ou d'un amendement au présent Protocole désignant une zone spécifique de contrôle des émissions de SOx en vertu du paragraphe 3) b) de la présente règle, les navires qui entrent dans la zone de contrôle des émissions de SOx mentionnée au paragraphe 3) a) de la présente règle, ou dans une zone de contrôle des émissions de SOx désignée en vertu du paragraphe 3) b) de la présente règle, sont exemptés de l'application des prescriptions des paragraphes 4) et 6) de la présente règle, ainsi que des prescriptions du paragraphe 5) de la présente règle dans la mesure où elles concernent le paragraphe 4) a) de la présente règle.

RÈGLE 15

Composés organiques volatils

1) Si les émissions de composés organiques volatils (COV) provenant des navires-citernes doivent être réglementées dans les ports ou terminaux relevant de la juridiction d'une Partie au Protocole de 1997, elles doivent l'être conformément aux dispositions de la présente règle.

2) Une Partie au Protocole de 1997 qui désigne des ports ou terminaux relevant de leur juridiction dans lesquels les émissions de COV doivent être réglementées doit soumettre à l'Organisation une notification qui indique les dimensions des navires-citernes à contrôler, les cargaisons nécessitant des systèmes de contrôle des émissions de vapeurs et la date à laquelle ce contrôle prend effet. Cette notification doit être soumise au moins six mois avant cette date.

3) Le Gouvernement de chaque Partie au Protocole de 1997 qui désigne des ports ou terminaux dans lesquels les émissions de COV provenant des navires-citernes doivent être réglementées doit s'assurer que des systèmes de contrôle des émissions de vapeurs, approuvés par lui compte tenu des normes de sécurité élaborées par l'Organisation, sont installés dans les ports et terminaux désignés et sont exploités en toute sécurité et de manière à éviter de causer un retard indu au navire.

4) L'Organisation doit diffuser une liste des ports et terminaux désignés par les Parties au Protocole de 1997 aux autres Parties au Protocole de 1997 et aux États Membres de l'Organisation, pour information.

5) Tous les navires-citernes soumis à un contrôle des émissions de vapeurs conformément aux dispositions du paragraphe 2) de la présente règle doivent être pourvus d'un collecteur de vapeurs approuvé par l'Administration, compte tenu des normes de sécurité élaborées par l'Organisation et doivent utiliser ce système lors du chargement des cargaisons en question. Les terminaux qui ont mis en place des systèmes de contrôle des émissions de vapeurs conformément à la présente règle peuvent accepter les navires-citernes existants qui ne sont pas pourvus de collecteurs de vapeurs pendant une période de trois ans après la date notifiée en vertu du paragraphe 2).

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6) La présente règle ne s'applique aux transporteurs de gaz que lorsque le type de systèmes de chargement et de confinement permet de conserver à bord en toute sécurité les COV ne contenant pas de méthane ou de les réacheminer en toute sécurité à terre.

RÈGLE 16

Incinération à bord

1) Sauf dans le cas prévu au paragraphe 5), l'incinération à bord n'est autorisée que dans un incinérateur de bord.

2) a) Sauf dans le cas prévu à l'alinéa b) du présent paragraphe, chaque incinérateur installé à bord d'un navire le 1er janvier 2000 ou après cette date doit satisfaire aux prescriptions de l'appendice IV de la présente Annexe. Chaque incinérateur doit être approuvé par l'Administration, compte tenu des spécifications normalisées applicables aux incinérateurs de bord qui ont été élaborées par l'Organisation.

b) L'Administration peut exempter de l'application de l'alinéa a) du présent paragraphe tout incinérateur qui est installé à bord d'un navire avant la date d'entrée en vigueur du Protocole de 1997, à condition que ce navire effectue uniquement des voyages dans des eaux relevant de la souveraineté ou de la juridiction de l'État dont il est autorisé à battre le pavillon.

3) Aucune disposition de la présente règle ne porte atteinte à l'interdiction ou aux autres prescriptions prévues dans la Convention de 1972 sur la prévention de la pollution des mers résultant de l'immersion de déchets, telle que modifiée, et dans le Protocole de 1996 y relatif.

4) L'incinération à bord des substances énumérées ci-après est interdite :

a) résidus de cargaison visés par les Annexes I, II et III de la présente Convention et matériaux contaminés utilisés pour leur conditionnement;

b) biphényles polychlorés (PCB);

c) ordures, telles que définies à l'Annexe V de la présente Convention, contenant plus que des traces de métaux lourds; et

d) produits pétroliers raffinés contenant des composés halogénés.

5) L'incinération à bord de boues d'épuration ou de boues d'hydrocarbures produites pendant l'exploitation normale du navire peut également se faire dans les machines principales ou auxiliaires ou dans les chaudières mais dans ce cas elle ne doit pas être effectuée dans des ports et des estuaires.

6) L'incinération à bord de chlorures de polyvinyle (PVC) est interdite, sauf si elle a lieu dans des incinérateurs de bord pour lesquels des certificats OMI d'approbation par type ont été délivrés.

7) Tous les navires équipés d'incinérateurs soumis à la présente règle doivent avoir à bord un manuel d'exploitation du fabricant qui spécifie comment exploiter l'incinérateur dans les limites décrites au paragraphe 2) de l'appendice IV de la présente Annexe.

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8) Le personnel responsable de l'exploitation de tout incinérateur doit avoir reçu une formation et être capable d'appliquer les instructions fournies dans le manuel d'exploitation du fabricant

9) La température des gaz à la sortie de la chambre de combustion doit faire l'objet d'une surveillance permanente et les déchets ne doivent pas être chargés dans un incinérateur de bord à chargement continu lorsque la température est inférieure à la température minimale admissible de 850° C. Dans le cas des incinérateurs à chargement discontinu l'appareil doit être conçu de manière à ce que la température dans la chambre de combustion atteigne 600° C dans un délai de 5 minutes après l'allumage.

10) Aucune disposition de la présente règle n'empêche la mise au point, l'installation et l'exploitation d'autres types d'appareils de traitement thermique des déchets à bord qui satisfont aux prescriptions de la présente règle ou à des prescriptions encore plus sévères.

RÈGLE 17

Installations de réception

1) Le Gouvernement de chaque Partie au Protocole de 1997 s'engage à faire assurer la mise en place d'installations adaptées aux :

a) besoins des navires qui utilisent ses ports de réparation, pour la réception des substances qui appauvrissent la couche d'ozone et du matériel contenant ces substances lorsqu'ils sont enlevés des navires,

b) besoins des navires qui utilisent ses ports, terminaux ou ports de réparation, pour la réception des résidus de l'épuration des gaz d'échappement qui proviennent d'un dispositif approuvé d'épuration des gaz d'échappement lorsque le rejet de ces résidus dans le milieu marin n'est pas autorisé aux termes de la règle 14 de la présente Annexe

sans imposer de retards indus aux navires, et

c) besoins, dans les installations de démolition des navires, pour la réception des substances qui appauvrissent la couche d'ozone et du matériel contenant ces substances lorsqu'ils sont enlevés des navires

2) Chaque Partie au Protocole de 1997 doit notifier à l'Organisation, pour communication aux Membres de l'Organisation, tous les cas où les installations prescrites par la présente règle ne sont pas disponibles ou sont estimées insuffisantes

RÈGLE 18

Qualité du fuel-oil

1) Le fuel-oil qui est livré et utilisé aux fins de combustion à bord des navires auxquels s'applique la présente Annexe doit satisfaire aux prescriptions suivantes

a) sauf dans le cas prévu à l'alinéa b) :

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i) le fuel-oil doit être un mélange d'hydrocarbures résultant du raffinage du pétrole. Il peut toutefois incorporer de petites quantités d'additifs destinés à améliorer certains aspects liés à la performance;

ii) le fuel-oil doit être exempt d'acides inorganiques; et

iii) le fuel-oil ne doit contenir aucun additif ou déchet chimique qui :

1) compromette la sécurité du navire ou affecte la performance des machines, ou

2) soit nuisible pour le personnel, ou

3) contribue globalement à accroître la pollution de l'atmosphère; et

b) le fuel-oil destiné à la combustion qui est obtenu par des procédés autres que le raffinage du pétrole ne doit pas :

i) dépasser la teneur en soufre indiquée à la règle 14 de la présente Annexe;

ii) provoquer un dépassement, par un moteur, des limites d'émission de NOx spécifiées à la règle 13.3) a) de la présente Annexe;

iii) contenir des acides inorganiques; et

iv) 1) compromettre la sécurité du navire ou affecter la performance des machines, ou

2) être nuisible pour le personnel; ou

3) contribuer globalement à accroître la pollution de l'atmosphère.

2) La présente règle ne s'applique pas au charbon sous forme solide, ni aux combustibles nucléaires.

3) Pour chaque navire visé par les règles 5 et 6 de la présente Annexe, les détails du fuel-oil qui est livré et utilisé aux fins de combustion à bord doivent être consignés dans une note de livraison de soutes, laquelle doit contenir au moins les renseignements spécifiés à l'appendice V de la présente Annexe.

4) La note de livraison de soutes doit être conservée à bord dans un endroit où elle soit facilement accessible aux fins d'inspection à tout moment raisonnable. Elle doit être conservée pendant une période de trois ans à compter de la livraison du fuel-oil à bord.

5) a) L'autorité compétente du Gouvernement d'une Partie au Protocole de 1997 peut inspecter les notes de livraison de soutes à bord de tout navire auquel s'applique la présente Annexe alors que le navire se trouve dans son port ou terminal au large; elle peut faire une copie de chaque note de livraison et demander au capitaine ou à la personne responsable du navire de certifier que chaque copie est une copie conforme de la note de livraison de soutes en question. L'autorité compétente peut aussi vérifier le contenu de chaque note en contactant le port où la note a été délivrée.

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b) Lorsqu'elle inspecte les notes de livraison de soutes et qu'elle fait établir des copies certifiées conformes en vertu du présent paragraphe, l'autorité compétente doit procéder le plus rapidement possible sans retarder indûment le navire.

6) La note de livraison de soutes doit être accompagnée d'un échantillon représentatif du fuel-oil livré compte tenu des directives que doit élaborer l'Organisation. L'échantillon doit être scellé et recevoir la signature du représentant du fournisseur et celle du capitaine ou de l'officier chargé de l'opération de soutage, lorsque les opérations de soutage sont terminées, et il doit être conservé sous le contrôle du navire jusqu'à ce que le fuel-oil soit en grande partie consommé mais en tout cas pendant une période d'au moins douze mois à compter de la date de livraison.

7) Les Parties au Protocole de 1997 s'engagent à faire en sorte que les autorités compétentes désignées par elles :

a) tiennent un registre des fournisseurs locaux de fuel-oil;

b) exigent des fournisseurs locaux qu'ils établissent la note de livraison de soutes et fournissent un échantillon conformément aux prescriptions de la présente règle, le fournisseur du fuel-oil attestant que le fuel-oil satisfait aux prescriptions des règles 14 et 18 de la présente Annexe;

c) exigent des fournisseurs locaux qu'ils conservent une copie de la note de livraison de soutes pendant trois ans au moins aux fins d'inspection et de vérification par l'État du port, si nécessaire;

d) prennent des mesures appropriées à l'encontre des fournisseurs de fuel-oil qui s'avèrent avoir livré du fuel-oil qui n'est pas conforme aux indications de la note de livraison de soutes;

e) informent l'Administration de tout cas où un navire a reçu du fuel-oil qui s'est avéré ne pas satisfaire aux prescriptions de la règle 14 ou de la règle 18; et

f) informent l'Organisation pour communication aux Parties au Protocole de 1997, de tous les cas où des fournisseurs de fuel-oil n'ont pas satisfait aux prescriptions spécifiées dans la règle 14 ou la règle 18 de la présente Annexe.

8) Dans le contexte des inspections des navires par l'État du port qui sont effectuées par des Parties au Protocole de 1997, les Parties s'engagent en outre à :

a) informer la Partie ou la non-Partie sous la juridiction de laquelle la note de livraison de soutes a été délivrée des cas de livraison de fuel-oil ne satisfaisant pas aux prescriptions, en fournissant tous les renseignements pertinents; et

b) s'assurer que les mesures correctives nécessaires sont prises pour rendre conforme le fuel-oil qui s'est avéré ne pas satisfaire aux prescriptions.

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RÈGLE 19

Prescriptions applicables aux plates-formes et installations de forage

1) Sous réserve des dispositions des paragraphes 2) et 3) de la présente règle, les installations de forage et plates-formes fixes ou flottantes doivent satisfaire aux prescriptions de la présente Annexe.

2) Les émissions qui résultent directement de l'exploration, de l'exploitation et du traitement connexe au large des ressources minérales du fond des mers sont, conformément à l'article 2 3) b) a) de la présente Convention, exemptées de l'application des dispositions de la présente Annexe. Ces émissions sont notamment les suivantes :

a) les émissions provenant de l'incinération de substances qui résultent uniquement et directement de l'exploration, de l'exploitation et du traitement connexe au large des ressources minérales du fond des mers, y compris, sans que cette liste soit limitative, la combustion en torchères d'hydrocarbures et l'incinération de débris de forage, boues et/ou fluides stimulateurs durant les opérations d'achèvement et d'essai des puits et la combustion en torchères résultant de conditions de refoulement;

b) les dégagements de gaz et de composés volatils entraînés dans les fluides de forage et les débris de forage;

c) les émissions liées uniquement et directement au traitement, à la manutention ou au stockage de minéraux du fond des mers, et

d) les émissions provenant de moteurs diesel qui servent uniquement à l'exploration, à l'exploitation et au traitement connexe au large des ressources minérales du fond des mers.

3) Les prescriptions de la règle 18 de la présente Annexe ne s'appliquent pas à l'utilisation des hydrocarbures qui sont produits puis utilisés sur place comme combustible, avec l'approbation de l'Administration.

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APPENDICE I

Modèle de Certificat IAPP
(Règle 8)

CERTIFICAT INTERNATIONAL DE PRÉVENTION DE LA POLLUTION DE L'ATMOSPHÈRE

Délivré en vertu des dispositions du Protocole de 1997 modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif (ci-après dénommée "la Convention"), sous l'autorité du Gouvernement :

.....
(Nom officiel complet du pays)

par .....
(Titre officiel complet de la personne compétente ou de l'organisme autorisé en vertu des dispositions de la Convention)

Nom du navire	Numéro ou lettres distinctifs	Numéro OMI	Port d'immatriculation	Jauge brute

Type de navire : ☐ navire-citerne
☐ navire autre qu'un navire-citerne

IL EST CERTIFIÉ

1 que le navire a été visité conformément à la règle 5 de l'Annexe VI de la Convention, et

2 qu'à la suite de cette visite, il a été constaté que l'équipement, les systèmes, les aménagements, les installations et les matériaux étaient à tous égards conformes aux prescriptions applicables de l'Annexe VI de la Convention.

Le présent Certificat est valable jusqu'au .....
sous réserve des visites prévues à la règle 5 de l'Annexe VI de la Convention.

Délivré à .....
(Lieu de délivrance du Certificat)

Le .....
(Date de délivrance)

.....
(Signature de l'agent dûment autorisé qui délivre le Certificat)

(Cachet ou timbre, selon le cas, de l'autorité)

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ATTESTATION DE VISITES ANNUELLES ET INTERMÉDIAIRES

IL EST CERTIFIE que, lors d'une visite prescrite par la règle 5 de l'Annexe VI de la Convention, il a été constaté que le navire satisfaisait aux dispositions pertinentes de la Convention :

Visite annuelle :

Signé.....
(Signature de l'agent dûment autorisé)

Lieu .....
Date .....

(Cachet ou tampon, selon le cas, de l'autorité)

Visite annuelle*/intermédiaire* :

Signé .....
(Signature de l'agent dûment autorisé)

Lieu.....
Date.....

(Cachet ou tampon, selon le cas, de l'autorité)

Visite annuelle*/intermédiaire* :

Signé.....
(Signature de l'agent dûment autorisé)

Lieu.....
Date.....

(Cachet ou tampon, selon le cas, de l'autorité)

Visite annuelle :

Signé.....
(Signature de l'agent dûment autorisé)

Lieu .....
Date .....

(Cachet ou tampon, selon le cas, de l'autorité)

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* Rayer la mention inutile.

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Supplément au Certificat international de prévention de la pollution de l'atmosphère (Certificat IAPP)

FICHE DE CONSTRUCTION ET D'ÉQUIPEMENT

Établie en application des dispositions de l'Annexe VI de la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif (ci-après dénommée "la Convention").

Notes

1 La présente fiche doit être jointe d'une manière permanente au Certificat IAPP. Le Certificat IAPP doit se trouver en permanence à bord du navire.

2 Si le texte original de la fiche est établi dans une langue qui n'est ni l'anglais ni le français ni l'espagnol, on doit joindre au texte une traduction dans l'une de ces langues.

3 Pour répondre aux questions, insérer dans les cases le symbole (x) lorsque la réponse est "oui" ou "applicable" et le symbole (-) lorsque la réponse est "non" ou "non applicable", selon le cas.

4 Sauf indication contraire, les règles mentionnées dans la présente fiche sont les règles de l'Annexe VI de la Convention et les résolutions ou circulaires sont celles qui ont été adoptées par l'Organisation maritime internationale.

1 Caractéristiques du navire

1.1 Nom du navire .....

1.2 Numéro ou lettres distinctifs .....

1.3 Numéro OMI .....

1.4 Port d'immatriculation .....

1.5 Jauge brute .....

1.6 Date à laquelle la quille a été posée ou à laquelle la construction du navire se trouvait à un stade équivalent .....

1.7 Date à laquelle une transformation importante du moteur a commencé (le cas échéant) (règle 13) .....

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2 **Contrôle des émissions provenant des navires**

2.1 Substances qui appauvrissent la couche d'ozone (règle 12)

2.1.1 Les dispositifs d'extinction de l'incendie et le matériel ci-après qui contiennent des halons peuvent rester en service : ..... ☐

Dispositif/matériel	Emplacement à bord

2.1.2 Les dispositifs et le matériel ci-après qui contiennent des CFC peuvent rester en service : ..... ☐

Dispositif/matériel	Emplacement à bord

2.1.3 Les dispositifs ci-après qui contiennent des hydrochlorofluorocarbones (HCFC) et ont été installés avant le 1er janvier 2020 peuvent rester en service ..... ☐

Dispositif/matériel	Emplacement à bord

2.2 Oxydes d'azote (NOx) (règle 13)

2.2.1 Les moteurs diesel ci-après, d'une puissance de sortie supérieure à 130 kW et installés à bord d'un navire construit le 1er janvier 2000 ou après cette date, satisfont aux normes d'émission de la règle 13.3) a), conformément au Code technique sur les NOx ..... ☐

Fabricant et modèle	Numéro de série	Utilisation	Puissance de sortie (kW)	Régime nominal (tr/min)

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2.2.2 Les moteurs diesel ci-après, d'une puissance de sortie supérieure à 130 kW et qui ont subi une transformation importante telle que spécifiée à la règle 13.2) le 1er janvier 2000 ou après cette date, satisfont aux normes d'émission de la règle 13.3) a), conformément au Code technique sur les NOx : ..... ☐

Fabricant et modèle	Numéro de série	Utilisation	Puissance de sortie (kW)	Régime nominal (t/m)

2.2.3 Les moteurs diesel ci-après, d'une puissance de sortie supérieure à 130 kW et installés à bord d'un navire construit le 1er janvier 2000 ou après cette date, ou d'une puissance de sortie supérieure à 130 kW et qui ont subi une transformation importante telle que spécifiée à la règle 13.2) le 1er janvier 2000 ou après cette date, sont équipés d'un dispositif d'épuration des gaz d'échappement ou d'autres méthodes équivalentes conformément à la règle 13.3) b) et au Code technique sur les NOx : ..... ☐

Fabricant et modèle	Numéro de série	Utilisation	Puissance de sortie (kW)	Régime nominal (t/m)

2.2.4 Les moteurs diesel ci-après, qui sont mentionnés dans les rubriques 2.2.1, 2.2.2 et 2.2.3 ci-dessus, sont équipés de dispositifs de contrôle et d'enregistrement des émissions de NOx conformément au Code technique sur les NOx : ..... ☐

Fabricant et modèle	Numéro de série	Utilisation	Puissance de sortie (kW)	Régime nominal (t/m)

2.3 Oxydes de soufre (SOx) (règle 14)

2.3.1 Lorsqu'il est exploité à l'intérieur d'une zone de contrôle des émissions de SOx spécifiée à la règle 14.3), le navire utilise :

1 du fuel-oil dont la teneur en soufre ne dépasse pas 1,5 % m/m, telle qu'attestée par les notes de livraison de soutes; ou ..... ☐

2 un dispositif approuvé d'épuration des gaz d'échappement pour ramener les émissions de SOx au-dessous de 6,0g SOx/kWh, ou ..... ☐

3 une autre technique approuvée pour ramener les émissions de SOx au-dessous de 6,0g SOx/kWh ..... ☐

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2.4 Composés organiques volatils (COV) (règle 15)

2.4.1 Le navire-citerne dispose d'un collecteur de vapeurs installé et approuvé conformément à la circulaire MSC/Circ.585 ..... [ ]

2.5 Le navire a un incinérateur :

.1 qui satisfait aux dispositions de la résolution MEPC.76(40), telle que modifiée ..... [ ]

.2 qui a été installé avant le 1er janvier 2000 et ne satisfait pas aux dispositions de la résolution MEPC.76(40), telle que modifiée ..... [ ]

IL EST CERTIFIÉ que la présente fiche est correcte à tous égards.

Délivrée à .....
(Lieu de délivrance de la fiche)

Le .....
Date de délivrance

.....
(Signature du fonctionnaire dûment autorisé qui délivre la fiche)

Cachet ou timbre, selon le cas, de l'autorité

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APPENDICE II

CYCLES D'ESSAI ET COEFFICIENTS DE PONDÉRATION
(Règle 13)

Les cycles d'essai et coefficients de pondération ci-après devraient être appliqués aux fins de vérifier que les moteurs diesel marins ne dépassent pas les limites d'émission de NOx spécifiées à la règle 13 de la présente Annexe, au moyen de la procédure d'essai et de la méthode de calcul qui sont decrites dans le Code technique sur les NOx.

.1 Pour les moteurs marins à vitesse constante assurant la propulsion principale du navire, y compris la transmission diesel-électrique, le cycle d'essai E2 devrait être appliqué

.2 Pour les installations à hélice à pas variable, le cycle d'essai E2 devrait être appliqué.

.3 Pour les moteurs principaux et auxiliaires adaptés à l'hélice, le cycle d'essai E3 devrait être appliqué.

.4 Pour les moteurs auxiliaires à vitesse constante, le cycle d'essai D2 devrait être appliqué

.5 Pour les moteurs auxiliaires à vitesse variable, à charge variable, qui n'appartiennent pas aux catégories ci-dessus, le cycle d'essai C1 devrait être appliqué

Cycle d'essai pour les systèmes de "propulsion principale à vitesse constante" (y compris la transmission diesel-électrique et les installations à hélice à pas variable)

Cycle d'essai du type E2	Vitesse	100%	100%	100%	100%
	Puissance	100%	75%	50%	25%
	Coefficient de pondération	0,2	0,5	0,15	0,15

Cycle d'essai pour les "moteurs principaux et auxiliaires adaptés à l'hélice"

Cycle d'essai du type E3	Vitesse	100%	91%	80%	63%
	Puissance	100%	75%	50%	25%
	Coefficient de pondération	0,2	0,5	0,15	0,15

Cycle d'essai pour les "moteurs auxiliaires à vitesse constante"

Cycle d'essai du type D2	Vitesse	100%	100%	100%	100%	100%
	Puissance	100%	75%	50%	25%	10%
	Coefficient de pondération	0,05	0,25	0,3	0,3	0,1

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Cycle d'essai pour les "moteurs auxiliaires à vitesse variable, à charge variable"

Cycle d'essai du type C1	Vitesse	Vitesse nominale				Vitesse intermédiaire			Ralenti
	Couple %	100%	75%	50%	10%	100%	75%	50%	0%
	Coefficient de pondération	0,15	0,15	0,15	0,1	0,1	0,1	0,1	0,15

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APPENDICE III

CRITÈRES ET PROCÉDURES POUR LA DÉSIGNATION DE ZONES DE CONTRÔLE DES ÉMISSIONS DE SOx
(Règle 14)

1 OBJECTIFS

1.1 Le présent appendice a pour objet de définir les critères et procédures applicables à la désignation de zones de contrôle des émissions de SOx. La désignation de zones de contrôle des émissions de SOx a pour but de prévenir, réduire et contrôler la pollution de l'atmosphère due aux émissions de SOx provenant des navires et les effets préjudiciables que ces émissions ont sur les zones terrestres et maritimes.

1.2 L'Organisation devrait envisager l'adoption d'une zone de contrôle des émissions de SOx si la preuve lui est fournie qu'il est nécessaire d'y prévenir, réduire et contrôler la pollution de l'atmosphère due aux émissions de SOx provenant des navires.

2 CRITÈRES APPLICABLES À LA PROPOSITION DE DÉSIGNATION D'UNE ZONE DE CONTRÔLE DES ÉMISSIONS DE SOx

2.1 Seuls les États contractants au Protocole de 1997 peuvent soumettre à l'Organisation une proposition visant à désigner une zone de contrôle des émissions de SOx. Lorsque deux ou plusieurs États contractants ont des intérêts communs dans une zone particulière, ils devraient formuler une proposition coordonnée.

2.2 La proposition doit comprendre :

.1 une délimitation précise de la zone dans laquelle il est proposé de contrôler les émissions de SOx provenant des navires, assortie d'une carte de référence sur laquelle la zone est indiquée;

.2 une description des zones terrestres et maritimes susceptibles d'être affectées par les émissions de SOx provenant des navires;

.3 une évaluation qui montre que les émissions de SOx provenant des navires exploités dans la zone où il est proposé de contrôler ces émissions contribuent à la pollution de l'atmosphère par les SOx, y compris aux retombées de SOx, et qui indique les effets préjudiciables qu'elles ont sur les zones terrestres et maritimes considérées. Cette évaluation doit comprendre une description des effets que les émissions de SOx ont sur les écosystèmes terrestres et aquatiques, les zones de productivité naturelle, les habitats critiques, la qualité de l'eau, la santé de l'homme et les zones importantes sur les plans culturel et scientifique, s'il y a lieu. Les sources des données pertinentes, y compris les méthodes utilisées, doivent être mentionnées;

.4 tout renseignement utile au sujet des conditions météorologiques dans la zone où il est proposé de contrôler les émissions de SOx, ainsi que dans les zones terrestres et maritimes menacées, concernant en particulier les caractéristiques des vents dominants, ou au sujet des conditions topographiques, géologiques, océanographiques,

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morphologiques ou autres qui risquent d'entraîner une augmentation probable du degré local de pollution de l'atmosphère ou des niveaux d'acidification;

.5 la nature du trafic maritime dans la zone où il est proposé de contrôler les émissions de SOx, y compris les courants de circulation et la densité du trafic, et

.6 une description des mesures de contrôle que la ou les États contractants qui présentent la proposition ont prises pour remédier aux émissions de SOx d'origine tellurique affectant la zone menacée et qui sont en place et déjà appliquées, ainsi que de celles qu'il est envisagé d'adopter en application de la règle 14 de l'Annexe VI de la présente Convention.

2.3 Les limites géographiques d'une zone de contrôle des émissions de SOx seront établies sur la base des critères pertinents énoncés ci-dessus, y compris les émissions et les retombées de SOx provenant des navires qui naviguent dans la zone proposée, les courants de circulation et la densité du trafic, ainsi que les caractéristiques des vents dominants.

2.4 Toute proposition visant à désigner une zone donnée comme zone de contrôle des émissions de SOx devrait être soumise à l'Organisation conformément aux règles et procédures établies par celle-ci.

3 PROCÉDURES D'ÉVALUATION ET D'ADOPTION PAR L'ORGANISATION DE ZONES DE CONTRÔLE DES ÉMISSIONS DE SOx

3.1 L'Organisation doit examiner chaque proposition qui lui est soumise par un ou plusieurs États contractants.

3.2 Une zone de contrôle des émissions de SOx doit être désignée comme telle par le biais d'un amendement à la présente Annexe qui est examiné, adopté et mis en vigueur conformément à l'article 16 de la présente Convention.

3.3 Lorsqu'elle évalue la proposition, l'Organisation doit tenir compte des critères qui doivent être inclus dans chaque proposition soumise pour adoption et qui sont énoncés à la section 2 ci-dessus, ainsi que des coûts relatifs des mesures visant à réduire les retombées de soufre provenant des navires par rapport à ceux des mesures de contrôle à terre. Il faudrait tenir compte également des conséquences que ces mesures auraient, sur le plan économique, pour les navires qui effectuent des voyages internationaux.

4 FONCTIONNEMENT DES ZONES DE CONTRÔLE DES ÉMISSIONS DE SOx

4.1 Les Parties dont des navires naviguent dans la zone sont encouragées à faire part à l'Organisation de toutes les préoccupations qu'elles pourraient avoir au sujet du fonctionnement de la zone.

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APPENDICE IV

APPROBATION PAR TYPE ET LIMITES D'EXPLOITATION DES INCINÉRATEURS DE BORD
(Règle 16)

1) Les incinérateurs de bord décrits à la règle 16 2) qui se trouvent à bord doivent être munis d'un certificat OMI d'approbation par type pour chaque incinérateur. Pour obtenir un tel certificat, l'incinérateur doit être conçu et construit conformément à une norme approuvée telle que décrite à la règle 16 2). Il faut soumettre chaque modèle, à l'usine ou dans un établissement d'essai agréé, à un essai de fonctionnement spécifié pour l'approbation par type, et cela, sous la responsabilité de l'Administration, en se fondant sur la spécification normalisée combustible/déchets ci-après, pour déterminer si l'incinérateur fonctionne dans les limites spécifiées au paragraphe 2) du présent appendice :

Boues d'hydrocarbures composées de :	75 % de BOUES DE FUEL-OIL LOURD; 5 % d'HUILES DE GRAISSAGE USÉES; et 20 % d'EAU ÉMULSIFIÉE.
Déchets solides composés de :	50 % de déchets alimentaires 50 % d'ordures contenant approximativement 30 % de papier, 40 % de carton, 10 % de chiffons, 20 % de matières plastiques Ce mélange aura jusqu'à 50 % d'eau et 7 % de solides incombustibles

2) Les incinérateurs décrits à la règle 16 2) doivent fonctionner dans les limites indiquées ci-dessous :

Quantité de O_2 dans la chambre de combustion :	6 - 12 %
Quantité maximale de CO dans les gaz de combustion (moyenne) :	200 mg/MJ
Nombre maximal de la suie (moyenne) :	BACHARACH 3 ou RINGELMAN 1 (opacité de 20 %) (Un nombre de suie plus élevé n'est acceptable que pendant de très brèves périodes, par exemple pendant la mise en marche)
Éléments non brûlés dans les cendres résiduelles :	Maximum : 10 % en poids
Intervalle de température des gaz à la sortie de la chambre de combustion :	850-1200° C.

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APPENDICE V

RENSEIGNEMENTS DEVANT FIGURER DANS LA NOTE DE LIVRAISON DE SOUTES
(Règle 18 3))

Nom et numéro OMI du navire destinataire

Port

Date à laquelle la livraison commence

Nom, adresse et numéro de téléphone du fournisseur du fuel-oil pour moteurs marins

Nom(s) du produit

Quantité en tonnes métriques

Densité à 15°C, en kg/m^3

Teneur en soufre (% m/m)

Déclaration signée par le représentant du fournisseur du fuel-oil attestant que le fuel-oil livré est conforme à la règle 14 1) ou 14 4) a) et à la règle 18 1) de la présente Annexe

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PROTOCOLO DE 1997 QUE ENMIENDA EL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973, MODIFICADO POR EL PROTOCOLO DE 1978

LAS PARTES EN EL PRESENTE PROTOCOLO,

SIENDO Partes en el Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973,

RECONOCIENDO la necesidad de prevenir y contener la contaminación atmosférica ocasionada por los buques,

RECORDANDO el Principio 15 de la Declaración de Río sobre el Medio Ambiente y el Desarrollo a favor de la aplicación del planteamiento preventivo,

CONSIDERANDO que el modo mas eficaz de lograr este objetivo es la conclusión de un Protocolo de 1997 que enmiende el Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978,

CONVIENEN:

Artículo 1

Instrumento que se enmienda

El presente Protocolo enmienda el Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978 (en adelante llamado "el Convenio").

Artículo 2

Adición del Anexo VI al Convenio

Se añade el Anexo VI, titulado "Reglas para prevenir la contaminación atmosférica ocasionada por los buques", cuyo texto figura en el Anexo del presente Protocolo.

Artículo 3

Obligaciones generales

1 El Convenio y el presente Protocolo, respecto de las Partes en el presente Protocolo, se leerán e interpretarán conjuntamente como un instrumento único.

2 Toda referencia al presente Protocolo supondrá también una referencia al Anexo.

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Artículo 4

Procedimiento de enmienda

Cuando se aplique el artículo 16 del Convenio respecto de una enmienda al Anexo VI y sus apéndices, se considerará que la referencia a "una Parte en el Convenio" corresponde a una Parte obligada por dicho Anexo.

CLÁUSULAS FINALES

Artículo 5

Firma, ratificación, aceptación, aprobación y adhesión

1 El presente Protocolo estará abierto a la firma en la sede de la Organización Marítima Internacional (en adelante llamada "la Organización") desde el 1 de enero de 1998 hasta el 31 de diciembre de 1998 y después de ese plazo seguirá abierto a la adhesión. Únicamente los Estados Contratantes del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante llamado "el Protocolo de 1978") podrán constituirse en Partes en el presente Protocolo mediante

a) firma sin reserva en cuanto a ratificación, aceptación o aprobación, o

b) firma a reserva de ratificación, aceptación o aprobación, seguida de ratificación, aceptación o aprobación, o

c) adhesión.

2 La ratificación, aceptación, aprobación o adhesión se efectuará depositando ante el Secretario General de la Organización (en adelante llamado "el Secretario General") el instrumento que proceda.

Artículo 6

Entrada en vigor

1 El presente Protocolo entrará en vigor 12 meses después de la fecha en que por lo menos 15 Estados cuyas flotas mercantes combinadas representan no menos del 50% del tonelaje bruto de la marina mercante mundial, se hayan constituido en Partes del mismo de conformidad con lo prescrito en el artículo 5 del presente Protocolo.

2 Todo instrumento de ratificación, aceptación, aprobación o adhesión depositado con posterioridad a la fecha de entrada en vigor del presente Protocolo adquirirá efectividad tres meses después de la fecha en que fue depositado.

3 Después de la fecha en la que se considere aceptada una enmienda al actual Protocolo de conformidad con lo prescrito en el artículo 16 del Convenio, todo instrumento de ratificación, aceptación, aprobación o adhesión depositado se aplicará al presente Protocolo enmendado.

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Artículo 7

Denuncia

1 El presente Protocolo podrá ser denunciado por una Parte en el presente Protocolo en cualquier momento posterior a la expiración de un plazo de cinco años a contar de la fecha en que el Protocolo haya entrado en vigor para dicha Parte.

2 La denuncia se efectuará depositando un instrumento de denuncia ante el Secretario General.

3 La denuncia surtirá efecto transcurridos 12 meses a partir de la recepción de la notificación por el Secretario General, o después de la expiración de cualquier otro plazo más largo que se fije en la notificación.

4 Se considerará que la denuncia del Protocolo de 1978, de conformidad con el artículo VII de mismo, incluye la denuncia del presente Protocolo, de conformidad con el presente artículo. Esta denuncia surtirá efecto en la fecha en que surta efecto la denuncia del Protocolo de 1978, de conformidad con el artículo VII de dicho Protocolo.

Artículo 8

Depositario

1 El presente Protocolo será depositado ante el Secretario General (en adelante llamado "el Depositario").

2 El Depositario:

a) informará a todos los Estados que hayan firmado el presente Protocolo o se hayan adherido al mismo, de:

i) toda nueva firma o depósito de un instrumento de ratificación, aceptación, aprobación o adhesión, así como de la fecha en que se produzcan;

ii) la fecha de entrada en vigor del presente Protocolo; y

iii) todo depósito de un instrumento de denuncia del presente Protocolo y de la fecha en que fue recibido dicho instrumento, así como de la fecha en que la denuncia surta efecto; y

b) remitirá ejemplares auténticos certificados del presente Protocolo a todos los Estados que hayan firmado el Protocolo o se hayan adherido al mismo.

3 Tan pronto como el presente Protocolo entre en vigor, el Depositario remitirá a la Secretaría de las Naciones Unidas una copia auténtica certificada del mismo para que se registre y publique, conforme a lo dispuesto en el artículo 102 de la Carta de las Naciones Unidas.

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Artículo 9

Idiomas

El presente Protocolo está redactado en un solo ejemplar en los idiomas árabe, chino, español, francés, inglés y ruso, y cada uno de los textos tendrá la misma autenticidad.

EN FE DE LO CUAL los infrascritos, debidamente autorizados al efecto por sus respectivos gobiernos, han firmado el presente Protocolo.

HECHO EN LONDRES, el día veintiséis de septiembre de mil novecientos noventa y siete.

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ANEXO

ADICIÓN DEL ANEXO VI AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973, MODIFICADO POR EL PROTOCOLO DE 1978

Se añade el nuevo Anexo VI después del Anexo V existente:

"ANEXO VI

REGLAS PARA PREVENIR LA CONTAMINACIÓN ATMOSFÉRICA OCASIONADA POR LOS BUQUES

CAPÍTULO I - GENERALIDADES

Regla 1

Ámbito de aplicación

Las disposiciones del presente anexo se aplicarán a todos los buques, salvo que se disponga expresamente otra cosa en las reglas 3, 5, 6, 13, 15, 18 y 19 del presente anexo.

Regla 2

Definiciones

A los efectos del presente anexo

1) Por "cuya construcción se halle en una fase equivalente" se entiende la fase en que:

a) comienza la construcción que puede identificarse como propia de un buque concreto; y

b) ha comenzado el montaje del buque de que se trate, utilizando al menos 50 toneladas del total estimado del material estructural o un 1% de dicho total, si este segundo valor es menor.

2) Por "alimentación continua" se entiende el proceso mediante el cual se alimenta de desechos una cámara de combustión sin intervención humana, estando el incinerador en condiciones de funcionamiento normal, con la temperatura de trabajo de la cámara de combustión entre 850°C y 1200°C.

3) Por "emisión" se entiende toda liberación a la atmósfera o al mar por los buques de sustancias sometidas a control en virtud del presente anexo.

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4) Por "nuevas instalaciones", en relación con la regla 12 del presente anexo, se entiende la instalación en un buque de sistemas y equipo, incluidas las nuevas unidades portátiles de extinción de incendios, aislamiento u otros materiales después de la fecha en que el presente anexo entre en vigor, pero no la reparación o recarga de sistemas y equipo, aislamiento y otros materiales previamente instalados, ni la recarga de las unidades portátiles de extinción de incendios.

5) Por "Código Técnico sobre los NO_x" se entiende el Código técnico relativo a las emisiones de óxidos de nitrógeno de los motores diesel marinos, aprobado mediante la resolución 2 de la Conferencia, con las enmiendas que introduzca la Organización, a condición de que dichas enmiendas se aprueben y entren en vigor de conformidad con lo dispuesto en el artículo 16 del Convenio acerca de los procedimientos de enmienda aplicables a un apéndice de un anexo.

6) Por "sustancias que agotan la capa de ozono" se entiende las sustancias controladas definidas en el párrafo 4 del artículo 1 del Protocolo de Montreal relativo a las sustancias que agotan la capa de ozono, de 1987, que figuran en los anexos A, B, C y E de dicho Protocolo, en vigor en el momento de aplicar o interpretar el presente anexo.

A bordo de los buques puede haber, sin que esta lista sea exhaustiva, las siguientes "sustancias que agotan la capa de ozono":

Halón 1211 Bromoclorodifluorometano
Halón 1301 Bromotrifluorometano
Halón 2402 1,2-Dibromo-1,1,2,2-tetrafluoroetano (también denominado Halón 114B2)
CFC-11 Triclorofluorometano
CFC-12 Diclorodifluorometano
CFC-113 1,1,2-Tricloro-1,2,2-trifluoroetano
CFC-114 1,2-Dicloro-1,1,2,2-tetrafluoroetano
CFC-115 Cloropentafluoroetano

7) Por "fangos oleosos" se entiende todo fango proveniente de los separadores de combustible o aceite lubricante, los desechos de aceite lubricante de las máquinas principales o auxiliares y los desechos oleosos de los separadores de aguas de sentina, el equipo filtrador de hidrocarburos o las bandejas de goteo.

8) Por "incineración a bordo" se entiende la incineración de desechos u otras materias a bordo de un buque si dichos desechos u otras materias se han producido durante la explotación normal de dicho buque.

9) Por "incinerador de a bordo" se entiende la instalación proyectada con la finalidad principal de incinerar a bordo.

10) Por "buque construido" se entiende todo buque cuya quilla haya sido colocada o cuya construcción se halle en una fase equivalente.

11) Por "zona de control de las emisiones de SO_x" se entiende una zona en la que es necesario adoptar medidas especiales de carácter obligatorio para prevenir, reducir y contener la contaminación atmosférica por SO_x y sus consiguientes efectos negativos en zonas terrestres y marítimas. Son zonas de control de las emisiones de SO_x las enumeradas en la regla 14 del presente anexo.

12) Por "buque tanque" se entiende un petrolero definido en el párrafo 4) de la regla 1 del Anexo I o un buque tanque químiquero definido en el párrafo 1) de la regla 1 del Anexo II del presente Convenio.

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13) Por "Protocolo de 1997" se entiende el Protocolo de 1997 que enmienda el Convenio para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978.

Regla 3

Excepciones generales

Las reglas del presente anexo no se aplicarán:

a) a las emisiones necesarias para proteger la seguridad del buque o salvar vidas en el mar; ni

b) a las emisiones resultantes de averías sufridas por un buque o por su equipo

i) siempre que después de producirse la avería o de descubrirse la emisión se hayan tomado todas las precauciones razonables para prevenir o reducir al mínimo tal emisión; y

ii) salvo que el propietario o el capitán hayan actuado ya sea con la intención de causar la avería, o con imprudencia temeraria y a sabiendas de que probablemente se produciría una avería.

Regla 4

Equivalentes

1) La Administración podrá autorizar a bordo de un buque accesorios, materiales, dispositivos o aparatos en lugar de los prescritos en el presente anexo, si tales accesorios, materiales, dispositivos o aparatos son por lo menos tan eficaces como los prescritos en el presente anexo.

2) La Administración que autorice accesorios, materiales, dispositivos o aparatos en lugar de los prescritos en el presente anexo comunicará a la Organización los pormenores de los mismos a fin de que ésta los notifique a las Partes en el presente Convenio para su información y para que tomen las medidas que puedan resultar oportunas.

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CAPÍTULO II - RECONOCIMIENTO, CERTIFICACIÓN Y MEDIOS DE CONTROL

Regla 5

Reconocimientos e inspecciones

1) Todo buque de arqueo bruto igual o superior a 400 y todas las torres de perforación y otras plataformas, fijas o flotantes, serán objeto de los reconocimientos que se especifican a continuación:

a) un reconocimiento inicial antes de que el buque entre en servicio o de que se expida por primera vez el certificado prescrito en la regla 6 del presente anexo. Este reconocimiento se realizará de modo que garantice que el equipo, los sistemas, los accesorios, las instalaciones y los materiales cumplen plenamente las prescripciones aplicables del presente anexo;

b) reconocimientos periódicos a intervalos especificados por la Administración, pero que no excederán de cinco años, los cuales se realizarán de modo que garanticen que el equipo, los sistemas, los accesorios, las instalaciones y los materiales cumplen plenamente las prescripciones del presente anexo; y

c) un reconocimiento intermedio, como mínimo, durante el periodo de validez del certificado, que se realizará de modo que garantice que el equipo y las instalaciones cumplen plenamente las prescripciones del presente anexo y están en buen estado de funcionamiento. Cuando se efectúe solamente un reconocimiento intermedio durante uno de los periodos de validez del certificado, y cuando el periodo de validez del certificado sea superior a dos años y medio, dicho reconocimiento se efectuará no más de seis meses antes ni más de seis meses después de transcurrido la mitad del periodo de validez del certificado. Estos reconocimientos intermedios se consignarán en el certificado expedido en virtud de la regla 6 del presente anexo.

2) En el caso de los buques de arqueo bruto inferior a 400, la Administración podrá establecer las medidas pertinentes para que se cumplan las disposiciones aplicables del presente anexo.

3) El reconocimiento de buques, por lo que respecta a la aplicación de lo prescrito en el presente anexo, será realizado por funcionarios de la Administración. No obstante, la Administración podrá confiar los reconocimientos a inspectores nombrados al efecto o a organizaciones reconocidas por ella. Tales organizaciones cumplirán las Directrices aprobadas por la Organización. En todos los casos, la Administración interesada garantizará plenamente la integridad y eficacia del reconocimiento.

4) El reconocimiento de los motores y del equipo, para determinar si cumplen lo dispuesto en la regla 13 del presente anexo, se realizará de conformidad con lo dispuesto en el Código Técnico sobre los NO_x.

5) La Administración tomará disposiciones para que, durante el periodo de validez del certificado se realicen inspecciones fuera de programa. Tales inspecciones garantizarán que el equipo continúa siendo satisfactorio en todos los aspectos para el servicio al que está destinado. Podrán efectuar las inspecciones funcionarios del propio servicio de la Administración, inspectores nombrados a tal efecto, organizaciones reconocidas, u otras Partes a petición de la Administración. Cuando la Administración, en virtud de lo dispuesto en el párrafo 1) de la presente regla, preceptue la realización de reconocimientos anuales obligatorios, no serán obligatorias las mencionadas inspecciones fuera de programa.

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6) Cuando el inspector nombrado o la organización reconocida dictaminen que el estado del equipo no corresponde en lo esencial con los pormenores del certificado, el inspector o la organización harán que se tomen medidas correctivas y, a su debido tiempo, notificarán esto a la Administración. Si no se toman dichas medidas correctivas, la Administracion retirará el certificado. Cuando el buque se encuentre en un puerto de otra Parte, también se dará notificación inmediata a las autoridades competentes del Estado rector del puerto. Cuando un funcionario de la Administración, un inspector nombrado o una organización reconocida hayan informado con la oportuna notificación a las autoridades competentes del Estado rector del puerto, el gobierno de dicho Estado prestará al funcionario, inspector u organización mencionados toda la asistencia necesaria para el cumplimiento de las obligaciones impuestas por la presente regla.

7) Se mantendrá el equipo de modo que se ajuste a las disposiciones del presente anexo y no se efectuará ningún cambio del equipo, los sistemas, los accesorios, las instalaciones o los materiales que fueron objeto del reconocimiento, sin la autorización expresa de la Administracion. Se permitirá la simple sustitución de dicho equipo o accesorios por equipo y accesorios que se ajusten a las disposiciones del presente anexo.

8) Siempre que un buque sufra un accidente o que se descubra algún defecto que afecte considerablemente a la eficacia o la integridad del equipo al que se aplique el presente anexo, el capitán o el propietario del buque informarán lo antes posible a la Administración, al inspector nombrado o a la organización reconocida, encargados de expedir el certificado pertinente.

Regla 6

Expedición del Certificado internacional de prevención de la contaminación atmosférica

1) Se expedirá un Certificado internacional de prevención de la contaminación atmosférica, tras un reconocimiento efectuado de conformidad con las disposiciones de la regla 5 del presente anexo:

a) a todo buque de arqueo bruto igual o superior a 400, que realice viajes a puertos o terminales mar adentro sometidos a la jurisdicción de otras Partes, y

b) a las plataformas y torres de perforación que realicen viajes a aguas sometidas a la soberanía o jurisdicción de otras Partes en el Protocolo de 1997.

2) A los buques construidos antes de la fecha de entrada en vigor del Protocolo de 1997 se les expedirá un Certificado internacional de prevención de la contaminación atmosférica conforme a lo dispuesto en el párrafo 1) de la presente regla, en la primera entrada programada en dique seco posterior a la entrada en vigor del presente anexo, a más tardar, y en ningún caso más de tres años después de la entrada en vigor del Protocolo de 1997.

3) Tal certificado será expedido por la Administración o por cualquier persona u organización debidamente autorizada por ella. En cualquier caso, la Administración asume la total responsabilidad del certificado.

Regla 7

Expedición del certificado por otro gobierno

1) El Gobierno de una Parte en el Protocolo de 1997 podrá, a requerimiento de la Administración, hacer que un buque sea objeto de reconocimiento y, si estima que cumple las disposiciones del

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presente anexo, expedir o autorizar la expedición a ese buque de un Certificado internacional de prevención de la contaminación atmosférica, de conformidad con el presente anexo.

2) Se remitirá lo antes posible a la Administración que haya pedido el reconocimiento una copia del certificado y otra del informe relativo al reconocimiento.

3) Se hará constar en el certificado que ha sido expedido a petición de la Administración y éste tendrá la misma fuerza y gozará del mismo reconocimiento que el expedido en virtud de la regla 6 del presente anexo.

4) No se expedirá el Certificado internacional de prevención de la contaminación atmosférica a ningún buque con derecho a enarbolar el pabellón de un Estado que no sea Parte en el Protocolo de 1997.

Regla 8

Modelo del certificado

El Certificado internacional de prevención de la contaminación atmosférica se redactará en un idioma oficial del país que lo expida, conforme al modelo que figura en el apéndice I del presente anexo. Si el idioma utilizado no es el español, el francés o el inglés, el texto incluirá una traducción a uno de estos tres idiomas.

Regla 9

Duración y validez del certificado

1) El Certificado internacional de prevención de la contaminación atmosférica se expedirá para un período que especificará la Administración y que no excederá de cinco años contados a partir de la fecha de expedición.

2) No se permitirá prórroga alguna del período de validez de cinco años del Certificado internacional de prevención de la contaminación atmosférica salvo que sea conforme a lo dispuesto en el párrafo 3).

3) Si en la fecha de expiración del Certificado internacional de prevención de la contaminación atmosférica el buque no se encuentra en un puerto del Estado cuyo pabellón tenga derecho a enarbolar o en el que haya de ser objeto de reconocimiento, la Administración podrá prorrogar la validez del certificado por un período que no exceda de cinco meses. Esa prórroga sólo se concederá con el fin de que el buque pueda seguir su viaje y llegar al Estado cuyo pabellón tiene derecho a enarbolar o en el que haya de ser objeto de reconocimiento, y sólo así sólo en caso de que se estime oportuno y razonable hacerlo. El buque al que se haya concedido tal prórroga no estará autorizado, cuando llegue al Estado cuyo pabellón tenga derecho a enarbolar o al puerto en que haya de ser objeto de reconocimiento, a salir de ese puerto o Estado sin haber obtenido previamente un nuevo Certificado internacional de prevención de la contaminación atmosférica.

4) El Certificado internacional de prevención de la contaminación atmosférica perderá su validez en cualquiera de las circunstancias siguientes:

a) si las inspecciones y reconocimientos no se han efectuado dentro de los plazos especificados en la regla 5 del presente anexo;

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b) si se efectúan reformas considerables del equipo, los sistemas, los accesorios, las instalaciones o los materiales a los cuales se aplica el presente anexo sin autorización expresa de la Administración, salvo que se trate de la simple sustitución de tal equipo o accesorios por equipo o accesorios que se ajusten a las prescripciones del presente anexo. A los efectos de la regla 13, el concepto de reforma considerable incluirá todo cambio o ajuste del sistema, los accesorios o la instalación de un motor diesel como resultado de los cuales dicho motor deje de cumplir los límites relativos a la emisión de óxidos de nitrógeno que le corresponden, o

c) cuando el buque cambie su pabellón por el de otro Estado. Sólo se expedirá un nuevo certificado cuando el gobierno que lo expida se haya cerciorado plenamente de que el buque cumple todo lo prescrito en la regla 5 del presente anexo. En el caso de un cambio de pabellón entre Partes, el Gobierno de la Parte cuyo pabellón tenía antes derecho a enarbolar el buque transmitirá lo antes posible a la Administración de la otra Parte, previa petición de ésta cursada en un plazo de tres meses después de efectuado el cambio, una copia del Certificado internacional de prevención de la contaminación atmosférica que llevaba el buque antes del cambio y, si están disponibles, copias de los informes de los reconocimientos pertinentes.

Regla 10

Supervisión de las prescripciones operacionales por el Estado rector del puerto

1) Un buque que se encuentre en un puerto o en un terminal mar adentro sometido a la jurisdicción de otra Parte en el Protocolo de 1997 podrá ser objeto de una inspección por funcionarios debidamente autorizados por dicha Parte en lo que respecta a las prescripciones operacionales del presente anexo, si existen motivos fundados para pensar que el capitán o la tripulación no están familiarizados con los procedimientos esenciales de a bordo relativos a la prevención de la contaminación atmosférica ocasionada por los buques.

2) En las circunstancias indicadas en el párrafo 1) de la presente regla, la Parte interesada tomará medidas para garantizar que el buque no se haga a la mar hasta que la situación se haya remediado conforme a lo prescrito en el presente anexo.

3) Los procedimientos relativos a la supervisión por el Estado rector del puerto prescritos en el artículo 5 del presente Convenio se aplicarán a la presente regla.

4) Nada de lo dispuesto en la presente regla se interpretará como una limitación de los derechos y obligaciones de una Parte que supervise las prescripciones operacionales específicamente previstas en el presente Convenio.

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Regla 11

Detección de transgresiones y cumplimiento

1) Las Partes en el presente anexo cooperarán en toda gestión que conduzca a la detección de las transgresiones y al cumplimiento de las disposiciones del mismo utilizando cualquier medida apropiada y practicable de detección y de vigilancia ambiental, los procedimientos adecuados de notificación y el acopio de pruebas.

2) Todo buque al que se aplique el presente anexo puede ser objeto de inspección, en cualquier puerto o terminal mar adentro de una Parte, por los funcionarios que nombre o autorice dicha Parte a fin de verificar si el buque ha emitido alguna de las sustancias a las que se aplica el presente anexo transgrediendo lo dispuesto en el mismo. Si la inspección indica que hubo transgresión del presente anexo se enviará informe a la Administración para que tome las medidas oportunas.

3) Cualquier Parte facilitará a la Administración pruebas, si las hubiere, de que un buque ha emitido alguna de las sustancias a las que se aplica el presente anexo, transgrediendo lo dispuesto en el mismo. Cuando sea posible, la autoridad competente de dicha Parte notificará al capitán del buque la transgresión que se le imputa.

4) Al recibir tales pruebas, la Administración investigará el asunto y podrá solicitar de la otra Parte que le facilite más y mejores pruebas de la presunta transgresión. Si la Administración estima que hay pruebas suficientes para incoar un procedimiento respecto a la presunta transgresión, hará que se inicie tal procedimiento lo antes posible de conformidad con su legislación. Esa Administración informará inmediatamente a la Parte que haya notificado la presunta transgresión, y a la Organización, de las medidas que se hayan tomado.

5) Toda Parte podrá asimismo proceder a la inspección de un buque al que sea de aplicación el presente anexo cuando el buque entre en los puertos o terminales mar adentro bajo su jurisdicción, si ha recibido de cualquier otra Parte una solicitud de investigación junto con pruebas suficientes de que ese buque ha emitido en cualquier lugar alguna de las sustancias a las que se aplica el presente anexo transgrediendo lo dispuesto en el mismo. El informe de la investigación se transmitirá tanto a la Parte que la solicitó como a la Administración, a fin de que puedan tomarse las medidas oportunas con arreglo al presente Convenio.

6) Las normas de derecho internacional relativas a la prevención, reducción y control de la contaminación del medio marino causada por los buques, incluidas las relativas a ejecución y garantías, que estén en vigor en el momento de la aplicación o interpretación del presente anexo se aplicarán *mutatis mutandis* a las reglas y normas establecidas en el mismo.

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CAPÍTULO III - PRESCRIPCIONES PARA EL CONTROL DE LAS EMISIONES DE LOS BUQUES

Regla 12

Sustancias que agotan la capa de ozono

1) A reserva de lo dispuesto en la regla 3, se prohíbe toda emisión deliberada de sustancias que agotan la capa de ozono. Las emisiones deliberadas incluyen las que se producen durante el mantenimiento, la revisión, la reparación o el arrumbamiento de sistemas o equipo, excepto la liberación de cantidades mínimas durante la recuperación o el reciclaje de una sustancia que agota la capa de ozono. Las emisiones debidas a fugas de una sustancia que agota la capa de ozono, independientemente de que las fugas sean o no deliberadas, podrán ser reglamentadas por las Partes en el Protocolo de 1997.

2) Se prohibirán en todos los buques las instalaciones nuevas que contengan sustancias que agotan la capa de ozono, salvo las instalaciones nuevas que contengan hidroclorofluorocarbonos (HCFC), que se permitirán hasta el 1 de enero del año 2020.

3) Las sustancias a que se hace referencia en la presente regla y el equipo que contenga dichas sustancias se depositarán en instalaciones de recepción adecuadas cuando se retiren del buque.

Regla 13

Óxidos de nitrógeno (NO_x)

1) a) La presente regla se aplicará:

i) a todo motor diesel con una potencia de salida superior a 130 kW, instalado a bordo de un buque construido el 1 de enero del año 2000 o posteriormente, y

ii) a todo motor diesel con una potencia de salida superior a 130 kW, que haya sido objeto de una transformación importante el 1 de enero del año 2000 o posteriormente.

b) La presente regla no se aplicará:

i) a los motores diesel de emergencia, a los motores instalados a bordo de botes salvavidas ni a ningún dispositivo o equipo previsto para ser utilizado únicamente en caso de emergencia, o

ii) a los motores instalados a bordo de buques que estén solamente dedicados a realizar viajes dentro de las aguas sometidas a la soberanía o jurisdicción del Estado cuyo pabellón estén autorizados a enarbolar, a condición de que tales motores estén sometidos a otra medida de control de los NO_x establecida por la Administración.

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c) No obstante lo dispuesto en el apartado a) del presente párrafo, la Administración podrá permitir que la presente regla no se aplique a los motores diesel que se instalen en los buques construidos antes de la fecha de entrada en vigor del presente Protocolo o en los buques que sean objeto de una transformación importante antes de esa fecha, a condición de que éstos estén exclusivamente dedicados a realizar viajes hacia puertos o terminales mar adentro situados en el Estado cuyo pabellón están autorizados a enarbolar.

2) a) A los efectos de la presente regla, por "transformación importante" se entenderá la modificación de un motor mediante la cual:

i) se sustituye el motor por un motor nuevo construido el 1 de enero del año 2000 o posteriormente, o

ii) se realiza una modificación apreciable del motor, según se define ésta en el Código Técnico sobre los NO_x, o

iii) se aumenta la velocidad de régimen máxima continua del motor en más de un 10%.

b) La emisión de NO_x resultante de las modificaciones a las que se hace referencia en el apartado a) del presente párrafo se documentará de conformidad con lo dispuesto en el Código Técnico sobre los NO_x, con miras a su aprobación por la Administración.

3) a) A reserva de lo dispuesto en la regla 3 del presente anexo, se prohíbe el funcionamiento de todo motor diesel al que se aplique la presente regla, a menos que la emisión de óxidos de nitrógeno (calculada en forma de emisión total ponderada de NO_2) del motor se encuentre dentro de los límites que figuran a continuación:

i)	17,0 g/kWh	si n es inferior a 130 rpm;
ii)	$45,0 * n^{(-0,2)}$ g/kWh	si n es igual o superior a 130 rpm pero inferior a 2000 rpm;
iii)	9,8 g/kWh	si n es igual o superior a 2000 rpm;

donde: n = velocidad de régimen del motor (revoluciones por minuto del cigüeñal).

Cuando se use combustible compuesto por mezclas de hidrocarburos derivados del refinado de petróleo, los procedimientos de ensayo y los métodos de medición se ajustarán a lo dispuesto en el Código Técnico sobre los NO_x, teniendo en cuenta los ciclos de ensayo y los factores de ponderación que se indican en el apéndice V del presente anexo.

b) No obstante lo dispuesto en el apartado a) del presente párrafo, se permite el funcionamiento de un motor diesel si:

i) el motor consta de un sistema de limpieza de los gases de escape, aprobado por la Administración de conformidad con lo dispuesto en el Código Técnico sobre los NO_x, destinado a reducir las emisiones de NO_x del buque a los límites especificados en el apartado a), como mínimo, o

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ii) se utiliza cualquier otro método equivalente, aprobado por la Administración teniendo en cuenta las directrices pertinentes que elabore la Organización, con objeto de reducir las emisiones de NO_x del buque a los límites especificados en el apartado a) del presente párrafo, como mínimo.

Regla 14

Óxidos de azufre (SO_x)

Prescripciones generales

1) El contenido de azufre de todo fueloil utilizado a bordo de los buques no excederá del 4,5% masa/masa.

2) El contenido medio de azufre a escala mundial del fueloil residual suministrado para uso a bordo de los buques se vigilará teniendo en cuenta las directrices que elabore la Organización.

Prescripciones aplicables en las zonas de control de las emisiones de SO_x

3) A los efectos de la presente regla las zonas de control de las emisiones de SO_x incluirán:

a) la zona del mar Báltico definida en el apartado 1) b) de la regla 10 del Anexo I, y

b) cualquier otra zona marítima o portuaria designada por la Organización de conformidad con los criterios y procedimientos para la designación de zonas de control de las emisiones de SO_x, en lo que respecta a la prevención de la contaminación atmosférica ocasionada por los buques, que figuran en el apéndice II.

4) Mientras los buques se encuentren dentro de una zona de control de las emisiones de SO_x cumplirán al menos una de las siguientes condiciones:

a) el contenido de azufre del fueloil que se utiliza a bordo de los buques en una zona de control de las emisiones de SO_x no excede del 1,5% masa/masa.

b) se utiliza un sistema de limpieza de los gases de escape, aprobado por la Administración teniendo en cuenta las directrices que elabore la Organización, para reducir la cantidad total de las emisiones de óxidos de azufre del buque, incluidas las de los motores propulsores principales y auxiliares, a 6,0 g de SO_x/kWh o menos, calculada en forma de emisión total ponderada de dióxido de azufre. Los flujos de desechos procedentes de la utilización de dicho equipo no se descargarán en puertos cerrados o en estuarios, a menos que se pueda demostrar de forma detallada con documentos que tales flujos de desechos no tienen un efecto negativo en los ecosistemas de esos puertos, basándose en los criterios notificados por las autoridades del Estado rector del puerto a la Organización. La Organización notificará estos criterios a todas las Partes en el Convenio; o

c) se utiliza cualquier otro método o tecnología verificable y que se pueda hacer aplicar para reducir las emisiones de SO_x a un nivel equivalente al que se indica en el apartado b). Esos métodos deberán estar aprobados por la Administración teniendo en cuenta las directrices que elabore la Organización.

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5) El proveedor demostrará mediante la pertinente documentación, según lo prescrito en la regla 18 del presente anexo, el contenido de azufre del fueloil mencionado en el párrafo 1) y en el apartado 4) a) de la presente regla.

6) En los buques que utilicen fueloil de distintos tipos para cumplir lo prescrito en el apartado 4) a) de la presente regla, se preverá tiempo suficiente para limpiar todos los combustibles que tengan un contenido de azufre superior al 1,5% masa/masa del sistema de distribución de fueloil, antes de entrar en una zona de control de las emisiones de SO_x. Se indicarán en el libro registro prescrito por la Administración el volumen de fueloil con bajo contenido de azufre (igual o inferior al 1,5 %) de cada tanque, así como la fecha, la hora y la situación del buque cuando se llevó a cabo dicha operación.

7) Durante los doce meses siguientes a la entrada en vigor del presente Protocolo, o de una enmienda al presente Protocolo por la que se designe una zona específica de control de las emisiones de SO_x en virtud de lo dispuesto en el apartado 3) b) de la presente regla, los buques que penetren en una zona de control de las emisiones de SO_x mencionada en el apartado 3) a) de la presente regla o designada en virtud de lo dispuesto en el apartado 3) b) de la presente regla, estarán exentos de las prescripciones de los párrafos 4) y 6) de la presente regla y de las prescripciones del párrafo 5) de la presente regla en lo que respecta al apartado 4) a) de la misma.

Regla 15

Compuestos orgánicos volátiles

1) Si las emisiones de compuestos orgánicos volátiles (COV) procedentes de los buques tanque se reglamentan en los puertos o terminales sometidos a la jurisdicción de una Parte en el Protocolo de 1997, dicha reglamentación será conforme a lo dispuesto en la presente regla.

2) Toda Parte en el Protocolo de 1997 que designe puertos o terminales sometidos a su jurisdicción en que se vayan a reglamentar las emisiones de COV enviará una notificación a la Organización en la que se indicará el tamaño de los buques que se han de controlar, las cargas que requieren el empleo de sistemas de control de la emisión de vapores y la fecha de entrada en vigor de dicho control. La notificación se enviará por lo menos seis meses antes de dicha fecha de entrada en vigor.

3) El Gobierno de una Parte en el Protocolo de 1997 que designe puertos o terminales en los que se vayan a reglamentar las emisiones de COV procedentes de los buques tanque, garantizará que en los puertos y terminales designados existen sistemas de control de la emisión de vapores aprobados por él teniendo en cuenta las normas de seguridad elaboradas por la Organización y que tales sistemas funcionan en condiciones de seguridad y de modo que el buque no sufra una demora innecesaria.

4) La Organización distribuirá una lista de los puertos y terminales designados por las Partes en el Protocolo de 1997 a los demás Estados Miembros de la Organización, a efectos de información.

5) Todo buque tanque que pueda ser objeto de un control de la emisión de vapores conforme a lo dispuesto en el párrafo 2) de la presente regla estará provisto de un sistema de recogida de

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vapores aprobado por la Administración teniendo en cuenta las normas de seguridad elaboradas por la Organización, que se utilizará durante el embarque de las cargas pertinentes. Los terminales que hayan instalado sistemas de control de la emisión de vapores de conformidad con la presente regla podrán aceptar a los buques tanque existentes que no estén equipados con un sistema de recogida de vapores durante un período de tres años después de la fecha de entrada en vigor a que se hace referencia en el párrafo 2)

6) Esta regla se aplicará solamente a los gaseros cuando el tipo de sistema de carga y de contención permita la retención sin riesgos a bordo de los COV que no contienen metano o su retorno sin riesgos a tierra.

Regla 16

Incineración a bordo

1) A reserva de lo dispuesto en el párrafo 5), la incineración a bordo se permitirá solamente en un incinerador de a bordo.

2) a) Con la salvedad de lo dispuesto en el apartado b) del presente párrafo, todo incinerador que se instale a bordo de un buque a partir del 1 de enero del año 2000 cumplirá lo dispuesto en el apéndice IV del presente anexo. Cada incinerador será aprobado por la Administración teniendo en cuenta las especificaciones normalizadas para los incineradores de a bordo elaboradas por la Organización.

b) La Administración podrá permitir que se exima de la aplicación del apartado a) del presente párrafo a todo incinerador que se instale a bordo de un buque antes de la fecha de entrada en vigor del Protocolo de 1997, a condición de que el buque esté dedicado solamente a realizar viajes en aguas sometidas a la soberanía o jurisdicción del Estado cuyo pabellón está autorizado a enarbolar.

3) Nada de lo dispuesto en la presente regla afecta a la prohibición establecida en el Convenio sobre la prevención de la contaminación del mar por vertimiento de desechos y otras materias, 1972, enmendado, y su Protocolo de 1996, ni a otras prescripciones de dicho Convenio.

4) Se prohíbe la incineración a bordo de las siguientes sustancias:

a) residuos de las cargas enumeradas en los Anexos I, II y III del presente Convenio y los correspondientes materiales de embalaje o envase contaminados;

b) difenilos policlorados (PCB);

c) las basuras, según se definen éstas en el Anexo V del presente Convenio, que contengan metales pesados en concentraciones que no sean meras trazas; y

d) productos refinados del petróleo que contengan compuestos halogenados.

5) La incineración a bordo de lodos de aguas residuales y fangos de hidrocarburos producidos durante la explotación normal del buque también se podrá realizar en la planta generadora o caldera principal o auxiliar, aunque en este caso no se llevará a cabo dentro de puertos o estuarios.

6) Se prohíbe la incineración a bordo de cloruros de polivinilo (PVC), salvo en los incineradores de a bordo para los que haya expedido un certificado de homologación de la OMI.

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7) Todos los buques provistos de incineradores sujetos a lo dispuesto en la presente regla tendrán un manual de instrucciones del fabricante que especifique como hacer funcionar el incinerador dentro de los límites establecidos en el párrafo 2) del apendice IV del presente anexo.

8) El personal encargado del funcionamiento de un incinerador recibirá formación al respecto y podrá seguir las instrucciones dadas en el manual del fabricante

9) Será necesario vigilar en todo momento la temperatura de salida del gas de combustión y no se echarán desechos en un incinerador de alimentación continua cuando la temperatura esté por debajo de la temperatura mínima permitida de 850°C. Por lo que respecta a los incineradores de a bordo de carga discontinua, la unidad se proyectará de modo que en la cámara de combustión la temperatura alcance 600°C en los cinco minutos siguientes al encendido.

10) Nada de lo dispuesto en la presente regla impide desarrollar, instalar y utilizar otros dispositivos de tratamiento térmico de desechos a bordo que satisfagan las prescripciones de la presente regla o las superen.

Regla 17

Instalaciones de recepción

1) Los gobiernos de las Partes en el Protocolo de 1997 se comprometen a garantizar la provisión de instalaciones adecuadas que se ajusten a:

a) las necesidades de los buques que utilicen sus puertos de reparaciones para la recepción de sustancias que agotan la capa de ozono y el equipo que contenga dichas sustancias cuando éstos se retiren de los buques.

b) las necesidades de los buques que utilicen sus puertos, terminales o puertos de reparaciones para la recepción de los residuos de la limpieza de los gases de escape procedentes de un sistema de limpieza de los gases de escape aprobado, cuando la descarga en el medio marino de tales residuos no esté permitida en virtud de la regla 14 del presente anexo.

sin causar demoras innecesarias a los buques; y

c) la necesidad de medios de desguace para la recepción de sustancias que agotan la capa de ozono y del equipo que contiene tales sustancias cuando éstos se retiran de los buques.

2) Cada Parte en el Protocolo de 1997 notificará a la Organización, para que ésta lo comunique a sus Miembros, todos los casos en que las instalaciones previstas en cumplimiento de la presente regla no estén disponibles o en que se considere que son insuficientes.

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Regla 18

Calidad del fueloil

1) El fueloil para combustible que se entregue y utilice a bordo de los buques a los que se aplique el presente anexo se ajustará a las siguientes prescripciones:

a) a excepción de lo estipulado en el apartado b):

i) estará compuesto por mezclas de hidrocarburos derivados del refinado de petróleo. Esto no excluirá la posibilidad de incorporar pequeñas cantidades de aditivos con objeto de mejorar algunos aspectos de rendimiento;

ii) no contendrá ningún ácido inorgánico,

iii) no contendrá ninguna sustancia añadida ni desecho químico que:

1) comprometa la seguridad de los buques o afecte negativamente al rendimiento de los motores, o

2) sea perjudicial para el personal, o

3) contribuya en general a aumentar la contaminación atmosférica; y

b) el fueloil obtenido por métodos distintos del refinado de petróleo no deberá:

i) tener un contenido de azufre superior al estipulado en la regla 14 del presente anexo;

ii) ser causa de que el motor supere los límites de emisión de NO_x estipulados en el apartado 3) a) de la regla 13 del presente anexo;

iii) contener ningún ácido inorgánico;

iv) 1) comprometer la seguridad de los buques o afectar negativamente al rendimiento de las máquinas;

2) ser perjudicial para el personal, ni

3) contribuir en general a aumentar la contaminación atmosférica.

2) La presente regla no se aplica al carbón en su forma sólida ni a los combustibles nucleares.

3) En todo buque al que se apliquen las reglas 5 y 6 del presente anexo, los pormenores relativos al fueloil para combustible entregado y utilizado a bordo se registrarán en una nota de entrega de combustible que contendrá, como mínimo, la información especificada en el apéndice V del presente anexo.

4) La nota de entrega de combustible se conservará a bordo, en un lugar que permita inspeccionarla fácilmente en cualquier momento razonable. Se conservará durante un período de tres años a partir de la fecha en que se efectúe la entrega del combustible a bordo.

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5) a) La autoridad competente del Gobierno de una Parte en el Protocolo de 1997 podrá inspeccionar las notas de entrega de combustible a bordo de cualquier buque al que se aplique el presente anexo mientras el buque esté en uno de sus puertos o terminales mar adentro, podrá sacar copia de cada nota de entrega de combustible y podrá pedir al capitán o a la persona que esté a cargo del buque que certifique que cada una de esas copias es una copia auténtica de la correspondiente nota de entrega de combustible. La autoridad competente podrá verificar también el contenido de cada nota mediante consulta con el puerto en el que fue expedida.

b) Cuando, en virtud del presente párrafo, la autoridad competente inspeccione las notas de entrega de combustible y saque copias certificadas, lo hará con la mayor diligencia posible y sin causar demoras innecesarias al buque.

6) La nota de entrega de combustible irá acompañada de una muestra representativa del fueloil entregado, teniendo en cuenta las directrices que elabore la Organización. La muestra será sellada y firmada por el representante del proveedor y por el capitán o el oficial encargado de la operación de toma de combustible al concluirse ésta, y se conservará en el buque hasta que el fueloil se haya consumido en gran parte, y en cualquier caso durante un período no inferior a doce meses contados desde la fecha de entrega.

7) Las Partes en el Protocolo de 1997 se comprometen a hacer que las autoridades portuarias designadas por ellas:

a) mantengan un registro de los proveedores locales de combustible líquido;

b) exijan a los proveedores locales que faciliten la nota de entrega de combustible y la muestra prescritas en la presente regla con la certificación del proveedor de que el combustible se ajusta a lo prescrito en las reglas 14 y 18 del presente anexo;

c) exijan a los proveedores de combustible que conserven copias de las notas de entrega de combustible facilitadas a los buques durante tres años, como mínimo, de modo que el Estado rector del puerto pueda inspeccionarlas y verificarlas si es necesario;

d) tomen las medidas pertinentes contra los proveedores de combustible que hayan entregado combustible que no se ajuste a lo indicado en la nota de entrega de combustible;

e) informen a la Administración de los casos en que un buque haya recibido combustible que no se ajusta a lo prescrito en las reglas 14 ó 18 del presente anexo, y

f) informen a la Organización, para que ésta lo comunique a las Partes en el Protocolo de 1997, de todos los casos en que un proveedor de combustible no haya cumplido lo prescrito en las reglas 14 ó 18 del presente anexo.

8) Por lo que respecta a las inspecciones por el Estado rector del puerto realizadas por las Partes en el Protocolo de 1997, las Partes se comprometen además a:

a) informar a la Parte o al Estado que no sea Parte, bajo cuya jurisdicción se haya expedido la nota de entrega de combustible, de los casos de entrega de combustible no reglamentario, aportando todos los datos pertinentes, y

b) asegurarse de que se toman las medidas correctivas apropiadas para hacer que el combustible no reglamentario descubierto se ajuste a lo prescrito.

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Regla 19

Prescripciones aplicables a las plataformas y a las torres de perforación

1) A reserva de lo dispuesto en los párrafos 2) y 3) de la presente regla, las plataformas y las torres de perforación, fijas o flotantes, cumplirán las prescripciones del presente anexo.

2) Las emisiones resultantes directamente de la exploración, la explotación y el consiguiente tratamiento mar adentro de los recursos minerales de los fondos marinos quedan exentas del cumplimiento de las prescripciones del presente anexo, de conformidad con el inciso 3) b) ii) del artículo 2 del presente Convenio. Tales emisiones incluyen:

a) las emisiones procedentes de la incineración de sustancias resultantes única y directamente de la exploración, la explotación y el consiguiente tratamiento mar adentro de los recursos de los fondos marinos, incluidas, sin que la enumeración sea exhaustiva, la combustión de hidrocarburos en antorcha y la quema de sedimentos de perforación, lodos o fluidos de estimulación durante las operaciones de terminación y ensayo de los pozos, y la combustión en antorcha debida a circunstancias excepcionales;

b) el desprendimiento de gases y compuestos volátiles presentes en los fluidos y sedimentos de perforación;

c) las emisiones relacionadas única y directamente con el tratamiento, la manipulación o el almacenamiento de minerales de los fondos marinos, y

d) las emisiones de los motores diesel dedicados exclusivamente a la exploración, la explotación y el consiguiente tratamiento mar adentro de los recursos minerales de los fondos marinos.

3) Las prescripciones de la regla 18 del presente anexo no se aplicarán a la utilización de los hidrocarburos que se producen y utilizan ulteriormente *in situ* como combustible, cuando así lo apruebe la Administración.

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APÉNDICE I

Modelo de Certificado IAPP
(Regla 8)

CERTIFICADO INTERNACIONAL DE PREVENCIÓN DE LA CONTAMINACIÓN ATMOSFÉRICA

Expedido en virtud de lo dispuesto en el Protocolo de 1997 que enmienda el Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978, (en adelante llamado "el Convenio"), con la autoridad conferida por el Gobierno de:

. . . . . .
(nombre oficial completo del país)

por . . . . . .
(título oficial completo de la persona u organización competente autorizada en virtud de lo dispuesto en el Convenio)

Nombre del buque	Número o letras distintivos	Número IMO	Puerto de matrícula	Arqueo bruto

Tipo de buque: ☐ buque tanque
☐ otro tipo

SE CERTIFICA

1. que el buque ha sido objeto de reconocimiento, de conformidad con lo dispuesto en la regla 5 del Anexo VI del Convenio, y

2. que el reconocimiento ha puesto de manifiesto que el equipo, los sistemas, los accesorios, las instalaciones y los materiales cumplen plenamente las prescripciones aplicables del Anexo VI del Convenio.

El presente certificado es válido hasta el . . . . . .
a condición de que se realicen los reconocimientos prescritos en la regla 5 del Anexo VI del Convenio.

Expedido en . . . . . .
(lugar de expedición del certificado)

el . . . . . .
(fecha de expedición) *(firma del funcionario debidamente autorizado)*

(sello o estampilla de la autoridad)

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REFRENDO DE RECONOCIMIENTOS ANUALES E INTERMEDIOS

SE CERTIFICA que en el reconocimiento efectuado de conformidad con lo prescrito en la regla 5 del Anexo VI del Convenio, se ha comprobado que el buque cumple las disposiciones pertinentes del Convenio

Reconocimiento anual Firmado .....
(firma del funcionario debidamente autorizado)

Lugar .....

Fecha .....

(sello o estampilla de la autoridad)

Reconocimiento anual*/intermedio* Firmado .....
(firma del funcionario debidamente autorizado)

Lugar .....

Fecha .....

(sello o estampilla de la autoridad)

Reconocimiento anual*/intermedio* Firmado .....
(firma del funcionario debidamente autorizado)

Lugar .....

Fecha .....

(sello o estampilla de la autoridad)

Reconocimiento anual: Firmado .....
(firma del funcionario debidamente autorizado)

Lugar .....

Fecha .....

(sello o estampilla de la autoridad)

---

* Táchese según proceda

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Suplemento del Certificado internacional de prevención de la contaminación atmosférica (Certificado IAPP)

CUADERNILLO DE CONSTRUCCIÓN Y EQUIPO

Conforme a lo dispuesto en el Anexo VI del Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978, (en adelante llamado "el Convenio")

Notas:

1 El presente cuadernillo acompañará permanentemente al Certificado IAPP. El Certificado IAPP estará disponible a bordo del buque en todo momento.

2 Cuando el idioma utilizado en el cuadernillo original no sea el español, el francés o el inglés, se incluirá en el texto una traducción a uno de estos idiomas.

3 En las casillas se pondrá una cruz (x) si la respuesta es "sí" o "aplicable" y un guión (-) si la respuesta es "no" o "no aplicable", según corresponda.

4 A menos que se indique lo contrario, las reglas mencionadas en el presente cuadernillo son las reglas del Anexo VI del Convenio y las resoluciones o circulares son las aprobadas por la Organización Marítima Internacional.

1 Pormenores del buque

1.1 Nombre del buque .....

1.2 Número o letras distintivos .....

1.3 Número IMO .....

1.4 Puerto de matrícula .....

1.5 Arqueo bruto .....

1.6 Fecha en que se colocó la quilla o en que el buque se hallaba en una fase equivalente de construcción .....

1.7 Fecha en que comenzó la transformación importante del motor (si procede) (regla 13) .....

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2 Control de las emisiones de los buques

2.1 Sustancias que agotan la capa de ozono (regla 12)

2.1.1 Los siguientes sistemas y equipos de extinción de incendios que contienen halones pueden continuar en servicio ..... □

Sistema/equipo	Ubicación a bordo

2.1.2 Los siguientes sistemas y equipos que contienen CFC pueden continuar en servicio: ... □

.....

Sistema/equipo	Ubicación a bordo

2.1.3 Los siguientes sistemas que contienen hidroclorofluorocarburos (HCFC) instalados antes del 1 de enero del año 2020, pueden continuar en servicio ..... □

Sistema/equipo	Ubicación a bordo

2.2 Óxidos de nitrógeno (NO_x) (regla 13)

2.2.1 Los siguientes motores diesel con una potencia de salida superior a 130 kW, instalados en un buque construido el 1 de enero del año 2000 o posteriormente, se ajustan a las normas sobre emisiones del apartado 2.1.a) de la regla 13 de conformidad con lo dispuesto en el Código Técnico sobre los NO_x ..... □

Fabricante y modelo	Número de serie	Utilización	Potencia de salida (kW)	Velocidad de régimen (rpm)

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2.2.2 Los siguientes motores diesel, con una potencia de salida superior a 130 kW, que han sido objeto de una transformación importante, según la definición del párrafo 2) de la regla 13, el 1 de enero del año 2000 o posteriormente, se ajustan a las normas sobre emisiones del apartado 3) a) de la regla 13, de conformidad con lo dispuesto en el Código Técnico sobre los NO_x . . . . . ☐

Fabricante y modelo	Número de serie	Utilización	Potencia de salida (kW)	Velocidad de régimen (rpm)

2.2.3 Los siguientes motores diesel, con una potencia de salida superior a 130 kW e instalados en un buque construido el 1 de enero del año 2000 o posteriormente, o con una potencia de salida superior a 130 kW y que hayan sido objeto de una transformación importante según la definición del párrafo 2) de la regla 13, el 1 de enero del año 2000 o posteriormente, están dotados de un sistema de limpieza de los gases de escape o de otros métodos equivalentes, de conformidad con el apartado 3) b) de la regla 13 y con lo dispuesto en el Código Técnico sobre los NOX . . ☐

Fabricante y modelo	Número de serie	Utilización	Potencia de salida (kW)	Velocidad de régimen (rpm)

2.2.4 Los siguientes motores diesel, indicados en 2.2.1, 2.2.2 y 2.2.3 *supra* están dotados de dispositivos de vigilancia y registro de las emisiones de NO_x, de conformidad con lo dispuesto en el Código Técnico sobre los NO_x . . . . . ☐

Fabricante y modelo	Número de serie	Utilización	Potencia de salida (kW)	Velocidad de régimen (rpm)

2.3 Óxidos de azufre (SO_x) (regla 14)

2.3.1 Cuando se explota el buque dentro de una zona de control de las emisiones de SO_x especificada en el párrafo 3) de la regla 14, éste utiliza

.1 fueloil con un contenido de azufre que no excede del 1,5% masa/masa, según consta en las notas de entrega de combustible, o . . . . . ☐

.2 un sistema aprobado de limpieza de los gases de escape para reducir las emisiones de SO_x a menos de 6,0 g de SO_x/kWh, o . . . . . ☐

.3 otra técnica aprobada para reducir las emisiones de SO_x a menos de 6,0 g de SO_x/kWh . . . . . ☐

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2.4 Compuestos orgánicos volátiles (COV) (regla 15)

2.4.1 El buque tanque cuenta con un sistema de recogida del vapor, instalado y aprobado de conformidad con la circular MSC/Circ 585 ..... ☐

2.5 El buque tiene un incinerador.

.1 que cumple lo prescrito en la resolución MEPC.76(40) enmendada ..... ☐

.2 instalado antes del 1 de enero del año 2000 que no cumple lo prescrito en la resolución MEPC 76(40) enmendada ..... ☐

SE CERTIFICA que el presente cuadernillo es correcto en todos los aspectos.

Expedido en .....
(lugar de expedición del cuadernillo)

a .....
(fecha de expedición)

.....
(firma del funcionario debidamente autorizado que expide el cuadernillo)

(sello o estampilla de la autoridad)

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APÉNDICE II

CICLOS DE ENSAYO Y FACTORES DE PONDERACIÓN
(Regla 13)

Se deberían aplicar los siguientes ciclos de ensayo y factores de ponderación para verificar si los motores diesel marinos cumplen los límites relativos a los NO_x de conformidad con la regla 13 del presente anexo, utilizándose a tal efecto el procedimiento de ensayo y el método de cálculo que se especifican en el Código Técnico sobre los NO_x.

.1 Para motores marinos de velocidad constante, utilizados para la propulsión principal del buque, incluida la transmisión diesoleléctrica, se debería aplicar el ciclo de ensayo E2.
.2 Para grupos de motores con hélice de paso regulable se debería aplicar el ciclo de ensayo E2.
.3 Para motores auxiliares y principales adaptados a la demanda de la hélice se debería aplicar el ciclo de ensayo E3.
.4 Para motores auxiliares de velocidad constante se debería aplicar el ciclo de ensayo D2.
.5 Para motores auxiliares de carga y velocidad regulables no pertenecientes a las categorías anteriores se debería aplicar el ciclo de ensayo C1.

Ciclo de ensayo para "propulsión principal de velocidad constante" (incluidas la transmisión diesoleléctrica o las instalaciones de hélice de paso regulable)

Tipo de ciclo de ensayo E2	Velocidad	100%	100%	100%	100%
	Potencia	100%	75%	50%	25%
	Factor de ponderación	0,2	0,5	0,15	0,15

Ciclo de ensayo para "motores principales y auxiliares adaptados a la demanda de la hélice"

Tipo de ciclo de ensayo E3	Velocidad	100%	91%	80%	63%
	Potencia	100%	75%	50%	25%
	Factor de ponderación	0,2	0,5	0,15	0,15

«

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Ciclo de ensayo para "motores auxiliares de velocidad constante"

Tipo de ciclo de ensayo D2	Velocidad	100%	100%	100%	100%	100%
	Potencia	100%	75%	50%	25%	10%
	Factor de ponderación	0,05	0,25	0,3	0,3	0,1

Ciclo de ensayo para "motores auxiliares de carga y velocidad regulables"

Tipo de ciclo de ensayo C1	Velocidad	de régimen				intermedia			lenta
	Par %	100%	75%	50%	10%	100	75	50%	0%
	Factor de ponderación	0,15	0,15	0,15	0,1	0,1	0,1	0,1	0,15

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APÉNDICE III

CRITERIOS Y PROCEDIMIENTOS PARA LA DESIGNACIÓN DE ZONAS DE CONTROL DE LAS EMISIONES DE SO_x (Regla 14)

1 OBJETIVOS

1.1 El presente apéndice tiene por objeto proporcionar los criterios y procedimientos para la designación de zonas de control de las emisiones de SO_x. La finalidad de las zonas de control de las emisiones de SO_x es prevenir, reducir y controlar la contaminación atmosférica ocasionada por las emisiones de SO_x de los buques y sus consiguientes efectos negativos en zonas marítimas y terrestres.

1.2 La Organización considerará el establecimiento de una zona especial de control de las emisiones de SO_x cuando se demuestre que es necesario para prevenir, reducir y controlar la contaminación atmosférica ocasionada por las emisiones de SO_x de los buques.

2 CRITERIOS APLICABLES A LAS PROPUESTAS DE DESIGNACIÓN DE ZONAS DE CONTROL DE LAS EMISIONES DE SO_x

2.1 Sólo los Estados Contratantes del Protocolo de 1997 podrán proponer a la Organización la designación de una zona de control de las emisiones de SO_x. Cuando dos o más Estados Contratantes comparten el interés por una zona particular deberían formular una propuesta conjunta.

2.2 Toda propuesta incluirá lo siguiente:

.1 una clara delimitación de la zona propuesta para la aplicación de las medidas de control de las emisiones de SO_x, junto con una carta de referencia en donde se indique dicha zona;

.2 una descripción de las zonas marítimas y terrestres en las que las emisiones de SO_x de los buques pueden tener efectos negativos;

.3 una evaluación que demuestre que las emisiones de SO_x de los buques que operan en la zona propuesta para la aplicación de las medidas de control de las emisiones de SO_x contribuyen a la contaminación atmosférica por SO_x, incluida la deposición de SO_x, y a los consiguientes efectos negativos en las zonas marinas y terrestres de que se trata. Tal evaluación incluirá una descripción de los efectos de las emisiones de SO_x en los ecosistemas acuáticos y terrestres, las zonas de productividad natural, los hábitat críticos, la calidad del agua, la salud del hombre y, cuando proceda, las zonas de importancia cultural y científica. Se indicarán las fuentes de los datos pertinentes así como las metodologías utilizadas;

.4 información pertinente acerca de las condiciones meteorológicas de la zona propuesta para la aplicación de las medidas de control de las emisiones de SO_x y de las zonas marinas y terrestres que pueden ser afectadas, en particular los vientos dominantes o las condiciones topográficas, geológicas, oceanográficas, morfológicas u otras condiciones que puedan favorecer el aumento de la contaminación atmosférica local o de los niveles de acidificación;

.5 la naturaleza del tráfico marítimo en la zona de control de las emisiones de SO_x propuesta, incluidas las características y densidad de dicho tráfico, y

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é una descripción de las medidas de control adoptadas por el Estado Contratante o los Estados Contratantes que formulan la propuesta para hacer frente a las emisiones de SO_x procedentes de fuentes terrestres que afectan a la zona en peligro, y que están en vigor y se aplican, junto con las que se estén examinando con miras a su adopción en relación con lo dispuesto en la regla 14 del Anexo VI del presente Convenio.

2.3 Los límites geográficos de la zona de control de las emisiones de SO_x se basarán en los criterios pertinentes antes mencionados, incluidas las emisiones y deposiciones de SO_x procedentes de los buques que naveguen en la zona propuesta, las características y densidad del tráfico y el régimen de vientos.

2.4 La propuesta para designar una zona determinada como zona de control de las emisiones de SO_x se presentará a la Organización de conformidad con las reglas y procedimientos establecidos por ésta.

3 PROCEDIMIENTOS PARA LA EVALUACIÓN Y ADOPCIÓN DE ZONAS DE CONTROL DE LAS EMISIONES DE SO_x POR LA ORGANIZACIÓN

3.1 La Organización examinará toda propuesta que le presenten uno o varios Estados Contratantes.

3.2 La designación de una zona de control de las emisiones de SO_x se realizará por medio de una enmienda del presente anexo, que se examinará y adoptará y que entrará en vigor de conformidad con el artículo 16 del presente Convenio.

3.3 Al evaluar la propuesta, la Organización tendrá en cuenta tanto los criterios que se han de incluir en cada propuesta que se presente para su aprobación, según se indican en la sección 2 *supra*, como los costos relativos de la reducción de las deposiciones de azufre procedentes de los buques por comparación con las medidas de control en tierra. También se tendrán en cuenta los efectos económicos en el transporte marítimo internacional.

4 FUNCIONAMIENTO DE LAS ZONAS DE CONTROL DE LAS EMISIONES DE SO_x

4.1 Se insta a las Partes cuyos buques naveguen en la zona que tengan a bien comunicar a la Organización todo asunto de interés relativo al funcionamiento de la zona.

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APÉNDICE IV

HOMOLOGACIÓN Y LÍMITES DE SERVICIO DE LOS INCINERADORES DE A BORDO

(Regla 16)

1) Los buques que tengan incineradores de a bordo como los descritos en el párrafo 2) de la regla 16 deberán tener un certificado de homologación de la OMI para cada incinerador. Con objeto de obtener dicho certificado, el incinerador se proyectará y construirá de conformidad con una norma aprobada como la que se describe en el párrafo 2) de la regla 16. Cada modelo será objeto de una prueba de funcionamiento específica para la homologación, que se realizará en la fábrica o en una instalación de pruebas aprobada, bajo la responsabilidad de la Administración, utilizando las siguientes especificaciones normalizadas de combustible y desechos para determinar si el incinerador funciona dentro de los límites especificados en el párrafo 2) del presente apéndice:

Fangos oleosos compuestos de:	75% DE FANGOS OLEOSOS PROVENIENTES DE FUELOIL PESADO, 5% DE DESECHOS DE ACEITE LUBRICANTE; y 20% DE AGUA EMULSIONADA
Desechos sólidos compuestos de:	50% de desechos alimenticios 50% de basuras que contengan: aprox. 30% de papel, aprox. 40% de cartón, aprox. 10% de trapos, aprox. 20% de plásticos La mezcla tendrá hasta un 50% de humedad y 7% de sólidos incombustibles

2) Los incineradores descritos en el párrafo 2) de la regla 16 funcionarán dentro de los siguientes límites:

Cantidad de O_2 en la cámara de combustión:	6 a 12%
Cantidad de CO en los gases de combustión (promedio máximo):	200 mg/MJ
Número de hollín (promedio máximo):	BACHARACH 3 o RINGELMAN 1 (20% de opacidad) (Sólo se aceptará un número más alto de hollín durante períodos muy breves, por ejemplo durante el encendido)
Componentes no quemados en los residuos de ceniza:	Máximo: 10% en peso
Gama de temperaturas de los gases de combustión a la salida de la cámara de combustión:	850 a 1200°C

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APÉNDICE V

INFORMACIÓN QUE DEBE INCLUIRSE EN LA NOTA DE ENTREGA DE COMBUSTIBLE

(Regla 18.3))

Nombre y número IMO del buque receptor

Puerto

Fecha de comienzo de la entrega

Nombre, dirección y número de teléfono del proveedor de fueloil para usos marinos

Denominación del producto o de los productos

Cantidad en toneladas métricas

Densidad a 15°C, en kg/m³

Contenido de azufre (% masa/masa)

Una declaración firmada por el representante del proveedor del fueloil de que el fueloil entregado se ajusta a lo dispuesto en los párrafos 1) o 4), apartado a), de la regla 14 y en el párrafo 1) de la regla 18 del presente anexo.

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CERTIFIED TRUE COPY of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, done at London on 26 September 1997, the original of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du Protocole de 1997 modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif, fait à Londres le 26 septembre 1997, dont l'exemplaire original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

COPIA AUTÉNTICA CERTIFICADA del Protocolo de 1997 que enmienda el Conventio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978, hecha en Londres el 26 de septiembre de 1997, cuyo original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General of the International Maritime Organization:

Pour le Secrétaire général de l'Organisation maritime internationale :

Por el Secretario General de la Organización Marítima Internacional:

London,

Londres, le 9. VI. 1998

Londres,

J/68 7/Add.3/IE/F/Si

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1990 AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

(Designation of Antarctic area as a special area under Annexes I and V of MARPOL 73/78)

AMENDEMENTS DE 1990 À L'ANNEXE DU PROTOCOLE DE 1978 RELATIF À LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES

(Désignation de la zone de l'Antarctique comme zone spéciale aux termes des Annexes I et V de MARPOL 73/78)

ПОПРАВКИ 1990 ГОДА К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Определение района Антарктики в качестве особого района согласно Приложениям I и V к МАРПОЛ 73/78)

ENMIENDAS DE 1990 AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACION POR LOS BUQUES, 1973

(Designación de la zona del Antártico como zona especial en virtud de los Anexos I y V del MARPOL 73/78)

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RESOLUTION MEPC.42(30)

Adopted by the Marine Environment Protection Committee
on 16 November 1990

ADOPTION OF AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978
RELATING TO THE INTERNATIONAL CONVENTION FOR THE
PREVENTION OF POLLUTION FROM SHIPS, 1973

(Designation of Antarctic area as a special area under
Annexes I and V of MARPOL 73/78)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Committee,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention") and article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") which confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 Protocol (MARPOL 73/78),

HAVING CONSIDERED, at its thirtieth session, amendments to the 1978 Protocol proposed and circulated in accordance with article 16(2)(a) of the 1973 Convention,

HAVING CONSIDERED ALSO the objective that all wastes are to be removed from the Antarctic area due to the ecological importance of the fragile ecosystems of the area,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, amendments to the Annex of the 1978 Protocol, the text of which is set out in the Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 16 September 1991 unless, prior to this date, one third or more of the Parties, or the Parties the combined merchant fleets of which constitute fifty per cent or more of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objections to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(i) of 1973 Convention, the amendments shall enter into force on 17 March 1992 upon their acceptance in accordance with paragraph 2 above;

4. DECIDES that the requirements of Regulation 10 of Annex I and Regulation 5 of Annex V of MARPOL 73/78 in respect of the Antarctic area shall take effect on the day the amendments thereto adopted under this resolution enter into force, which is expected to be 17 March 1992;

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5. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to Annexes I and V of MARPOL 73/78 certified copies of the present resolution and the text of the amendments contained in Annexes 1 and 2 respectively;

6. FURTHER REQUESTS the Secretary-General to transmit to the Members of the Organization which are not Parties to Annexes I or V of MARPOL 73/78 copies of the resolution and its annexes.

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ANNEX 1

ADOPTION OF AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

ANNEX I

REGULATIONS FOR THE PREVENTION OF POLLUTION BY OIL

Regulation 10 is amended to read as follows:

Regulation 10

Methods for the Prevention of Oil Pollution from Ships while Operating in Special Areas

(1) For the purposes of this Annex, the special areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area, the "Gulfs area", the Gulf of Aden and the Antarctic area, which are defined as follows:

(a) - (f) No change.

(g) "The Antarctic area means the sea area south of 60° south latitude".

(2) Subject to the provisions of Regulation 11 of this Annex:

(a) Any discharge into the sea of oil or oily mixture from any oil tanker, or any ship of 400 tons gross tonnage and above other than an oil tanker, shall be prohibited, while in a special area. In respect of the Antarctic area, any discharge into the sea of oil or oily mixture from any ship shall be prohibited.

(b) Except as provided for in respect of the Antarctic area under paragraph 2(a) of this Regulation, any discharge into the sea of oil or oily mixture from a ship of less than 400 tons gross tonnage, other than an oil tanker, shall be prohibited while in a special area, except when the oil content of the effluent without dilution does not exceed 15 parts per million or alternatively when all of the following conditions are satisfied:

(2)(b) (i), (ii), (iii) No change.

(3) - (7) No change.

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(8) Notwithstanding paragraph (7) of this Regulation, the following rules apply to the Antarctic area;

(a) The Government of each Party to the Convention whose ports are used by ships departing en route to or arriving from the Antarctic area undertakes to ensure that as soon as practicable adequate facilities are provided for the reception of all sludge, dirty ballast, tank washing water, and other oily residues and mixtures from all ships, without causing undue delay, and according to the needs of the ships using them.

(b) The Government of each Party to the Convention shall ensure that all ships entitled to fly its flag, before entering the Antarctic area, are fitted with a tank or tanks of sufficient capacity on board for the retention of all sludge, dirty ballast, tank washing water and other oily residues and mixtures while operating in the area and have concluded arrangements to discharge such oily residues at a reception facility after leaving the area.

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ANNEX 2

ADOPTION OF AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

ANNEX V

REGULATIONS FOR THE PREVENTION OF POLLUTION BY GARBAGE FROM SHIPS

Regulation 5 is amended to read as follows:

Regulation 5

Disposal of Garbage within Special Areas

(1) For the purposes of this Annex, the special areas are the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area, the "Gulfs area", the North Sea area and the Antarctic area, which are defined as follows:

(a) - (f) No change.

(g) The Antarctic area means the sea area south of 60° south latitude.

(2) - (4) No change.

(5) Notwithstanding paragraph 4 of this Regulation, the following rules apply to the Antarctic area:

(a) The Government of each Party to the Convention whose ports are used by ships departing en route to or arriving from the Antarctic area undertakes to ensure that as soon as practicable adequate facilities are provided for the reception of all garbage from all ships, without causing undue delay, and according to the needs of the ships using them.

(b) The Government of each Party to the Convention shall ensure that all ships entitled to fly its flag, before entering the Antarctic area, have sufficient capacity on board for the retention of all garbage while operating in the area and have concluded arrangements to discharge such garbage at a reception facility after leaving the area.

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RESOLUTION MEPC.42(30)

adoptée le 15 novembre 1991

ADOPTION D'AMENDEMENTS A L'ANNEXE DU PROTOCOLE DE 1978 RELATIF A LA CONVENTION INTERNATIONALE DE 1973 POUR LA PREVENTION DE LA POLLUTION PAR LES NAVIRES

(Désignation de la zone de l'Antarctique comme zone spéciale aux termes des Annexes I et V de MARPOL 73/78)

LE COMITE DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale qui a trait aux fonctions du Comité,

NOTANT que l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973") et l'article VI du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé le "Protocole de 1978") confèrent à l'organe compétent de l'Organisation la fonction d'examiner et d'adopter des amendements à la Convention de 1973, telle que modifiée par le Protocole de 1978 (MARPOL 73/78),

AYANT EXAMINE, à sa trentième session, des amendements au Protocole de 1978 qui avaient été proposés et diffusés conformément à l'article 16 2) a) de la Convention de 1973,

AYANT EXAMINE EGALEMENT l'objectif qui était d'évacuer tous les déchets de la zone de l'Antarctique en raison de l'importance écologique des écosystèmes fragiles de cette zone,

1. ADOPTE, conformément à l'article 16 2) d) de la Convention de 1973, les amendements à l'Annexe du Protocole de 1978 dont le texte figure en annexe de la présente résolution;

2. CONSIDERE que, conformément à l'article 16 2) f) iii) de la Convention de 1973, les amendements seront réputés avoir été acceptés le 16 septembre 1992 à moins que, avant cette date, un tiers au moins des Parties ou les Parties dont les flottes marchandes représentent au total au moins cinquante pour cent du tonnage brut de la flotte mondiale des navires de commerce n'aient communiqué à l'Organisation des objections à ces amendements;

3. INVITE les Parties à noter que, conformément à l'article 16 2) g) ii) de la Convention de 1973, les amendements entreront en vigueur le 17 mars 1992 s'ils ont été acceptés de la manière indiquée au paragraphe 2 ci-dessus;

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4. DECIDE que les prescriptions de la règle 10 de l'Annexe I et de la règle 5 de l'Annexe V de MARPOL 73/78 relatives à la zone de l'Antarctique prendront effet à la date à laquelle les amendements à ces règles adoptés en vertu de la présente résolution entreront en vigueur, soit en principe le 1er mars 1992;

5. PRIE le Secrétaire général, en application de l'article 16 2) e) de la Convention de 1973, d'adresser à toutes les Parties aux Annexes I et V de MARPOL 73/78 des copies certifiées conformes de la présente résolution et du texte des amendements figurant aux annexes 1 et 2 respectivement;

6. PRIE EN OUTRE le Secrétaire général de transmettre des copies de la résolution et de ses annexes aux Membres de l'Organisation qui ne sont pas Parties à l'Annexe I ou à l'Annexe V de MARPOL 73/78.

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ANNEXE 1

AMENDEMENTS A L'ANNEXE DU PROTOCOLE DE 1978 RELATIF A LA CONVENTION INTERNATIONALE DE 1973 POUR LA PREVENTION DE LA POLLUTION PAR LES NAVIRES

ANNEXE I

REGLES RELATIVES A LA PREVENTION DE LA POLLUTION PAR LES HYDROCARBURES

Modifier la règle 10 comme suit :

Règle 10

Méthodes de prévention de la pollution par les hydrocarbures due aux navires exploités dans les zones spéciales

1) Aux fins de la présente Annexe, les zones spéciales sont la zone de la mer Méditerranée, la zone de la mer Baltique, la zone de la mer Noire, la zone de la mer Rouge, la "zone des golfes", la zone du golfe d'Aden et la zone de l'Antarctique, qui sont définies comme suit :

a) à f) Pas de changement.

g) "Par zone de l'Antarctique, on entend la zone maritime située au sud du parallèle 60°S".

2) Sous réserve des dispositions de la règle 11 de la présente Annexe :

a) Il est interdit à tout pétrolier, ainsi qu'à tout navire d'une jauge brute égale ou supérieure à 400 tonneaux autre qu'un pétrolier, de rejeter à la mer des hydrocarbures ou des mélanges d'hydrocarbures pendant qu'il se trouve dans une zone spéciale. En ce qui concerne la zone de l'Antarctique, il est interdit à tout navire de rejeter à la mer des hydrocarbures ou des mélanges d'hydrocarbures.

b) Sous réserve des dispositions du paragraphe 2 a) de la présente règle applicables à la zone de l'Antarctique, il est interdit à tout navire d'une jauge brute inférieure à 400 tonneaux autre qu'un pétrolier de rejeter à la mer des hydrocarbures ou des mélanges d'hydrocarbures pendant qu'il se trouve dans une zone spéciale, sauf si la teneur en hydrocarbures de l'effluent ne dépasse pas, sans dilution, 15 parts par million ou encore si toutes les conditions suivantes se trouvent réunies :

2 b) i), ii), iii) Pas de changement.

3) à 7) Pas de changement.

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8) Nonobstant les dispositions du paragraphe 7 de la présente règle, les règles qui suivent s'appliquent à la zone de l'Antarctique :

a) Les Gouvernements de toutes les Parties à la Convention dont les ports sont utilisés par des navires à destination ou en provenance de la zone de l'Antarctique s'engagent à faire mettre en place, aussitôt que possible, des installations suffisantes pour la réception de toutes les boues, de tout le ballast pollué, de toutes les eaux de nettoyage des citernes et de tous les autres résidus et mélanges d'hydrocarbures de tous les navires susceptibles de les utiliser, sans leur imposer de retards anormaux.

b) Les Gouvernements de toutes les Parties à la Convention veillent à ce que tous les navires habilités à battre leur pavillon soient équipés, avant de pénétrer dans la zone de l'Antarctique, d'une ou de plusieurs citernes d'une capacité suffisante pour conserver à bord toutes les boues, tout le ballast pollué, toutes les eaux de nettoyage des citernes et tous les autres résidus et mélanges d'hydrocarbures pendant qu'ils naviguent dans la zone et aient conclu des accords pour rejeter ces résidus et mélanges d'hydrocarbures dans une installation de réception après avoir quitté la zone.

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ANNEXE 2

AMENDEMENTS A L'ANNEXE DU PROTOCOLE DE 1978 RELATIF A LA CONVENTION INTERNATIONALE DE 1973 POUR LA PREVENTION DE LA POLLUTION PAR LES NAVIRES

ANNEXE V

REGLES RELATIVES A LA PREVENTION DE LA POLLUTION PAR LES ORDURES DES NAVIRES

Modifier la règle 5 comme suit :

Règle 5

Evacuation des ordures dans les zones spéciales

1) Aux fins de la présente Annexe, les zones spéciales sont la zone de la mer Méditerranée, la zone de la mer Baltique, la zone de la mer Noire, la zone de la mer Rouge, la "zone des golfes", la zone de la mer du Nord et la zone de l'Antarctique, qui sont définies comme suit :

a) à f) Pas de changement.

g) "Par zone de l'Antarctique, on entend la zone maritime située au sud du parallèle 60°S."

2) à 4) Pas de changement.

5) Nonobstant les dispositions du paragraphe 4 de la présente règle, les règles qui suivent s'appliquent à la zone de l'Antarctique.

a) Les Gouvernements de toutes les Parties à la Convention dont les ports sont utilisés par des navires à destination ou en provenance de la zone de l'Antarctique s'engagent à faire mettre en place, aussitôt que possible, des installations suffisantes pour la réception de toutes les ordures de tous les navires susceptibles de les utiliser, sans leur imposer de retards anormaux.

b) Les Gouvernements de toutes les Parties à la Convention veillent à ce que tous les navires habilités à battre leur pavillon aient à bord, avant de pénétrer dans la zone de l'Antarctique, une capacité suffisante pour conserver toutes leurs ordures pendant qu'ils naviguent dans la zone et aient conclu des accords pour rejeter ces ordures dans une installation de réception après avoir quitté la zone.

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РЕЗОЛЮЦИЯ МЕРС.42(30)

принята Комитетом по защите морской среды
16 ноября 1990 года

ОДОБРЕНИЕ ПОПРАВОК К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА
К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ
ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

(Определение района Антарктики в качестве особого
района согласно Приложениям I и V к МАРПОЛ 73/78)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на пункт (a) статьи 38 Конвенции о Международной морской организации, касающийся функций Комитета,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемой "Конвенция 1973 года") и статью VI Протокола 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемого "Протокол 1978 года"), которые возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколом 1978 года (МАРПОЛ 73/78),

РАССМОТРЕВ на своей тридцатой сессии поправки к Протоколу 1978 года, предложенные и разосланные в соответствии со статьей 16(2)(a) Конвенции 1973 года,

РАССМОТРЕВ ТАКЖЕ цель, состоящую в том, что все отходы должны быть удалены из района Антарктики вследствие экологического значения уязвимых экосистем района,

1. ОДОБРЯЕТ в соответствии со статьей 16(2)(d) Конвенции 1973 года поправки к Приложению к Протоколу 1978 года, текст которых изложен в приложении к настоящей резолюции;

2. ПОСТАНОВЛЯЕТ в соответствии со статьей 16(2)(f)(iii) Конвенции 1973 года, что поправки считаются принятыми 16 сентября 1991 года, если до этой даты одна треть или более Сторон либо Стороны, общая валовая вместимость торговых судов которых составляет пятьдесят или более процентов валовой вместимости судов мирового торгового флота, не сообщат Организации о своих возражениях против поправок;

3. ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16(2)(g)(ii) Конвенции 1973 года поправки вступят в силу 17 марта 1992 года после их принятия в соответствии с пунктом 2 выше;

4. ПРИНИМАЕТ РЕШЕНИЕ, что требования Правила 10 Приложения I и Правила 5 Приложения V к МАРПОЛ 73/78 в отношении района Антарктики вступят в силу в тот день, когда вступят в силу поправки к ним, одобренные согласно этой резолюции, то есть 17 марта 1992 года;

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5. ПРОСИТ Генерального секретаря в соответствии со статьей 16(2)(e) Конвенции 1973 года передать всем Сторонам Приложений I и V к МАРПОЛ 73/78 заверенные копии настоящей резолюции и текста поправок, содержащихся в приложениях 1 и 2 соответственно;

6. ПРОСИТ ДАЛЕЕ Генерального секретаря передать членам Организации, которые не являются Сторонами Приложений I или V к МАРПОЛ 73/78, копии резолюции и ее приложений.

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ПРИЛОЖЕНИЕ 1

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА
К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ
С СУДОВ 1973 ГОДА

ПРИЛОЖЕНИЕ I

ПРАВИЛА ПРЕДОТВРАЩЕНИЯ ЗАГРЯЗНЕНИЯ НЕФТЬЮ

Правило 10 изменяется следующим образом:

Правило 10

Методы предотвращения загрязнения нефтью
с судов при плавании в особых районах

(1) Для целей настоящего Приложения особыми районами являются районы Средиземного моря, район Балтийского моря, район Черного моря, район Красного моря, "Район заливов", Аденский залив и район Антарктики, определение которым дается ниже:

(a)-(f) Без изменения.

(g) "Район Антарктики означает морской район, расположенный к югу от 60° южной широты".

(2) С учетом положений Правила 11 настоящего Приложения:

(a) В особом районе запрещается любой сброс в море нефти или нефтесодержащей смеси с любого нефтяного танкера или любого судна валовой вместимостью 400 рег. т и более, не являющегося нефтяным танкером. В отношении района Антарктики запрещается любой сброс в море нефти или нефтесодержащей смеси с любого судна.

(b) За исключением того, как это предусмотрено в отношении района Антарктики согласно пункту 2(a) настоящего Правила, в особом районе запрещается любой сброс в море нефти или нефтесодержащей смеси с судна валовой вместимостью менее 400 рег. т, не являющегося нефтяным танкером, исключая случаи, когда содержание нефти в стоке без его разбавления не превышает 15 миллионных долей или когда соблюдаются одновременно следующие условия:

(2)(b) (i), (ii), (iii) Без изменения.

(3)-(7) Без изменения.

(8) Несмотря на пункт (7) настоящего Правила, к району Антарктики применяются следующие правила:

(a) Правительство каждой Стороны Конвенции, из портов которой суда уходят в рейс в район Антарктики или в порты которой суда прибывают из района Антарктики,

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обязуются обеспечить, чтобы, как только это будет практически возможно, были предусмотрены соответствующие сооружения для приема осадков, грязного балласта, промывочной воды из танков, а также других нефтесодержащих остатков и смесей от всех судов, не вызывающие чрезмерного простоя и отвечающие нуждам пользующихся ими судов.

(b) Правительство каждой Стороны Конвенции обеспечивает, чтобы все суда, имеющие право плавания под ее флагом, перед входом в район Антарктики имели на борту танк или танки достаточной вместимости для сохранения всех осадков, грязного балласта, промывочной воды из танков, а также других нефтесодержащих остатков и смесей при плавании в этом районе и имели договоренности о сбросе таких нефтесодержащих остатков в приемное сооружение после выхода из этого района.

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ПРИЛОЖЕНИЕ 2

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1978 ГОДА
К МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ
ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА

ПРИЛОЖЕНИЕ V

ПРАВИЛА ПРЕДОТВРАЩЕНИЯ ЗАГРЯЗНЕНИЯ
МУСОРОМ С СУДОВ

Правило 5 изменено следующим образом:

Правило 5

Удаление мусора в пределах особых районов

(1) Для целей настоящего Приложения особыми районами являются район Средиземного моря, район Балтийского моря, район Черного моря, район Красного моря, "Район заливов", район Северного моря и район Антарктики, определение которым приводится ниже:

(a)-(f) Без изменения.

(g) Район Антарктики означает морской район, расположенный к югу от 60° южной широты.

(2)-(4) Без изменения.

(5) Несмотря на пункт (4) настоящего Правила, к району Антарктики применяются следующие правила:

(a) Правительство каждой Стороны Конвенции, из портов которой суда уходят в рейс в район Антарктики или в порты которой суда прибывают из района Антарктики, обязуется обеспечить, чтобы, как только это будет практически возможно, были предусмотрены соответствующие сооружения для приема всего мусора со всех судов, но вызывающие чрезмерного простоя и отвечающие нуждам пользующихся ими судов.

(b) Правительство каждой Стороны Конвенции обеспечивает, чтобы все суда, имеющие право плавания под ее флагом, перед входом в район Антарктики имели на борту достаточные емкости для сохранения всего мусора при плавании в этом районе и имели договоренности о сбросе такого мусора в приемное сооружение после выхода из этого района.

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RESOLUCION MEPC.42(30)

aprobada por el Comité de Protección del Medio Marino
el 16 de noviembre de 1990

APROBACION DE ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACION POR LOS BUQUES, 1973

(Designación de la zona del Antártico como zona especial en virtud de los Anexos I y V del MARPOL 73/78)

EL COMITE DE PROTECCION DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, artículo que trata de las funciones del Comité,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante llamado "Convenio de 1973") y del artículo VI del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante llamado "Protocolo de 1978"), que confieren al órgano competente de la Organización la función de estudiar y aprobar enmiendas al Convenio de 1973, en su forma modificada por el Protocolo de 1978 (MARPOL 73/78),

HABIENDO EXAMINADO en su 30º periodo de sesiones las enmiendas al Protocolo de 1978 propuestas y distribuidas de conformidad con lo dispuesto en el artículo 16 2) a) del Convenio de 1973,

HABIENDO CONSIDERADO ADEMAS el objetivo de que todos los desechos deben ser retirados de la zona del Antártico debido a la importancia ecológica de los frágiles ecosistemas de la zona,

1. APRUEBA, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio de 1973, las enmiendas al Anexo del Protocolo de 1978 cuyo texto figura en el anexo de la presente resolución;

2. DECIDE, de conformidad con lo dispuesto en el artículo 16 2) f) iii) del Convenio de 1973, que las enmiendas se considerarán aceptadas el 16 de septiembre de 1991, salvo que, antes de esa fecha, un tercio cuando menos de las Partes, o aquellas Partes cuyas flotas mercantes combinadas representen como mínimo el 50% del tonelaje bruto de la flota mercante mundial, notifiquen a la Organización que rechazan las enmiendas;

3. INVITA a las Partes a que tomen nota de que, de conformidad con lo dispuesto en el artículo 16 2) g) ii) del Convenio de 1973, las enmiendas entrarán en vigor el 17 de marzo de 1992, una vez que hayan sido aceptadas de conformidad con lo indicado en el párrafo 2 anterior;

4. DECIDE que las prescripciones de la regla 10 del Anexo I y de la regla 5 del Anexo V del MARPOL 73/78 relativas a la zona del Antártico empiecen a regir el día en que las enmiendas a dichos Anexos aprobadas mediante la presente resolución entren en vigor, lo cual está previsto para el 17 de marzo de 1992;

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5. PIDE al Secretario General que, de conformidad con lo dispuesto en el artículo 16 2) e) del Convenio de 1973, envíe copias certificadas de la presente resolución y del texto de las enmiendas que figuran en los anexos 1 y 2, respectivamente, a todas las Partes en los Anexos I y V del MARPOL 73/78;

6. PIDE ADEMAS al Secretario General que envíe copias de la resolución y de sus anexos a los Miembros de la Organización que no sean Partes en los Anexos I y V del MARPOL 73/78.

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ANEXO 1

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO AL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACION POR LOS BUQUES, 1973

ANEXO I

REGLAS PARA PREVENIR LA CONTAMINACION POR HIDROCARBUROS

Enmiéndese la regla 10 de modo que diga:

Regla 10

Métodos para prevenir la contaminación por hidrocarburos desde buques que operen en zonas especiales

1) A los efectos del presente Anexo las zonas especiales son el Mar Mediterráneo, el Mar Báltico, el Mar Negro, el Mar Rojo, la "zona de los Golfos", el Golfo de Adén y la zona del Antártico, según se definen a continuación:

a) - f) Sin cambios.

g) "Por zona del Antártico se entiende la extensión de mar situada al sur de los 60° de latitud sur".

2) A reserva de las disposiciones de la regla 11 del presente Anexo:

a) Estará prohibida toda descarga en el mar de hidrocarburos o mezclas oleosas desde petroleros y desde buques no petroleros cuyo arqueo bruto sea igual o superior a 400 toneladas, mientras se encuentren en una zona especial. Con respecto a la zona del Antártico, estará prohibida toda descarga en el mar de hidrocarburos o mezclas oleosas procedentes de cualquier buque.

b) Exceptuando lo dispuesto en relación con la zona del Antártico en el párrafo 2 a) de la presente regla, estará prohibida toda descarga en el mar de hidrocarburos o mezclas oleosas desde buques no petroleros de arqueo bruto inferior a 400 toneladas, mientras se encuentren en una zona especial, salvo cuando el contenido de hidrocarburos del efluente sin dilución no exceda de 15 partes por millón o, de otro modo, cuando se cumplan todas las condiciones siguientes:

2) b), i), ii), iii) Sin cambios.

3) - 7) Sin cambios.

8) No obstante lo dispuesto en el párrafo 7) de la presente regla, en la zona del Antártico se aplicarán las siguientes normas:

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a) Los gobiernos de las Partes en el Convenio cuyos puertos sean utilizados por buques en viajes de ida o vuelta a la zona del Antártico se comprometen a garantizar que, tan pronto como sea factible, se provean instalaciones adecuadas para la recepción de todos los fangos, lastres contaminados, aguas de lavado de tanques y otros residuos y mezclas oleosas procedentes de todos los buques, sin causar demoras innecesarias, y de acuerdo con las necesidades de los buques que las utilicen.

b) Los gobiernos de las Partes en el Convenio comprobarán que todos los buques que tengan derecho a enarbolar su pabellón, antes de entrar en la zona del Antártico, están dotados de uno o varios tanques con capacidad suficiente para retener a bordo todos los fangos, lastres contaminados, aguas de lavado de tanques y otros residuos y mezclas oleosas mientras operen en la zona, y han concertado acuerdos para descargar dichos residuos oleosos en una instalación de recepción después de salir de la zona.

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ANEXO 2

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1978 RELATIVO
AL CONVENIO INTERNACIONAL PARA PREVENIR
LA CONTAMINACION POR LOS BUQUES, 1973

ANEXO V

REGLAS PARA PREVENIR LA CONTAMINACION POR LAS BASURAS DE LOS BUQUES

Enmiéndese la regla 5 de modo que diga:

Regla 5

Eliminación de basuras en las zonas especiales

1) A los efectos del presente Anexo las zonas especiales son la zona del Mar Mediterráneo, la zona del Mar Báltico, la zona del Mar Negro, la zona del Mar Rojo, la "zona de los Golfos", la zona del Mar del Norte y la zona del Antártico, según se definen a continuación:

a) - f) Sin cambios.

g) Por zona del Antártico se entiende la extensión de mar situada al sur de los 60° de latitud sur.

2) - 4) Sin cambios.

5) No obstante lo dispuesto en el párrafo 4) de la presente regla, en la zona del Antártico se aplicarán las siguientes normas:

a) Los gobiernos de las Partes en el Convenio cuyos puertos sean utilizados por buques en viajes de ida y vuelta a la zona del Antártico se comprometen a garantizar que, tan pronto como sea factible, se provean instalaciones adecuadas para la recepción de todas las basuras procedentes de todos los buques, sin causar demoras innecesarias, y de acuerdo con las necesidades de los buques que las utilicen.

b) Los gobiernos de las Partes en el Convenio comprobarán que todos los buques que tengan derecho a enarbolar su pabellón, antes de entrar en la zona del Antártico, tienen capacidad suficiente para retener a bordo todas las basuras mientras operen en la zona, y han concertado acuerdos para descargar dichas basuras en una instalación de recepción después de salir de la zona.

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CERTIFIED TRUE COPY of the text of the amendments to the Annex of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (Designation of Antarctic area as a special area) adopted at the thirtieth session of the Marine Environment Protection Committee of the International Maritime Organization on 16 November 1990 in conformity with article VI of the Protocol and article 16 of the Convention by resolution MEPC.42(30), the original text of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du texte des amendements à l'Annexe du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (désignation de la zone de l'Antarctique en tant que zone spéciale) que le Comité de la protection du milieu marin de l'Organisation maritime internationale a adoptés le 16 novembre 1990 à sa trentième session conformément aux dispositions de l'article VI du Protocole et de l'article 16 de la Convention, par sa résolution MEPC.42(30) dont l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ ПОДЛИННИКА текста поправок к Приложению к Протоколу 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (Определение района Антарктики в качестве особого района), одобренных на тридцатой сессии Комитета по защите морской среды Международной морской организации 16 ноября 1990 года в соответствии со статьей VI Протокола к статьей 16 Конвенции резолюцией МЕРС.42(30), оригинал которого сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTENTICA CERTIFICADA del texto de las enmiendas al Anexo del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (designación de la zona del Antártico como zona especial), aprobadas el 16 de noviembre de 1990 en el 30º periodo de sesiones del Comité de Protección del Medio Marino de la Organización Marítima Internacional, mediante la resolución MEPC.42(30), de conformidad con lo dispuesto en el artículo VI del Protocolo y el artículo 16 del Convenio, cuyo original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General of the International Maritime Organization:

Pour le Secrétaire général de l'Organisation maritime internationale :

За Генерального секретаря Международной морской организации:

Por el Secretario General de la Organización Marítima Internacional:

London,

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2008 AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

(Revised MARPOL Annex VI)

(Resolution MEPC.176(58))

AMENDEMENTS DE 2008 À L'ANNEXE AU PROTOCOLE DE 1997 MODIFIANT LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES, TELLE QUE MODIFIÉE PAR LE PROTOCOLE DE 1978 Y RELATIF

(Annexe VI révisée de MARPOL 73/78)

(Résolution MEPC.176(58))

ПОПРАВКИ 2008 ГОДА К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1997 ОБ ИЗМЕНЕНИИ МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА, ИЗМЕНЕННОЙ ПРОТОКОЛОМ 1978 ГОДА К НЕЙ

(Пересмотренное Приложение VI к Конвенции МАРПОЛ 73/78)

(Резолюция MEPC.176(58))

ENMIENDAS DE 2008 AL ANEXO DEL PROTOCOLO DE 1997 QUE ENMIENDA EL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973, MODIFICADO POR EL PROTOCOLO DE 1978

(Anexo VI revisado del Convenio MARPOL 73/78)

(Resolución MEPC.176(58))

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RESOLUTION MEPC.176(58)

Adopted on 10 October 2008

AMENDMENTS TO THE ANNEX OF THE PROTOCOL OF 1997 TO AMEND THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AS MODIFIED BY THE PROTOCOL OF 1978 RELATING THERETO

(Revised MARPOL Annex VI)

THE MARINE ENVIRONMENT PROTECTION COMMITTEE,

RECALLING Article 38(a) of the Convention on the International Maritime Organization concerning the functions of the Marine Environment Protection Committee (the Committee) conferred upon it by international conventions for the prevention and control of marine pollution,

NOTING article 16 of the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1973 Convention"), article VI of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as the "1978 Protocol") and article 4 of the Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (herein after referred to as the "1997 Protocol"), which together specify the amendment procedure of the 1997 Protocol and confer upon the appropriate body of the Organization the function of considering and adopting amendments to the 1973 Convention, as modified by the 1978 and 1997 Protocols,

NOTING ALSO that, by the 1997 Protocol, Annex VI entitled Regulations for the Prevention of Air Pollution from Ships is added to the 1973 Convention (hereinafter referred to as "Annex VI"),

HAVING CONSIDERED the draft amendments to MARPOL Annex VI,

1. ADOPTS, in accordance with article 16(2)(d) of the 1973 Convention, the amendments to Annex VI, the text of which is set out at Annex to the present resolution;

2. DETERMINES, in accordance with article 16(2)(f)(iii) of the 1973 Convention, that the amendments shall be deemed to have been accepted on 1 January 2010, unless prior to that date, not less than one-third of the Parties or Parties the combined merchant fleets of which constitute not less than 50 per cent of the gross tonnage of the world's merchant fleet, have communicated to the Organization their objection to the amendments;

3. INVITES the Parties to note that, in accordance with article 16(2)(g)(ii) of the 1973 Convention, the said amendments shall enter into force on 1 July 2010 upon their acceptance in accordance with paragraph 2 above;

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4. REQUESTS the Secretary-General, in conformity with article 16(2)(e) of the 1973 Convention, to transmit to all Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, certified copies of the present resolution and the text of the amendments contained in the Annex;

5. REQUESTS FURTHER the Secretary-General to transmit to the Members of the Organization which are not Parties to the 1973 Convention, as modified by the 1978 and 1997 Protocols, copies of the present resolution and its Annex; and

6 INVITES the Parties to MARPOL Annex VI and other Member Governments to bring the amendments to MARPOL Annex VI to the attention of shipowners, ship operators, shipbuilders, marine diesel engine manufacturers, marine fuel suppliers and any other interested groups.

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ANNEX

REVISED MARPOL ANNEX VI

Regulations for the Prevention of Air Pollution from Ships

CHAPTER 1

GENERAL

Regulation 1
Application

The provisions of this Annex shall apply to all ships, except where expressly provided otherwise in regulations 3, 5, 6, 13, 15, 16 and 18 of this Annex.

Regulation 2
Definitions

For the purpose of this Annex:

1 *Annex* means Annex VI to the International Convention for the Prevention of Pollution from Ships 1973 (MARPOL), as modified by the Protocol of 1978 relating thereto, and as modified by the Protocol of 1997, as amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention.

2 *A similar stage of construction* means the stage at which:

.1 construction identifiable with a specific ship begins; and

.2 assembly of that ship has commenced comprising at least 50 tons or one per cent of the estimated mass of all structural material, whichever is less.

3 *Anniversary date* means the day and the month of each year which will correspond to the date of expiry of the International Air Pollution Prevention Certificate.

4 *Auxiliary control device* means a system, function, or control strategy installed on a marine diesel engine that is used to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure, or that is used to facilitate the starting of the engine. An auxiliary control device may also be a strategy or measure that has been satisfactorily demonstrated not to be a defeat device.

5 *Continuous feeding* is defined as the process whereby waste is fed into a combustion chamber without human assistance while the incinerator is in normal operating conditions with the combustion chamber operative temperature between 850°C and 1,200°C.

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6 *Defeat device* means a device which measures, senses, or responds to operating variables (*e.g.*, engine speed, temperature, intake pressure or any other parameter) for the purpose of activating, modulating, delaying or deactivating the operation of any component or the function of the emission control system such that the effectiveness of the emission control system is reduced under conditions encountered during normal operation, unless the use of such a device is substantially included in the applied emission certification test procedures.

7 *Emission* means any release of substances, subject to control by this Annex, from ships into the atmosphere or sea.

8 *Emission Control Area* means an area where the adoption of special mandatory measures for emissions from ships is required to prevent, reduce and control air pollution from NO_x or SO_x and particulate matter or all three types of emissions and their attendant adverse impacts on human health and the environment. Emission Control Areas shall include those listed in, or designated under, regulations 13 and 14 of this Annex.

9 *Fuel oil* means any fuel delivered to and intended for combustion purposes for propulsion or operation on board a ship, including distillate and residual fuels.

10 *Gross tonnage* means the gross tonnage calculated in accordance with the tonnage measurement regulations contained in Annex I to the International Convention on Tonnage Measurements of Ships, 1969 or any successor Convention.

11 *Installations* in relation to regulation 12 of this Annex means the installation of systems, equipment including portable fire-extinguishing units, insulation, or other material on a ship, but excludes the repair or recharge of previously installed systems, equipment, insulation, or other material, or the recharge of portable fire-extinguishing units.

12 *Installed* means a marine diesel engine that is or is intended to be fitted on a ship, including a portable auxiliary marine diesel engine, only if its fuelling, cooling, or exhaust system is an integral part of the ship. A fuelling system is considered integral to the ship only if it is permanently affixed to the ship. This definition includes a marine diesel engine that is used to supplement or augment the installed power capacity of the ship and is intended to be an integral part of the ship.

13 *Irrational emission control strategy* means any strategy or measure that, when the ship is operated under normal conditions of use, reduces the effectiveness of an emission control system to a level below that expected on the applicable emission test procedures.

14 *Marine diesel engine* means any reciprocating internal combustion engine operating on liquid or dual fuel, to which regulation 13 of this Annex applies, including booster/compound systems if applied.

15 *NO_x Technical Code* means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by resolution 2 of the 1997 MARPOL Conference, as amended by the Organization, provided that such amendments are adopted and brought into force in accordance with the provisions of article 16 of the present Convention.

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16 *Ozone depleting substances* means controlled substances defined in paragraph (4) of article 1 of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987, listed in Annexes A, B, C or E to the said Protocol in force at the time of application or interpretation of this Annex.

Ozone depleting substances that may be found on board ship include, but are not limited to:

Halon 1211 Bromochlorodifluoromethane

Halon 1301 Bromotrifluoromethane

Halon 2402 1, 2-Dibromo -1, 1, 2, 2-tetrafloureothane (also known as Halon 114B2)

CFC-11 Trichlorofluoromethane

CFC-12 Dichlorodifluoromethane

CFC-113 1, 1, 2 – Trichloro – 1, 2, 2 – trifluoroethane

CFC-114 1, 2 – Dichloro – 1, 1, 2, 2 – tetrafluoroethane

CFC-115 Chloropentafluoroethane

17 *Shipboard incineration* means the incineration of wastes or other matter on board a ship, if such wastes or other matter were generated during the normal operation of that ship.

18 *Shipboard incinerator* means a shipboard facility designed for the primary purpose of incineration.

19 *Ships constructed* means ships the keels of which are laid or which are at a similar stage of construction.

20 *Sludge oil* means sludge from the fuel oil or lubricating oil separators, waste lubricating oil from main or auxiliary machinery, or waste oil from bilge water separators, oil filtering equipment or drip trays.

21 *Tanker* means an oil tanker as defined in regulation 1 of Annex I or a chemical tanker as defined in regulation 1 of Annex II of the present Convention.

Regulation 3
Exceptions and Exemptions

General

1 Regulations of this Annex shall not apply to:

.1 any emission necessary for the purpose of securing the safety of a ship or saving life at sea; or

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.2 any emission resulting from damage to a ship or its equipment:

.2.1 provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the emission for the purpose of preventing or minimizing the emission; and

.2.2 except if the owner or the master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result.

Trials for Ship Emission Reduction and Control Technology Research

2 The Administration of a Party may, in co-operation with other Administrations as appropriate, issue an exemption from specific provisions of this Annex for a ship to conduct trials for the development of ship emission reduction and control technologies and engine design programmes. Such an exemption shall only be provided if the applications of specific provisions of the Annex or the revised NO_x Technical Code 2008 could impede research into the development of such technologies or programmes. A permit for such an exemption shall only be provided to the minimum number of ships necessary and be subject to the following provisions:

.1 for marine diesel engines with a per cylinder displacement up to 30 litres, the duration of the sea trial shall not exceed 18 months. If additional time is required, a permitting Administration or Administrations may permit a renewal for one additional 18-month period; or

.2 for marine diesel engines with a per cylinder displacement at or above 30 litres, the duration of the ship trial shall not exceed 5 years and shall require a progress review by the permitting Administration or Administrations at each intermediate survey. A permit may be withdrawn based on this review if the testing has not adhered to the conditions of the permit or if it is determined that the technology or programme is not likely to produce effective results in the reduction and control of ship emissions. If the reviewing Administration or Administrations determine that additional time is required to conduct a test of a particular technology or programme, a permit may be renewed for an additional time period not to exceed five years.

Emissions from Sea-bed Mineral Activities

3.1 Emissions directly arising from the exploration, exploitation and associated offshore processing of sea-bed mineral resources are, consistent with article 2(3)(b)(ii) of the present Convention, exempt from the provisions of this Annex. Such emissions include the following:

.1 emissions resulting from the incineration of substances that are solely and directly the result of exploration, exploitation and associated offshore processing of sea-bed mineral resources, including but not limited to the flaring of hydrocarbons and the burning of cuttings, muds, and/or stimulation fluids during well completion and testing operations, and flaring arising from upset conditions;

.2 the release of gases and volatile compounds entrained in drilling fluids and cuttings;

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.3 emissions associated solely and directly with the treatment, handling, or storage of sea-bed minerals; and

.4 emissions from marine diesel engines that are solely dedicated to the exploration, exploitation and associated offshore processing of sea-bed mineral resources.

3.2 The requirements of regulation 18 of this Annex shall not apply to the use of hydrocarbons which are produced and subsequently used on site as fuel, when approved by the Administration.

Regulation 4
Equivalents

1 The Administration of a Party may allow any fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Annex if such fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods are at least as effective in terms of emissions reductions as that required by this Annex, including any of the standards set forth in regulations 13 and 14.

2 The Administration of a Party which allows a fitting, material, appliance or apparatus or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Annex shall communicate to the Organization for circulation to the Parties particulars thereof, for their information and appropriate action, if any.

3 The Administration of a Party should take into account any relevant guidelines developed by the Organization pertaining to the equivalents provided for in this regulation.

4 The Administration of a Party which allows the use of an equivalent as set forth in paragraph 1 of this regulation shall endeavour not to impair or damage its environment, human health, property, or resources or those of other States.

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CHAPTER II

SURVEY, CERTIFICATION AND MEANS OF CONTROL

Regulation 5
Surveys

1 Every ship of 400 gross tonnage and above and every fixed and floating drilling rig and other platforms shall be subject to the surveys specified below:

.1 An initial survey before the ship is put into service or before the certificate required under regulation 6 of this Annex is issued for the first time. This survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of this Annex;

.2 A renewal survey at intervals specified by the Administration, but not exceeding five years, except where regulation 9.2, 9.5, 9.6 or 9.7 of this Annex is applicable. The renewal survey shall be such as to ensure that the equipment, systems, fittings, arrangements and material fully comply with applicable requirements of this Annex;

.3 An intermediate survey within three months before or after the second anniversary date or within three months before or after the third anniversary date of the certificate which shall take the place of one of the annual surveys specified in paragraph 1.4 of this regulation. The intermediate survey shall be such as to ensure that the equipment and arrangements fully comply with the applicable requirements of this Annex and are in good working order. Such intermediate surveys shall be endorsed on the certificate issued under regulation 6 or 7 of this Annex;

.4 An annual survey within three months before or after each anniversary date of the certificate, including a general inspection of the equipment, systems, fittings, arrangements and material referred to in paragraph 1.1 of this regulation to ensure that they have been maintained in accordance with paragraph 4 of this regulation and that they remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the certificate issued under regulation 6 or 7 of this Annex; and

.5 An additional survey either general or partial, according to the circumstances, shall be made whenever any important repairs or renewals are made as prescribed in paragraph 4 of this regulation or after a repair resulting from investigations prescribed in paragraph 5 of this regulation. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory and that the ship complies in all respects with the requirements of this Annex.

2 In the case of ships of less than 400 gross tonnage, the Administration may establish appropriate measures in order to ensure that the applicable provisions of this Annex are complied with.

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3 Surveys of ships as regards the enforcement of the provisions of this Annex shall be carried out by officers of the Administration.

.1 The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it. Such organizations shall comply with the guidelines adopted by the Organization;[1]

.2 The survey of marine diesel engines and equipment for compliance with regulation 13 of this Annex shall be conducted in accordance with the revised NO_x Technical Code 2008;

.3 When a nominated surveyor or recognized organization determines that the condition of the equipment does not correspond substantially with the particulars of the certificate, they shall ensure that corrective action is taken and shall in due course notify the Administration. If such corrective action is not taken, the certificate shall be withdrawn by the Administration. If the ship is in a port of another Party, the appropriate authorities of the port State shall also be notified immediately. When an officer of the Administration, a nominated surveyor or recognized organization has notified the appropriate authorities of the port State, the Government of the port State concerned shall give such officer, surveyor or organization any necessary assistance to carry out their obligations under this regulation; and

.4 In every case, the Administration concerned shall fully guarantee the completeness and efficiency of the survey and shall undertake to ensure the necessary arrangements to satisfy this obligation.

4 The equipment shall be maintained to conform with the provisions of this Annex and no changes shall be made in the equipment, systems, fittings, arrangements, or material covered by the survey, without the express approval of the Administration. The direct replacement of such equipment and fittings with equipment and fittings that conform with the provisions of this Annex is permitted.

5 Whenever an accident occurs to a ship or a defect is discovered which substantially affects the efficiency or completeness of its equipment covered by this Annex, the master or owner of the ship shall report at the earliest opportunity to the Administration, a nominated surveyor, or recognized organization responsible for issuing the relevant certificate.

Regulation 6
Issue or endorsement of a Certificate

1 An International Air Pollution Prevention Certificate shall be issued, after an initial or renewal survey in accordance with the provisions of regulation 5 of this Annex, to:

.1 any ship of 400 gross tonnage and above engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties; and

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[1] Refer to the Guidelines for the authorization of organizations acting on behalf of the Administration, adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the Specifications on the survey and certification functions of recognized organizations acting on behalf of the Administration, adopted by the Organization by resolution A.789(19), as may be amended by the Organization.

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.2 platforms and drilling rigs engaged in voyages to waters under the sovereignty or jurisdiction of other Parties.

2 A ship constructed before the date of entry into force of Annex VI for such ship's Administration shall be issued with an International Air Pollution Prevention Certificate in accordance with paragraph 1 of this regulation no later than the first scheduled dry-docking after the date of such entry into force, but in no case later than three years after this date.

3 Such certificate shall be issued or endorsed either by the Administration or by any person or organization duly authorized by it. In every case, the Administration assumes full responsibility for the certificate.

Regulation 7
Issue of a Certificate by another Party

1 A Party may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the provisions of this Annex are complied with, shall issue or authorize the issuance of an International Air Pollution Prevention Certificate to the ship, and where appropriate, endorse or authorize the endorsement of that certificate on the ship, in accordance with this Annex.

2 A copy of the certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.

3 A certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as a certificate issued under regulation 6 of this Annex.

4 No International Air Pollution Prevention Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party.

Regulation 8
Form of Certificate

The International Air Pollution Prevention Certificate shall be drawn up in a form corresponding to the model given in appendix I to this Annex and shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.

Regulation 9
Duration and Validity of Certificate

1 An International Air Pollution Prevention Certificate shall be issued for a period specified by the Administration, which shall not exceed five years.

2 Notwithstanding the requirements of paragraph 1 of this regulation:

.1 when the renewal survey is completed within three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate;

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.2 when the renewal survey is completed after the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of expiry of the existing certificate; and

.3 when the renewal survey is completed more than three months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding five years from the date of completion of the renewal survey.

3 If a certificate is issued for a period of less than five years, the Administration may extend the validity of the certificate beyond the expiry date to the maximum period specified in paragraph 1 of this regulation, provided that the surveys referred to in regulations 5.1.3 and 5.1.4 of this Annex applicable when a certificate is issued for a period of five years are carried out as appropriate.

4 If a renewal survey has been completed and a new certificate cannot be issued or placed on board the ship before the expiry date of the existing certificate, the person or organization authorized by the Administration may endorse the existing certificate and such a certificate shall be accepted as valid for a further period which shall not exceed five months from the expiry date.

5 If a ship, at the time when a certificate expires, is not in a port in which it is to be surveyed, the Administration may extend the period of validity of the certificate but this extension shall be granted only for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so. No certificate shall be extended for a period longer than three months, and a ship to which an extension is granted shall not, on its arrival in the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port without having a new certificate. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

6 A certificate issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding five years from the date of expiry of the existing certificate before the extension was granted.

7 In special circumstances, as determined by the Administration, a new certificate need not be dated from the date of expiry of the existing certificate as required by paragraph 2.1, 5 or 6 of this regulation. In these special circumstances, the new certificate shall be valid to a date not exceeding five years from the date of completion of the renewal survey.

8 If an annual or intermediate survey is completed before the period specified in regulation 5 of this Annex, then:

.1 the anniversary date shown on the certificate shall be amended by endorsement to a date which shall not be more than three months later than the date on which the survey was completed;

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.2 the subsequent annual or intermediate survey required by regulation 5 of this Annex shall be completed at the intervals prescribed by that regulation using the new anniversary date; and

.3 the expiry date may remain unchanged provided one or more annual or intermediate surveys, as appropriate, are carried out so that the maximum intervals between the surveys prescribed by regulation 5 of this Annex are not exceeded.

9 A certificate issued under regulation 6 or 7 of this Annex shall cease to be valid in any of the following cases:

.1 if the relevant surveys are not completed within the periods specified under regulation 5.1 of this Annex;

.2 if the certificate is not endorsed in accordance with regulation 5.1.3 or 5.1.4 of this Annex: and

.3 upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of regulation 5.4 of this Annex. In the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports.

Regulation 10
Port State Control on Operational Requirements

1 A ship, when in a port or an offshore terminal under the jurisdiction of another Party, is subject to inspection by officers duly authorized by such Party concerning operational requirements under this Annex, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of air pollution from ships.

2 In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as to ensure that the ship shall not sail until the situation has been brought to order in accordance with the requirements of this Annex.

3 Procedures relating to the port State control prescribed in article 5 of the present Convention shall apply to this regulation.

4 Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the present Convention.

Regulation 11
Detection of Violations and Enforcement

1 Parties shall co-operate in the detection of violations and the enforcement of the provisions of this Annex, using all appropriate and practicable measures of detection and environmental monitoring, adequate procedures for reporting and accumulation of evidence.

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2 A ship to which this Annex applies may, in any port or offshore terminal of a Party, be subject to inspection by officers appointed or authorized by that Party for the purpose of verifying whether the ship has emitted any of the substances covered by this Annex in violation of the provision of this Annex. If an inspection indicates a violation of this Annex, a report shall be forwarded to the Administration for any appropriate action.

3 Any Party shall furnish to the Administration evidence, if any, that the ship has emitted any of the substances covered by this Annex in violation of the provisions of this Annex. If it is practicable to do so, the competent authority of the former Party shall notify the master of the ship of the alleged violation.

4 Upon receiving such evidence, the Administration so informed shall investigate the matter, and may request the other Party to furnish further or better evidence of the alleged contravention. If the Administration is satisfied that sufficient evidence is available to enable proceedings to be brought in respect of the alleged violation, it shall cause such proceedings to be taken in accordance with its law as soon as possible. The Administration shall promptly inform the Party which has reported the alleged violation, as well as the Organization, of the action taken.

5 A Party may also inspect a ship to which this Annex applies when it enters the ports or offshore terminals under its jurisdiction, if a request for an investigation is received from any Party together with sufficient evidence that the ship has emitted any of the substances covered by the Annex in any place in violation of this Annex. The report of such investigation shall be sent to the Party requesting it and to the Administration so that the appropriate action may be taken under the present Convention.

6 The international law concerning the prevention, reduction, and control of pollution of the marine environment from ships, including that law relating to enforcement and safeguards, in force at the time of application or interpretation of this Annex, applies, *mutatis mutandis*, to the rules and standards set forth in this Annex.

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CHAPTER III

REQUIREMENTS FOR CONTROL OF EMISSIONS FROM SHIPS

Regulation 12
Ozone Depleting Substances

1 This regulation does not apply to permanently sealed equipment where there are no refrigerant charging connections or potentially removable components containing ozone depleting substances.

2 Subject to the provisions of regulation 3.1, any deliberate emissions of ozone depleting substances shall be prohibited. Deliberate emissions include emissions occurring in the course of maintaining, servicing, repairing or disposing of systems or equipment, except that deliberate emissions do not include minimal releases associated with the recapture or recycling of an ozone depleting substance. Emissions arising from leaks of an ozone depleting substance, whether or not the leaks are deliberate, may be regulated by Parties.

3.1 Installations which contain ozone depleting substances, other than hydro-chlorofluorocarbons, shall be prohibited:

.1 on ships constructed on or after 19 May 2005; or

.2 in the case of ships constructed before 19 May 2005, which have a contractual delivery date of the equipment to the ship on or after 19 May 2005 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 19 May 2005.

3.2 Installations which contain hydro-chlorofluorocarbons shall be prohibited:

.1 on ships constructed on or after 1 January 2020; or

.2 in the case of ships constructed before 1 January 2020, which have a contractual delivery date of the equipment to the ship on or after 1 January 2020 or, in the absence of a contractual delivery date, the actual delivery of the equipment to the ship on or after 1 January 2020.

4 The substances referred to in this regulation, and equipment containing such substances, shall be delivered to appropriate reception facilities when removed from ships.

5 Each ship subject to regulation 6.1 shall maintain a list of equipment containing ozone depleting substances.[2]

6 Each ship subject to regulation 6.1 which has rechargeable systems that contain ozone depleting substances shall maintain an Ozone Depleting Substances Record Book. This Record Book may form part of an existing log-book or electronic recording system as approved by the Administration.

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[2] See Appendix I, Supplement to International Air Pollution Prevention Certificate (IAPP Certificate), section 2.1

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7 Entries in the Ozone Depleting Substances Record Book shall be recorded in terms of mass (kg) of substance and shall be completed without delay on each occasion, in respect of the following:

.1 recharge, full or partial, of equipment containing ozone depleting substances;

.2 repair or maintenance of equipment containing ozone depleting substances;

.3 discharge of ozone depleting substances to the atmosphere:

.3.1 deliberate; and

.3.2 non-deliberate;

.4 discharge of ozone depleting substances to land-based reception facilities; and

.5 supply of ozone depleting substances to the ship.

Regulation 13
Nitrogen Oxides (NO_x)

Application

1.1 This regulation shall apply to:

.1 each marine diesel engine with a power output of more than 130 kW installed on a ship; and

.2 each marine diesel engine with a power output of more than 130 kW which undergoes a major conversion on or after 1 January 2000 except when demonstrated to the satisfaction of the Administration that such engine is an identical replacement to the engine which it is replacing and is otherwise not covered under paragraph 1.1.1 of this regulation.

1.2 This regulation does not apply to:

.1 a marine diesel engine intended to be used solely for emergencies, or solely to power any device or equipment intended to be used solely for emergencies on the ship on which it is installed, or a marine diesel engine installed in lifeboats intended to be used solely for emergencies; and

.2 a marine diesel engine installed on a ship solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly, provided that such engine is subject to an alternative NO_x control measure established by the Administration.

1.3 Notwithstanding the provisions of subparagraph 1.1 of this paragraph, the Administration may provide an exclusion from the application of this regulation for any marine diesel engine which is installed on a ship constructed, or for any marine diesel engine which undergoes a major conversion, before 19 May 2005, provided that the ship on which the engine is installed is solely engaged in voyages to ports or offshore terminals within the State the flag of which the ship is entitled to fly.

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Major Conversion

2.1 For the purpose of this regulation, *major conversion* means a modification on or after 1 January 2000 of a marine diesel engine that has not already been certified to the standards set forth in paragraph 3, 4, or 5.1.1 of this regulation where:

.1 the engine is replaced by a marine diesel engine or an additional marine diesel engine is installed, or

.2 any substantial modification, as defined in the revised NO_x Technical Code 2008, is made to the engine, or

.3 the maximum continuous rating of the engine is increased by more than 10% compared to the maximum continuous rating of the original certification of the engine.

2.2 For a major conversion involving the replacement of a marine diesel engine with a non-identical marine diesel engine or the installation of an additional marine diesel engine, the standards in this regulation in force at the time of the replacement or addition of the engine shall apply. On or after 1 January 2016, in the case of replacement engines only, if it is not possible for such a replacement engine to meet the standards set forth in paragraph 5.1.1 of this regulation (Tier III), then that replacement engine shall meet the standards set forth in paragraph 4 of this regulation (Tier II). Guidelines are to be developed by the Organization to set forth the criteria of when it is not possible for a replacement engine to meet the standards in subparagraph 5.1.1 of this regulation.

2.3 A marine diesel engine referred to in paragraph 2.1.2 or 2.1.3 shall meet the following standards:

.1 for ships constructed prior to 1 January 2000, the standards set forth in paragraph 3 of this regulation shall apply; and

.2 for ships constructed on or after 1 January 2000, the standards in force at the time the ship was constructed shall apply.

Tier I

3 Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2000 and prior to 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1 17.0 g/kWh when n is less than 130 rpm;

.2 $45 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm;

.3 9.8 g/kWh when n is 2,000 rpm or more.

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Tier II

4 Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2011 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1 14.4 g/kWh when n is less than 130 rpm;

.2 $44 \cdot n^{(-0.23)}$ g/kWh when n is 130 or more but less than 2,000 rpm;

.3 7.7 g/kWh when n is 2,000 rpm or more.

Tier III

5.1 Subject to regulation 3 of this Annex, the operation of a marine diesel engine which is installed on a ship constructed on or after 1 January 2016:

.1 is prohibited except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1.1 3.4 g/kWh when n is less than 130 rpm;

.1.2 $9 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm; and

.1.3 2.0 g/kWh when n is 2,000 rpm or more;

.2 is subject to the standards set forth in subparagraph 5.1.1 of this paragraph when the ship is operating in an Emission Control Area designated under paragraph 6 of this regulation; and

.3 is subject to the standards set forth in paragraph 4 of this regulation when the ship is operating outside of an Emission Control Area designated under paragraph 6 of this regulation.

5.2 Subject to the review set forth in paragraph 10 of this regulation, the standards set forth in paragraph 5.1.1 of this regulation shall not apply to:

.1 a marine diesel engine installed on a ship with a length (L), as defined in regulation 1.19 of Annex I to the present Convention, less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes; or

.2 a marine diesel engine installed on a ship with a combined nameplate diesel engine propulsion power of less than 750 kW if it is demonstrated, to the satisfaction of the Administration, that the ship cannot comply with the standards set forth in paragraph 5.1.1 of this regulation because of design or construction limitations of the ship.

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Emission Control Area

6 For the purpose of this regulation, an Emission Control Area shall be any sea area, including any port area, designated by the Organization in accordance with the criteria and procedures set forth in appendix III to this Annex.

Marine Diesel Engines Installed on a Ship Constructed Prior to 1 January 2000

7.1 Notwithstanding paragraph 1.1.1 of this regulation, a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000 shall comply with the emission limits set forth in subparagraph 7.4 of this paragraph, provided that an Approved Method for that engine has been certified by an Administration of a Party and notification of such certification has been submitted to the Organization by the certifying Administration. Compliance with this paragraph shall be demonstrated through one of the following:

.1 installation of the certified Approved Method, as confirmed by a survey using the verification procedure specified in the Approved Method File, including appropriate notation on the ship's International Air Pollution Prevention Certificate of the presence of the Approved Method; or

.2 certification of the engine confirming that it operates within the limits set forth in paragraph 3, 4, or 5.1.1 of this regulation and an appropriate notation of the engine certification on the ship's International Air Pollution Prevention Certificate.

7.2 Subparagraph 7.1 shall apply no later than the first renewal survey that occurs 12 months or more after deposit of the notification in subparagraph 7.1. If a shipowner of a ship on which an Approved Method is to be installed can demonstrate to the satisfaction of the Administration that the Approved Method was not commercially available despite best efforts to obtain it, then that Approved Method shall be installed on the ship no later than the next annual survey of that ship which falls after the Approved Method is commercially available.

7.3 With regard to a ship with a marine diesel engine with a power output of more than 5,000 kW and a per cylinder displacement at or above 90 litres installed on a ship constructed on or after 1 January 1990 but prior to 1 January 2000, the International Air Pollution Prevention Certificate shall, for a marine diesel engine to which paragraph 7.1 of this regulation applies, indicate that either an Approved Method has been applied pursuant to paragraph 7.1.1 of this regulation or the engine has been certified pursuant to paragraph 7.1.2 of this regulation or that an Approved Method does not yet exist or is not yet commercially available as described in subparagraph 7.2 of this regulation.

7.4 Subject to regulation 3 of this Annex, the operation of a marine diesel engine described in subparagraph 7.1 is prohibited, except when the emission of nitrogen oxides (calculated as the total weighted emission of NO_2) from the engine is within the following limits, where n = rated engine speed (crankshaft revolutions per minute):

.1 17.0 g/kWh when n is less than 130 rpm;

.2 $45 \cdot n^{(-0.2)}$ g/kWh when n is 130 or more but less than 2,000 rpm; and

.3 9.8 g/kWh when n is 2,000 rpm or more.

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7.5 Certification of an Approved Method shall be in accordance with chapter 7 of the revised NO_x Technical Code 2008 and shall include verification:

.1 by the designer of the base marine diesel engine to which the Approved Method applies that the calculated effect of the Approved Method will not decrease engine rating by more than 1.0%, increase fuel consumption by more than 2.0% as measured according to the appropriate test cycle set forth in the revised NO_x Technical Code 2008, or adversely affect engine durability or reliability; and

.2 that the cost of the Approved Method is not excessive, which is determined by a comparison of the amount of NO_x reduced by the Approved Method to achieve the standard set forth in subparagraph 7.4 of this paragraph and the cost of purchasing and installing such Approved Method.[3]

Certification

8 The revised NO_x Technical Code 2008 shall be applied in the certification, testing, and measurement procedures for the standards set forth in this regulation.

9 The procedures for determining NO_x emissions set out in the revised NO_x Technical Code 2008 are intended to be representative of the normal operation of the engine. Defeat devices and irrational emission control strategies undermine this intention and shall not be allowed. This regulation shall not prevent the use of auxiliary control devices that are used to protect the engine and/or its ancillary equipment against operating conditions that could result in damage or failure or that are used to facilitate the starting of the engine.

Review

10 Beginning in 2012 and completed no later than 2013, the Organization shall review the status of the technological developments to implement the standards set forth in paragraph 5.1.1 of this regulation and shall, if proven necessary, adjust the time periods set forth in that subparagraph.

Regulation 14
Sulphur Oxides (SO_x) and Particulate Matter

General Requirements

1 The sulphur content of any fuel oil used on board ships shall not exceed the following limits:

.1 4.50% m/m prior to 1 January 2012;

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[3] The cost of an Approved Method shall not exceed 375 Special Drawing Rights/metric ton NO_x calculated in accordance with the Cost-Effectiveness formula below:

$$Ce = \frac{\text{Cost of Approved Method} \cdot 10^6}{P(kW) \cdot 0.768 \cdot 6000(\text{hours/year}) \cdot 5\ (\text{years}) \cdot \Delta NO_x(g/kWh)}$$

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.2 3.50% m/m on and after 1 January 2012; and

.3 0.50% m/m on and after 1 January 2020.

2 The worldwide average sulphur content of residual fuel oil supplied for use on board ships shall be monitored taking into account guidelines developed by the Organization.[4]

Requirements within Emission Control Areas

3 For the purpose of this regulation, Emission Control Areas shall include:

.1 the Baltic Sea area as defined in regulation 1.11.2 of Annex I, the North Sea as defined in regulation 5(1)(f) of Annex V; and

.2 any other sea area, including port areas, designated by the Organization in accordance with criteria and procedures set forth in appendix III to this Annex.

4 While ships are operating within an Emission Control Area, the sulphur content of fuel oil used on board ships shall not exceed the following limits:

.1 1.50% m/m prior to 1 July 2010;

.2 1.00% m/m on and after 1 July 2010; and

.3 0.10% m/m on and after 1 January 2015.

5 The sulphur content of fuel oil referred to in paragraph 1 and paragraph 4 of this regulation shall be documented by its supplier as required by regulation 18 of this Annex.

6 Those ships using separate fuel oils to comply with paragraph 4 of this regulation and entering or leaving an Emission Control Area set forth in paragraph 3 of this regulation shall carry a written procedure showing how the fuel oil change-over is to be done, allowing sufficient time for the fuel oil service system to be fully flushed of all fuel oils exceeding the applicable sulphur content specified in paragraph 4 of this regulation prior to entry into an Emission Control Area. The volume of low sulphur fuel oils in each tank as well as the date, time, and position of the ship when any fuel-oil-change-over operation is completed prior to the entry into an Emission Control Area or commenced after exit from such an area, shall be recorded in such log-book as prescribed by the Administration.

7 During the first twelve months immediately following an amendment designating a specific Emission Control Area under paragraph 3.2 of this regulation, ships operating in that Emission Control Area are exempt from the requirements in paragraphs 4 and 6 of this regulation and from the requirements of paragraph 5 of this regulation insofar as they relate to paragraph 4 of this regulation.

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[4] MEPC.82(43), "Guidelines for Monitoring the World-wide Average Sulphur Content of Residual Fuel Oils Supplied for Use On Board Ships".

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Review Provision

8 A review of the standard set forth in subparagraph 1.3 of this regulation shall be completed by 2018 to determine the availability of fuel oil to comply with the fuel oil standard set forth in that paragraph and shall take into account the following elements:

.1 the global market supply and demand for fuel oil to comply with paragraph 1.3 of this regulation that exist at the time that the review is conducted;

.2 an analysis of the trends in fuel oil markets; and

.3 any other relevant issue.

9 The Organization shall establish a group of experts, comprising of representatives with the appropriate expertise in the fuel oil market and appropriate maritime, environmental, scientific, and legal expertise, to conduct the review referred to in paragraph 8 of this regulation. The group of experts shall develop the appropriate information to inform the decision to be taken by the Parties.

10 The Parties, based on the information developed by the group of experts, may decide whether it is possible for ships to comply with the date in paragraph 1.3 of this regulation. If a decision is taken that it is not possible for ships to comply, then the standard in that subparagraph shall become effective on 1 January 2025.

Regulation 15
Volatile Organic Compounds (VOCs)

1 If the emissions of VOCs from a tanker are to be regulated in a port or ports or a terminal or terminals under the jurisdiction of a Party, they shall be regulated in accordance with the provisions of this regulation.

2 A Party regulating tankers for VOC emissions shall submit a notification to the Organization. This notification shall include information on the size of tankers to be controlled, the cargoes requiring vapour emission control systems, and the effective date of such control. The notification shall be submitted at least six months before the effective date.

3 A Party which designates ports or terminals at which VOCs emissions from tankers are to be regulated shall ensure that vapour emission control systems, approved by that Party taking into account the safety standards for such systems developed by the Organization[4], are provided in any designated port and terminal and are operated safely and in a manner so as to avoid undue delay to a ship.

4 The Organization shall circulate a list of the ports and terminals designated by Parties to other Parties and Member States of the Organization for their information.

5 A tanker to which paragraph 1 of this regulation applies shall be provided with a vapour emission collection system approved by the Administration taking into account the safety standards for such systems developed by the Organization[4], and shall use this system during the loading of relevant cargoes. A port or terminal which has installed vapour emission control systems in accordance with this regulation may accept tankers which are not fitted with vapour

[4] MSC/Circ.585, Standards for vapour emission control systems.

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collection systems for a period of three years after the effective date identified in paragraph 2 of this regulation.

6 A tanker carrying crude oil shall have on board and implement a VOC Management Plan approved by the Administration. Such a plan shall be prepared taking into account the guidelines developed by the Organization. The plan shall be specific to each ship and shall at least:

.1 provide written procedures for minimizing VOC emissions during the loading, sea passage and discharge of cargo;

.2 give consideration to the additional VOC generated by crude oil washing;

.3 identify a person responsible for implementing the plan; and

.4 for ships on international voyages, be written in the working language of the master and officers and, if the working language of the master and officers is not English, French, or Spanish, include a translation into one of these languages.

7 This regulation shall also apply to gas carriers only if the type of loading and containment systems allow safe retention of non-methane VOCs on board or their safe return ashore.[6]

Regulation 16
Shipboard Incineration

1 Except as provided in paragraph 4 of this regulation, shipboard incineration shall be allowed only in a shipboard incinerator.

2 Shipboard incineration of the following substances shall be prohibited:

.1 residues of cargoes subject to Annex I, II or III or related contaminated packing materials;

.2 polychlorinated biphenyls (PCBs);

.3 garbage, as defined by Annex V, containing more than traces of heavy metals;

.4 refined petroleum products containing halogen compounds;

.5 sewage sludge and sludge oil either of which are not generated on board the ship; and

.6 exhaust gas cleaning system residues.

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[6] MSC.30(61), "International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk", chapter 5.

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3 Shipboard incineration of polyvinyl chlorides (PVCs) shall be prohibited, except in shipboard incinerator for which an IMO Type Approval Certificates[7] has been issued.

4 Shipboard incineration of sewage sludge and sludge oil generated during normal operation of a ship may also take place in the main or auxiliary power plant or boilers, but in those cases, shall not take place inside ports, harbours and estuaries.

5 Nothing in this regulation neither:

.1 affects the prohibition in, or other requirements of, the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, as amended, and the 1996 Protocol thereto, nor

.2 precludes the development, installation and operation of alternative design shipboard thermal waste treatment devices that meet or exceed the requirements of this regulation.

6.1 Except as provided in subparagraph 6.2 of this paragraph, each incinerator on a ship constructed on or after 1 January 2000 or incinerator which is installed on board a ship on or after 1 January 2000 shall meet the requirements contained in appendix IV to this Annex. Each incinerator subject to this subparagraph shall be approved by the Administration taking into account the standard specification for shipboard incinerators developed by the Organization[8]; or

6.2 The Administration may allow exclusion from the application of subparagraph 6.1 of this paragraph to any incinerator which is installed on board a ship before 19 May 2005, provided that the ship is solely engaged in voyages within waters subject to the sovereignty or jurisdiction of the State the flag of which the ship is entitled to fly.

7 Incinerators installed in accordance with the requirements of paragraph 6.1 of this regulation shall be provided with a manufacturer's operating manual which is to be retained with the unit and which shall specify how to operate the incinerator within the limits described in paragraph 2 of appendix IV of this Annex.

8 Personnel responsible for the operation of an incinerator installed in accordance with the requirements of paragraph 6.1 of this regulation shall be trained to implement the guidance provided in the manufacturer's operating manual as required by paragraph 7 of this regulation.

9 For incinerators installed in accordance with the requirements of paragraph 6.1 of this regulation the combustion chamber gas outlet temperature shall be monitored at all times the unit is in operation. Where that incinerator is of the continuous-feed type, waste shall not be fed into the unit when the combustion chamber gas outlet temperature is below 850°C. Where that incinerator is of the batch-loaded type, the unit shall be designed so that the combustion chamber gas outlet temperature shall reach 600°C within five minutes after start-up and will thereafter stabilize at a temperature not less than 850°C.

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[7] Type Approval Certificates issued in accordance with resolution MEPC.59(33) or MEPC.76(40).

[8] Refer to resolution MEPC.76(40), Standard specification for shipboard incinerators.

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Regulation 17
Reception Facilities

1 Each Party undertakes to ensure the provision of facilities adequate to meet the:

.1 needs of ships using its repair ports for the reception of ozone depleting substances and equipment containing such substances when removed from ships;

.2 needs of ships using its ports, terminals or repair ports for the reception of exhaust gas cleaning residues from an exhaust gas cleaning system,

without causing undue delay to ships; and

.3 needs in ship-breaking facilities for the reception of ozone depleting substances and equipment containing such substances when removed from ships.

2 If a particular port or terminal of a Party is – taking into account the guidelines to be developed by the Organization – remotely located from, or lacking in, the industrial infrastructure necessary to manage and process those substances referred to in paragraph 1 of this regulation and therefore cannot accept such substances, then the Party shall inform the Organization of any such port or terminal so that this information may be circulated to all Parties and Member States of the Organization for their information and any appropriate action. Each Party that has provided the Organization with such information shall also notify the Organization of its ports and terminals where reception facilities are available to manage and process such substances.

3 Each Party shall notify the Organization for transmission to the Members of the Organization of all cases where the facilities provided under this regulation are unavailable or alleged to be inadequate.

Regulation 18
Fuel Oil Availability and Quality

Fuel Oil Availability

1 Each Party shall take all reasonable steps to promote the availability of fuel oils which comply with this Annex and inform the Organization of the availability of compliant fuel oils in its ports and terminals.

2.1 If a ship is found by a Party not to be in compliance with the standards for compliant fuel oils set forth in this Annex, the competent authority of the Party is entitled to require the ship to:

.1 present a record of the actions taken to attempt to achieve compliance; and

.2 provide evidence that it attempted to purchase compliant fuel oil in accordance with its voyage plan and, if it was not made available where planned, that attempts were made to locate alternative sources for such fuel oil and that despite best efforts to obtain compliant fuel oil, no such fuel oil was made available for purchase.

2.2 The ship should not be required to deviate from its intended voyage or to delay unduly the voyage in order to achieve compliance.

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2.3 If a ship provides the information set forth in subparagraph 2.1 of this paragraph, a Party shall take into account all relevant circumstances and the evidence presented to determine the appropriate action to take, including not taking control measures.

2.4 A ship shall notify its Administration and the competent authority of the relevant port of destination when it cannot purchase compliant fuel oil.

2.5 A Party shall notify the Organization when a ship has presented evidence of the non-availability of compliant fuel oil.

Fuel Oil Quality

3 Fuel oil for combustion purposes delivered to and used on board ships to which this Annex applies shall meet the following requirements:

.1 except as provided in subparagraph 3.2:

.1.1 the fuel oil shall be blends of hydrocarbons derived from petroleum refining. This shall not preclude the incorporation of small amounts of additives intended to improve some aspects of performance;

.1.2 the fuel oil shall be free from inorganic acid; and

.1.3 the fuel oil shall not include any added substance or chemical waste which:

.1.3.1 jeopardizes the safety of ships or adversely affects the performance of the machinery, or

.1.3.2 is harmful to personnel, or

.1.3.3 contributes overall to additional air pollution.

.2 fuel oil for combustion purposes derived by methods other than petroleum refining shall not:

.2.1 exceed the applicable sulphur content set forth in regulation 14 of this Annex;

.2.2 cause an engine to exceed the applicable NO_x emission limit set forth in paragraphs 3, 4, 5.1.1 and 7.4 of regulation 13;

.2.3 contain inorganic acid; or

.2.4.1 jeopardize the safety of ships or adversely affect the performance of the machinery, or

.2.4.2 be harmful to personnel, or

.2.4.3 contribute overall to additional air pollution.

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4 This regulation does not apply to coal in its solid form or nuclear fuels. Paragraphs 5, 6, 7.1, 7.2, 8.1, 8.2, 9.2, 9.3, and 9.4 of this regulation do not apply to gas fuels such as Liquified Natural Gas, Compressed Natural Gas or Liquified Petroleum Gas. The sulphur content of gas fuels delivered to a ship specifically for combustion purposes on board that ship shall be documented by the supplier.

5 For each ship subject to regulations 5 and 6 of this Annex, details of fuel oil for combustion purposes delivered to and used on board shall be recorded by means of a bunker delivery note which shall contain at least the information specified in appendix V to this Annex.

6 The bunker delivery note shall be kept on board the ship in such a place as to be readily available for inspection at all reasonable times. It shall be retained for a period of three years after the fuel oil has been delivered on board.

7.1 The competent authority of a Party may inspect the bunker delivery notes on board any ship to which this Annex applies while the ship is in its port or offshore terminal, may make a copy of each delivery note, and may require the master or person in charge of the ship to certify that each copy is a true copy of such bunker delivery note. The competent authority may also verify the contents of each note through consultations with the port where the note was issued.

7.2 The inspection of the bunker delivery notes and the taking of certified copies by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.

8.1 The bunker delivery note shall be accompanied by a representative sample of the fuel oil delivered taking into account guidelines developed by the Organization.[9] The sample is to be sealed and signed by the supplier's representative and the master or officer in charge of the bunker operation on completion of bunkering operations and retained under the ship's control until the fuel oil is substantially consumed, but in any case for a period of not less than 12 months from the time of delivery.

8.2 If an Administration requires the representative sample to be analysed, it shall be done in accordance with the verification procedure set forth in appendix VI to determine whether the fuel oil meets the requirements of this Annex.

9 Parties undertake to ensure that appropriate authorities designated by them:

.1 maintain a register of local suppliers of fuel oil;

.2 require local suppliers to provide the bunker delivery note and sample as required by this regulation, certified by the fuel oil supplier that the fuel oil meets the requirements of regulations 14 and 18 of this Annex;

.3 require local suppliers to retain a copy of the bunker delivery note for at least three years for inspection and verification by the port State as necessary;

.4 take action as appropriate against fuel oil suppliers that have been found to deliver fuel oil that does not comply with that stated on the bunker delivery note;

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[9] Refer to MEPC.96(47), "Guidelines for the Sampling of Fuel Oil for Determination of Compliance with Annex VI of MARPOL 73/78".

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.5 inform the Administration of any ship receiving fuel oil found to be non-compliant with the requirements of regulation 14 or 18 of this Annex; and

.6 inform the Organization for transmission to Parties and Member States of the Organization of all cases where fuel oil suppliers have failed to meet the requirements specified in regulations 14 or 18 of this Annex.

10 In connection with port State inspections carried out by Parties, the Parties further undertake to:

.1 inform the Party or non-Party under whose jurisdiction a bunker delivery note was issued of cases of delivery of noncompliant fuel oil, giving all relevant information; and

.2 ensure that remedial action as appropriate is taken to bring noncompliant fuel oil discovered into compliance.

11 For every ship of 400 gross tonnage and above on scheduled services with frequent and regular port calls, an Administration may decide after application and consultation with affected States that compliance with paragraph 6 of this regulation may be documented in an alternative manner which gives similar certainty of compliance with regulations 14 and 18 of this Annex.

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APPENDIX I

Form of International Air Pollution Prevention (IAPP) Certificate
(Regulation 8)

INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1997, as amended by resolution MEPC.xx(58) in 2008, to amend the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as "the Convention") under the authority of the Government of:

.....

(full designation of the country)

by .....

(full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of ship*

Name of ship.....

Distinctive number or letters.....

Port of registry.....

Gross tonnage.....

IMO Number† .....

---

* Alternatively, the particulars of the ship may be placed horizontally in boxes.

† In accordance with IMO ship identification number scheme, adopted by the Organization by resolution A.600(15).

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THIS IS TO CERTIFY:

1 That the ship has been surveyed in accordance with regulation 5 of Annex VI of the Convention; and

2 That the survey shows that the equipment, systems, fittings, arrangements and materials fully comply with the applicable requirements of Annex VI of the Convention.

Completion date of survey on which this Certificate is based: ..... (dd/mm/yyyy)

This Certificate is valid until .....* subject to surveys in accordance with regulation 5 of Annex VI of the Convention.

Issued at .....
(Place of issue of certificate)

(dd/mm/yyyy): .....
(Date of issue)

.....
(Signature of authorized official issuing the certificate)

(Seal or stamp of the authority, as appropriate)

---

* Insert the date of expiry as specified by the Administration in accordance with regulation 9.1 of Annex VI of the Convention. The day and the month of this date correspond to the anniversary date as defined in regulation 2.3 of Annex VI of the Convention, unless amended in accordance with regulation 9.8 of Annex VI of the Convention.

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Endorsement for annual and intermediate surveys

THIS IS TO CERTIFY that at a survey required by regulation 5 of Annex VI of the Convention the ship was found to comply with the relevant provisions of that Annex:

Annual survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate* survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate* survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Annual survey:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

---

* Delete as appropriate.

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Annual/intermediate survey in accordance with regulation 9.8.3

THIS IS TO CERTIFY that, at an annual/intermediate* survey in accordance with regulation 9.8.3 of Annex VI of the Convention, the ship was found to comply with the relevant provisions of that Annex:

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Endorsement to extend the certificate if valid for less than 5 years where regulation 9.3 applies

The ship complies with the relevant provisions of the Annex, and this certificate shall, in accordance with regulation 9.3 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy): .....

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Endorsement where the renewal survey has been completed and regulation 9.4 applies

The ship complies with the relevant provisions of the Annex, and this certificate shall, in accordance with regulation 9.4 of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy): .....

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

* Delete as appropriate.

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Endorsement to extend the validity of the certificate until reaching the port of survey or for a period of grace where regulation 9.5 or 9.6 applies

This certificate shall, in accordance with regulation 9.5 or 9.6* of Annex VI of the Convention, be accepted as valid until (dd/mm/yyyy):.....

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

Endorsement for advancement of anniversary date where regulation 9.8 applies

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy): .....

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

In accordance with regulation 9.8 of Annex VI of the Convention, the new anniversary date is (dd/mm/yyyy): .....

Signed: .....
(Signature of authorized official)

Place: .....

Date (dd/mm/yyyy): .....

(Seal or stamp of the authority, as appropriate)

---

* Delete as appropriate.

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SUPPLEMENT TO
INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE
(IAPP CERTIFICATE)

RECORD OF CONSTRUCTION AND EQUIPMENT

Notes:

1 This Record shall be permanently attached to the IAPP Certificate. The IAPP Certificate shall be available on board the ship at all times.

2 The Record shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.

3 Entries in boxes shall be made by inserting either a cross (x) for the answer "yes" and "applicable" or a (-) for the answers "no" and "not applicable" as appropriate.

4 Unless otherwise stated, regulations mentioned in this Record refer to regulations of Annex VI of the Convention and resolutions or circulars refer to those adopted by the International Maritime Organization.

1 Particulars of ship

1.1 Name of ship .....

1.2 IMO number .....

1.3 Date on which keel was laid or ship was at a similar stage of construction .....

1.4 Length (L) # metres .....

Completed only in respect of ships constructed on or after 1 January 2016, which are specially designed, and used solely, for recreational purposes and to which, in accordance with regulation 13.5.2.1, the NO_x emission limit as given by regulation 13.5.1.1 will not apply.

2 Control of emissions from ships

2.1 *Ozone depleting substances (regulation 12)*

2.1.1 The following fire-extinguishing systems, other systems and equipment containing ozone depleting substances, other than hydro-chlorofluorocarbons, installed before 19 May 2005 may continue in service:

System or equipment	Location on board	Substance

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2.1.2 The following systems containing hydro-chlorofluorocarbons (HCFCs) installed before 1 January 2020 may continue in service:

System or equipment	Location on board	Substance

2.2 *Nitrogen oxides (NO_x) (regulation 13)*

2.2.1 The following marine diesel engines installed on this ship comply with the applicable emission limit of regulation 13 in accordance with the revised NO_x Technical Code 2008:

		Engine #1	Engine #2	Engine #3	Engine #4	Engine #5	Engine #6
Manufacturer and model							
Serial number							
Use							
Power output (kW)							
Rated speed (RPM)							
Date of installation (dd/mm/yyyy)							
Date of major conversion (dd/mm/yyyy)	According to Reg. 13.2.2						
	According to Reg. 13.2.3						
Exempted by regulation 13.1.1.2		☐	☐	☐	☐	☐	☐
Tier I Reg.13.3		☐	☐	☐	☐	☐	☐
Tier II Reg.13.4		☐	☐	☐	☐	☐	☐
Tier II Reg. 13.2.2 or 13.5.2		☐	☐	☐	☐	☐	☐
Tier III Reg.13.5.1.1		☐	☐	☐	☐	☐	☐
Approved Method exists		☐	☐	☐	☐	☐	☐
Approved Method not commercially available		☐	☐	☐	☐	☐	☐
Approved Method installed		☐	☐	☐	☐	☐	☐

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2.3 *Sulphur oxides (SO_x) and particulate matter (regulation 14)*

2.3.1 When the ship operates within an Emission Control Area specified in regulation 14.3, the ship uses:

.1 fuel oil with a sulphur content that does not exceed the applicable limit value as documented by bunker delivery notes; or..... ☐

.2 an equivalent arrangement approved in accordance with regulation 4.1 as listed in 2.6 ..... ☐

2.4 *Volatile organic compounds (VOCs) (regulation 15)*

2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ.585. ..... ☐

2.4.2.1 For a tanker carrying crude oil, there is an approved VOC Management Plan ..... ☐

2.4.2.2 VOC Management Plan approval reference: .....

2.5 *Shipboard incineration (regulation 16)*

The ship has an incinerator:

.1 installed on or after 1 January 2000 which complies with resolution MEPC.76(40) as amended ..... ☐

.2 installed before 1 January 2000 which complies with:

.2.1 resolution MEPC.59(33) ..... ☐

.2.2 resolution MEPC.76(40) ..... ☐

2.6 *Equivalents (regulation 4)*

The ship has been allowed to use the following fitting, material, appliance or apparatus to be fitted in a ship or other procedures, alternative fuel oils, or compliance methods used as an alternative to that required by this Annex:

System or equipment	Equivalent used	Approval reference

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THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at .....
(Place of issue of the Record)

(dd/mm/yyyy): .....
(Date of issue)

.....
(Signature of duly authorized official issuing the Record)

(Seal or stamp of the authority, as appropriate)

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APPENDIX II

TEST CYCLES AND WEIGHTING FACTORS
(Regulation 13)

The following test cycles and weighing factors shall be applied for verification of compliance of marine diesel engines with the applicable NO_x limit in accordance with regulation 13 of this Annex using the test procedure and calculation method as specified in the revised NO_x Technical Code 2008.

.1 For constant-speed marine engines for ship main propulsion, including diesel-electric drive, test cycle E2 shall be applied;

.2 For controllable-pitch propeller sets test cycle E2 shall be applied;

.3 For propeller-law-operated main and propeller-law-operated auxiliary engines the test cycle E3 shall be applied;

.4 For constant-speed auxiliary engines test cycle D2 shall be applied; and

.5 For variable-speed, variable-load auxiliary engines, not included above, test cycle C1 shall be applied.

Test cycle for *constant speed main propulsion* application
(including diesel-electric drive and all controllable-pitch propeller installations)

Test cycle type E2	Speed	100%	100%	100%	100%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *propeller-law-operated main* and *propeller-law-operated auxiliary engine* application

Test cycle type E3	Speed	100%	91%	80%	63%
	Power	100%	75%	50%	25%
	Weighting factor	0.2	0.5	0.15	0.15

Test cycle for *constant-speed auxiliary engine* application

Test cycle type D2	Speed	100%	100%	100%	100%	100%
	Power	100%	75%	50%	25%	10%
	Weighting factor	0.05	0.25	0.3	0.3	0.1

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Test cycle for *variable-speed and load auxiliary engine* application

Test cycle type C1	Speed	Rated				Intermediate			Idle
	Torque	100%	75%	50%	10%	100%	75%	50%	0%
	Weighting factor	0.15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

In the case of an engine to be certified in accordance with subparagraph 5.1.1 of regulation 13, the specific emission at each individual mode point shall not exceed the applicable NO_x emission limit value by more than 50% except as follows:

.1 The 10% mode point in the D2 test cycle.

.2 The 10% mode point in the C1 test cycle.

.3 The idle mode point in the C1 test cycle.

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APPENDIX III

CRITERIA AND PROCEDURES FOR DESIGNATION OF EMISSION CONTROL AREAS
(Regulation 13.6 and regulation 14.3)

1 OBJECTIVES

1.1 The purpose of this appendix is to provide the criteria and procedures to Parties for the formulation and submission of proposals for the designation of Emission Control Areas and to set forth the factors to be considered in the assessment of such proposals by the Organization.

1.2 Emissions of NO_x, SO_x and particulate matter from ocean-going ships contribute to ambient concentrations of air pollution in cities and coastal areas around the world. Adverse public health and environmental effects associated with air pollution include premature mortality, cardiopulmonary disease, lung cancer, chronic respiratory ailments, acidification and eutrophication.

1.3 An Emission Control Area should be considered for adoption by the Organization if supported by a demonstrated need to prevent, reduce, and control emissions of NO_x or SO_x and particulate matter or all three types of emissions (hereinafter emissions) from ships.

2 PROCESS FOR THE DESIGNATION OF EMISSION CONTROL AREAS

2.1 A proposal to the Organization for designation of an Emission Control Area for NO_x or SO_x and particulate matter or all three types of emissions may be submitted only by Parties. Where two or more Parties have a common interest in a particular area, they should formulate a coordinated proposal.

2.2 A proposal to designate a given area as an Emission Control Area should be submitted to the Organization in accordance with the rules and procedures established by the Organization.

3 CRITERIA FOR DESIGNATION OF AN EMISSION CONTROL AREA

3.1 The proposal shall include:

.1 a clear delineation of the proposed area of application, along with a reference chart on which the area is marked;

.2 the type or types of emission(s) that is or are being proposed for control (i.e. NO_x or SO_x and particulate matter or all three types of emissions);

.3 a description of the human populations and environmental areas at risk from the impacts of ship emissions;

.4 an assessment that emissions from ships operating in the proposed area of application are contributing to ambient concentrations of air pollution or to adverse environmental impacts. Such assessment shall include a description of the impacts of the relevant emissions on human health and the environment, such as adverse impacts to terrestrial and aquatic ecosystems, areas of natural

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productivity, critical habitats, water quality, human health, and areas of cultural and scientific significance, if applicable. The sources of relevant data including methodologies used shall be identified;

.5 relevant information pertaining to the meteorological conditions in the proposed area of application to the human populations and environmental areas at risk, in particular prevailing wind patterns, or to topographical, geological, oceanographic, morphological, or other conditions that contribute to ambient concentrations of air pollution or adverse environmental impacts;

.6 the nature of the ship traffic in the proposed Emission Control Area, including the patterns and density of such traffic;

.7 a description of the control measures taken by the proposing Party or Parties addressing land-based sources of NO_x, SO_x and particulate matter emissions affecting the human populations and environmental areas at risk that are in place and operating concurrent with the consideration of measures to be adopted in relation to provisions of regulations 13 and 14 of Annex VI; and

.8 the relative costs of reducing emissions from ships when compared with land-based controls, and the economic impacts on shipping engaged in international trade.

3.2 The geographical limits of an Emission Control Area will be based on the relevant criteria outlined above, including emissions and deposition from ships navigating in the proposed area, traffic patterns and density, and wind conditions.

4 PROCEDURES FOR THE ASSESSMENT AND ADOPTION OF EMISSION CONTROL AREAS BY THE ORGANIZATION

4.1 The Organization shall consider each proposal submitted to it by a Party or Parties.

4.2 In assessing the proposal, the Organization shall take into account the criteria which are to be included in each proposal for adoption as set forth in section 3 above.

4.3 An Emission Control Area shall be designated by means of an amendment to this Annex, considered, adopted and brought into force in accordance with article 16 of the present Convention.

5 OPERATION OF EMISSION CONTROL AREAS

5.1 Parties which have ships navigating in the area are encouraged to bring to the Organization any concerns regarding the operation of the area.

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APPENDIX IV

TYPE APPROVAL AND OPERATING LIMITS FOR SHIPBOARD INCINERATORS (Regulation 16)

1 Ships incinerators described in regulation 16.6.1 on board shall possess an IMO type approval certificate for each incinerator. In order to obtain such certificate, the incinerator shall be designed and built to an approved standard as described in regulation 16.6.1. Each model shall be subject to a specified type approval test operation at the factory or an approved test facility, and under the responsibility of the Administration, using the following standard fuel/waste specification for the type approval test for determining whether the incinerator operates within the limits specified in paragraph 2 of this appendix:

Sludge Oil Consisting of:	75% Sludge oil from HFO; 5% waste lubricating oil; and 20% emulsified water.
Solid waste consisting of:	50% food waste; 50% rubbish containing: approx. 30% paper, " 40% cardboard, " 10% rags, " 20% plastic The mixture will have up to 50% moisture and 7% incombustible solids.

2 Incinerators described in regulation 16.6.1 shall operate within the following limits:

O_2 in combustion chamber:	6 – 12%
CO in flue gas maximum average:	200 mg/MJ
Soot number maximum average:	Bacharach 3 or Ringelman 1 (20% opacity) (A higher soot number is acceptable only during very short periods such as starting up)
Unburned components in ash residues:	Maximum 10% by Weight
Combustion chamber flue gas outlet temperature range:	850 – 1200°C

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APPENDIX V

INFORMATION TO BE INCLUDED IN THE BUNKER DELIVERY NOTE
(Regulation 18.5)

Name and IMO Number of receiving ship

Port

Date of commencement of delivery

Name, address, and telephone number of marine fuel oil supplier

Product name(s)

Quantity in metric tons

Density at 15°C, kg/m³*

Sulphur content (%m/m)**

A declaration signed and certified by the fuel oil supplier's representative that the fuel oil supplied is in conformity with the applicable subparagraph of regulation 14.1 or 14.4 and regulation 18.3 of this Annex.

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* Fuel oil shall be tested in accordance with ISO 3675:1998 or ISO 12185:1996.

** Fuel oil shall be tested in accordance with ISO 8754:2003.

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APPENDIX VI

FUEL VERIFICATION PROCEDURE FOR MARPOL ANNEX VI FUEL OIL SAMPLES (Regulation 18.8.2)

The following procedure shall be used to determine whether the fuel oil delivered to and used on board ships is compliant with the sulphur limits required by regulation 14 of Annex VI.

1 General Requirements

1.1 The representative fuel oil sample, which is required by paragraph 8.1 of regulation 18 (the "MARPOL sample") shall be used to verify the sulphur content of the fuel oil supplied to a ship.

1.2 An Administration, through its competent authority, shall manage the verification procedure.

1.3 The laboratories responsible for the verification procedure set forth in this appendix shall be fully accredited* for the purpose of conducting the tests.

2 Verification Procedure Stage 1

2.1 The MARPOL sample shall be delivered by the competent authority to the laboratory.

2.2 The laboratory shall:

.1 record the details of the seal number and the sample label on the test record;

.2 confirm that the condition of the seal on the MARPOL sample has not been broken; and

.3 reject any MARPOL sample where the seal has been broken.

2.3 If the seal of the MARPOL sample has not been broken, the laboratory shall proceed with the verification procedure and shall:

.1 ensure that the MARPOL sample is thoroughly homogenized;

.2 draw two sub-samples from the MARPOL sample; and

.3 reseal the MARPOL sample and record the new reseal details on the test record.

* Accreditation is in accordance with ISO 17025 or an equivalent standard.

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2.4 The two sub-samples shall be tested in succession, in accordance with the specified test method referred to in appendix V. For the purposes of this verification procedure, the results of the test analysis shall be referred to as "A" and "B":

.1 If the results of "A" and "B" are within the repeatability (r) of the test method, the results shall be considered valid.

.2 If the results of "A" and "B" are not within the repeatability (r) of the test method, both results shall be rejected and two new sub-samples should be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 2.3.3 above after the new sub-samples have been taken.

2.5 If the test results of "A" and "B" are valid, an average of these two results should be calculated thus giving the result referred to as "X":

.1 If the result of "X" is equal to or falls below the applicable limit required by Annex VI, the fuel oil shall be deemed to meet the requirements.

.2 If the result of "X" is greater than the applicable limit required by Annex VI Verification Procedure Stage 2 should be conducted; however, if the result of "X" is greater than the specification limit by 0.59R (where R is the reproducibility of the test method), the fuel oil shall be considered non-compliant and no further testing is necessary.

3 Verification Procedure Stage 2

3.1 If Stage 2 of the verification procedure is necessary in accordance with paragraph 2.5.2 above, the competent authority shall send the MARPOL sample to a second accredited laboratory.

3.2 Upon receiving the MARPOL sample, the laboratory shall:

.1 record the details of the reseal number applied in accordance with 2.3.3 and the sample label on the test record;

.2 draw two sub-samples from the MARPOL sample; and

.3 reseal the MARPOL sample and record the new reseal details on the test record.

3.3 The two sub-samples shall be tested in succession, in accordance with the test method specified in appendix V. For the purposes of this verification procedure, the results of the test analysis shall be referred to as "C" and "D":

.1 If the results of "C" and "D" are within the repeatability (r) of the test method, the results shall be considered valid.

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.2 If the results of "C" and "D" are not within the repeatability (r) of the test method, both results shall be rejected and two new sub-samples shall be taken by the laboratory and analysed. The sample bottle should be resealed in accordance with paragraph 3.2.3 after the new sub-samples have been taken.

3.4 If the test results of "C" and "D" are valid, and the results of "A", "B", "C", and "D" are within the reproducibility (R) of the test method then the laboratory shall average the results, which is referred to as "Y".

.1 If the result of "Y" is equal to or falls below the applicable limit required by Annex VI, the fuel oil shall be deemed to meet the requirements.

.2 If the result of "Y" is greater than the applicable limit required by Annex VI, then the fuel oil fails to meet the standards required by Annex VI.

3.5 If the result of "A", "B", "C" and "D" are not within the reproducibility (R) of the test method then the Administration may discard all of the test results and, at its discretion, repeat the entire testing process.

3.6 The results obtained from the verification procedure are final.

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RÉSOLUTION MEPC.176(58)
adoptée le 10 octobre 2008

AMENDEMENTS À L'ANNEXE AU PROTOCOLE DE 1997 MODIFIANT LA CONVENTION INTERNATIONALE DE 1973 POUR LA PRÉVENTION DE LA POLLUTION PAR LES NAVIRES, TELLE QUE MODIFIÉE PAR LE PROTOCOLE DE 1978 Y RELATIF

(Annexe VI révisée de MARPOL)

LE COMITÉ DE LA PROTECTION DU MILIEU MARIN,

RAPPELANT l'article 38 a) de la Convention portant création de l'Organisation maritime internationale, qui a trait aux fonctions conférées au Comité de la protection du milieu marin (le Comité) aux termes des conventions internationales visant à prévenir et combattre la pollution des mers,

NOTANT l'article 16 de la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommée la "Convention de 1973"), l'article VI du Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (ci-après dénommé le "Protocole de 1978") et l'article 4 du Protocole de 1997 modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif (ci-après dénommé le "Protocole de 1997"), lesquels énoncent ensemble la procédure d'amendement du Protocole de 1997 et confèrent à l'organe compétent de l'Organisation la fonction d'examiner et d'adopter des amendements à la Convention de 1973, telle que modifiée par les Protocoles de 1978 et de 1997,

NOTANT AUSSI que par le biais du Protocole de 1997, il est ajouté à la Convention de 1973 une nouvelle Annexe VI, intitulée "Règles relatives à la prévention de la pollution de l'atmosphère par les navires" (ci-après dénommée "Annexe VI"),

AYANT EXAMINÉ le projet d'amendements à l'Annexe VI de MARPOL,

1. ADOPTE, conformément à l'article 16 2) d) de la Convention de 1973, les amendements à l'Annexe VI dont le texte figure en annexe à la présente résolution;

2. DÉCIDE, conformément à l'article 16 2) f) iii) de la Convention de 1973, que ces amendements seront réputés avoir été acceptés le 1er janvier 2010 à moins que, avant cette date, un tiers au moins des Parties ou des Parties dont les flottes marchandes représentent au total au moins 50 % du tonnage brut de la flotte mondiale des navires de commerce n'aient notifié à l'Organisation qu'elles élèvent une objection à ces amendements;

3. INVITE les Parties à noter que, conformément à l'article 16 2) g) ii) de la Convention de 1973, lesdits amendements entreront en vigueur le 1er juillet 2010, lorsqu'ils auront été acceptés dans les conditions prévues au paragraphe 2 ci-dessus;

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4. PRIE le Secrétaire général, en application de l'article 16 2) e) de la Convention de 1973, de transmettre à toutes les Parties à la Convention de 1973, telle que modifiée par les Protocoles de 1978 et de 1997, des copies certifiées conformes de la présente résolution et du texte des amendements qui y est annexé;

5. PRIE ÉGALEMENT le Secrétaire général de transmettre des exemplaires de la présente résolution et de son annexe aux Membres de l'Organisation qui ne sont pas Parties à la Convention de 1973, telle que modifiée par les Protocoles de 1978 et de 1997; et

6. INVITE les Parties à l'Annexe VI de MARPOL et les autres Gouvernements Membres à porter les amendements à l'Annexe VI de MARPOL à l'attention des propriétaires de navires, exploitants de navires, constructeurs de navires, constructeurs de moteurs diesel marins, fournisseurs de combustible pour moteurs marins et tous autres groupes intéressés.

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ANNEXE

ANNEXE VI RÉVISÉE DE MARPOL

Règles relatives à la prévention de la pollution de l'atmosphère par les navires

Chapitre 1

Généralités

Règle 1
Application

Les dispositions de la présente Annexe s'appliquent à tous les navires, sauf disposition expresse contraire des règles 3, 5, 6, 13, 15, 16 et 18 de la présente Annexe.

Règle 2
Définitions

Aux fins de la présente Annexe :

1 *Annexe* désigne l'Annexe VI de la Convention internationale de 1973 pour la prévention de la pollution par les navires (MARPOL), telle que modifiée par le Protocole de 1978 y relatif (MARPOL 73/78), et telle que modifiée par le Protocole de 1997 adopté par la résolution 1 de la Conférence MARPOL de 1997, tel que modifié par l'Organisation, à condition que ces amendements soient adoptés et soient mis en vigueur conformément aux dispositions de l'article 16 de la présente Convention.

2 L'expression *dont la construction se trouve à un stade équivalent* désigne le stade auquel :

.1 une construction identifiable à un navire particulier commence; et

.2 le montage du navire considéré a commencé, employant au moins 50 tonnes ou un pour cent de la masse estimée de tous les matériaux de structure, si cette dernière valeur est inférieure.

3 *Date d'anniversaire* désigne le jour et le mois de chaque année qui correspondent à la date d'expiration du Certificat international de prévention de la pollution de l'atmosphère.

4 *Dispositif de contrôle auxiliaire* désigne un système, une fonction ou une stratégie de contrôle qui est incorporé dans un moteur diesel marin pour protéger ce moteur et/ou son équipement auxiliaire contre des conditions d'exploitation qui risqueraient d'entraîner des dommages ou défaillances, ou qui est utilisé pour faciliter le démarrage du moteur. Un dispositif de contrôle auxiliaire peut également être une stratégie ou une mesure dont il a été démontré de façon satisfaisante qu'il ne s'agissait pas d'un dispositif d'invalidation.

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5 *Chargement continu* désigne le processus par lequel des déchets sont chargés dans une chambre de combustion sans intervention humaine, l'incinérateur étant dans des conditions normales d'exploitation et la chambre de combustion fonctionnant à une température comprise entre 850°C et 1 200°C.

6 *Dispositif d'invalidation* désigne un dispositif qui mesure, détecte ou réagit à des variables de fonctionnement (par exemple, vitesse du moteur, température, pression d'admission ou tout autre paramètre) en vue d'activer, de moduler, de retarder ou de désactiver le fonctionnement d'un composant ou la fonction du système de contrôle des émissions de manière telle que l'efficacité de ce système est réduite dans des conditions rencontrées au cours de l'exploitation normale, à moins que l'utilisation d'un tel dispositif ne soit largement prise en considération dans les méthodes d'essai appliquées pour l'homologation concernant les émissions.

7 *Émission* désigne toute libération, dans l'atmosphère ou dans la mer, par les navires de substances soumises à un contrôle en vertu de la présente Annexe.

8 *Zone de contrôle des émissions* désigne une zone dans laquelle il est nécessaire d'adopter des mesures obligatoires particulières concernant les émissions par les navires pour prévenir, réduire et contrôler la pollution de l'atmosphère par les NO_x ou les SO_x et les particules ou ces trois types d'émission et leurs effets préjudiciables sur la santé de l'homme et l'environnement. Les zones de contrôle des émissions sont mentionnées à la règle 13 et à la règle 14 de la présente Annexe.

9 *Fuel-oil* désigne tout combustible livré à un navire et destiné à être utilisé pour la propulsion ou l'exploitation de ce navire, y compris les distillats marine et les combustibles résiduaires.

10 *Jauge brute* désigne la jauge brute calculée conformément aux règles sur le jaugeage énoncées à l'Annexe I de la Convention internationale de 1969 sur le jaugeage des navires, ou dans toute convention qui lui succéderait.

11 *Installation*, dans le contexte de la règle 12 de la présente Annexe, désigne l'installation de systèmes, d'équipement, y compris d'extincteurs d'incendie portatifs, d'isolants ou d'autres matériaux à bord d'un navire, mais ne vise pas la réparation ni la recharge de systèmes, d'équipement, d'isolants ou d'autres matériaux précédemment installés, ni la recharge d'extincteurs d'incendie portatifs.

12 *Installé* qualifie un moteur diesel marin qui est installé ou est censé être installé à bord d'un navire, y compris un moteur diesel marin auxiliaire portable, uniquement si son système de ravitaillement en carburant, de refroidissement ou d'échappement fait partie intégrante du navire. Un système de ravitaillement en carburant est considéré comme intégré uniquement s'il est fixe à demeure au navire. Cette définition vise aussi un moteur diesel marin qui sert à compléter ou augmenter la puissance installée du navire et qui est censé faire partie intégrante du navire.

13 *Stratégie irrationnelle de contrôle des émissions* désigne toute stratégie ou toute mesure qui, lorsque le navire est exploité dans des conditions normales d'utilisation, réduit l'efficacité du système de contrôle des émissions pour l'abaisser à un niveau inférieur à celui qui était escompté par les méthodes d'essai applicables en matière d'émissions.

14 *Moteur diesel marin* désigne tout moteur alternatif à combustion interne fonctionnant au moyen de combustible liquide ou mixte, auquel la règle 13 de la présente Annexe s'applique, y compris les systèmes compound et de suralimentation éventuellement utilisés.

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15 *Code technique sur les NO_x* désigne le Code technique sur le contrôle des émissions d'oxydes d'azote provenant des moteurs diesel marins, adopté par la résolution 2 de la Conférence MARPOL de 1997, tel que modifié par l'Organisation, à condition que ces amendements soient adoptés et soient mis en vigueur conformément aux dispositions de l'article 16 de la présente Convention.

16 *Substance qui appauvrit la couche d'ozone* désigne une substance réglementée, telle que définie au paragraphe 4 de l'article premier du Protocole de Montréal relatif à des substances qui appauvrissent la couche d'ozone, 1987, qui figure dans la liste de l'Annexe A, B, C ou E dudit Protocole en vigueur à la date de l'application ou de l'interprétation de la présente Annexe.

Les *substances qui appauvrissent la couche d'ozone* que l'on peut trouver à bord des navires comprennent, sans toutefois s'y limiter, les substances suivantes :

Halon 1211 Bromochlorodifluorométhane

Halon 1301 Bromotrifluorométhane

Halon 2402 1,2-Dibromo-1,1,2,2-tétrafluoréthane (également appelé Halon 114B2)

CFC-11 Trichlorofluorométhane

CFC-12 Dichlorodifluorométhane

CFC-113 1,1,2-Trichloro-1,2,2-trifluoroéthane

CFC-114 1,2-Dichloro-1,1,2,2-tétrafluoroéthane

CFC-115 Chloropentafluoréthane

17 *Incinération à bord* désigne l'incinération de déchets ou autres matières à bord d'un navire, lorsque ces déchets ou autres matières sont produits pendant l'exploitation normale du navire.

18 *Incinérateur de bord* désigne une installation de bord conçue essentiellement pour l'incinération.

19 *Navire construit* désigne un navire dont la quille est posée ou dont la construction se trouve à un stade équivalent.

20 *Boues d'hydrocarbures* désigne les boues provenant des séparateurs de fuel-oil ou d'huile de graissage, les huiles de graissage usées provenant des machines principales ou auxiliaires ou les huiles de vidange provenant des séparateurs d'eau de cale, du matériel de filtrage des hydrocarbures ou des gattes.

21 *Navire-citerne* désigne un pétrolier tel que défini à la règle 1 de l'Annexe I ou un navire-citerne pour produits chimiques tel que défini à la règle de l'Annexe II de la présente Convention.

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Règle 3
Exceptions et exemptions

Généralités

1 Les règles de la présente Annexe ne s'appliquent pas :

.1 à toute émission nécessaire pour assurer la sécurité d'un navire ou pour sauver des vies humaines en mer; ou

.2 à toute émission résultant d'une avarie survenue au navire ou à son équipement :

.2.1 à condition que toutes les précautions raisonnables aient été prises après l'avarie ou la découverte des émissions pour empêcher ou réduire au minimum ces émissions; et

.2.2 sauf si le propriétaire ou le capitaine a agi soit avec l'intention de provoquer un dommage, soit témérairement et avec conscience qu'un dommage en résulterait probablement.

Essais aux fins de la recherche sur les techniques de réduction et de contrôle des émissions des navires

2 L'Administration d'une Partie peut, en coopération avec d'autres Administrations, s'il y a lieu, exempter un navire de l'application de dispositions particulières de la présente Annexe pour lui permettre d'effectuer des essais pour le développement de techniques de réduction et de contrôle des émissions des navires et de programmes de conception de moteurs. Une telle exemption ne peut être accordée que si l'application de dispositions spécifiques de l'Annexe ou du texte révisé du Code technique sur les NO_x, 2008 risquerait de freiner la recherche nécessaire au développement de ces techniques ou de ces programmes. Une telle exemption ne peut être accordée qu'au nombre minimum de navires nécessaire et est soumise aux conditions suivantes :

.1 dans le cas des moteurs diesel marins d'une cylindrée unitaire allant jusqu'à 30 *l*, la durée de l'essai en mer ne doit pas être supérieure à 18 mois. Si un délai supplémentaire est nécessaire, l'Administration ou les Administrations qui ont octroyé l'exemption peuvent la renouveler pour une période supplémentaire de 18 mois; ou

.2 dans le cas des moteurs diesel marins ayant une cylindrée unitaire égale ou supérieure à 30 *l*, la durée de l'essai en mer ne doit pas être supérieure à cinq ans et doit être revue périodiquement par l'Administration ou les Administrations qui ont octroyé l'exemption lors de chaque visite intermédiaire. Une exemption peut être retirée à la lumière de cet examen, si la mise à l'essai n'a pas respecté les conditions d'octroi de l'exemption ou s'il est établi que la technologie ou le programme risque de ne pas contribuer efficacement à réduire et maîtriser les émissions provenant du navire. Si l'Administration ou les Administrations qui procèdent à cet examen décident que davantage de temps est nécessaire pour mettre à l'essai une technique ou un programme particulier, l'exemption peut être renouvelée pour une période de temps supplémentaire ne dépassant pas cinq ans.

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Émissions provenant des activités relatives aux ressources minérales du fond des mers

3.1 Les émissions qui résultent directement de l'exploration, de l'exploitation et du traitement connexe au large des ressources minérales du fond des mers sont, conformément à l'article 2 3) b) ii) de la présente Convention, exemptées de l'application des dispositions de la présente Annexe. Ces émissions sont notamment les suivantes :

.1 les émissions provenant de l'incinération de substances qui résultent uniquement et directement de l'exploration, de l'exploitation et du traitement connexe au large des ressources minérales du fond des mers, y compris, sans toutefois s'y limiter, la combustion en torchères d'hydrocarbures et l'incinération de débris de forage, boues et/ou fluides stimulateurs durant les opérations d'achèvement et d'essai des puits et la combustion en torchères résultant de conditions de refoulement;

.2 les dégagements de gaz et de composés volatils entraînés dans les fluides de forage et les débris de forage;

.3 les émissions liées uniquement et directement au traitement, à la manutention ou au stockage de minéraux du fond des mers; et

.4 les émissions provenant de moteurs diesel marins qui servent uniquement à l'exploration, à l'exploitation et au traitement connexe au large des ressources minérales du fond des mers.

3.2 Les prescriptions de la règle 18 de la présente Annexe ne s'appliquent pas à l'utilisation des hydrocarbures qui sont produits puis utilisés sur place comme combustible, sous réserve de l'approbation de l'Administration.

Règle 4
Équivalences

1 L'Administration d'une Partie peut autoriser la mise en place à bord d'un navire d'installations, de matériaux, de dispositifs ou d'appareils ou d'autres procédures, fuel-oils de substitution ou méthodes visant au respect des dispositions, en remplacement de ceux qui sont prescrits par la présente Annexe, à condition que ces installations, matériaux, dispositifs ou appareils ou autres procédures, fuel-oils de substitution ou méthodes visant au respect des dispositions soient au moins aussi efficaces, du point de vue de la réduction des émissions, que ceux qui sont prescrits par la présente Annexe, y compris les normes énoncées dans les règles 13 et 14.

2 L'Administration d'une Partie qui autorise l'utilisation d'une installation, d'un matériau, d'un dispositif ou d'un appareil ou d'autres procédures, combustibles de substitution ou méthodes visant au respect des dispositions, en remplacement de ceux qui sont prescrits par la présente Annexe doit en communiquer les détails à l'Organisation, qui les diffuse aux Parties pour information et pour qu'il y soit donné suite, le cas échéant.

3 L'Administration d'une Partie devrait tenir compte de toutes les directives pertinentes que l'Organisation aura pu élaborer à propos des équivalences prévues aux termes de la présente règle.

4 L'Administration d'une Partie qui autorise l'utilisation des alternatives équivalentes indiquées au paragraphe 1 de la présente règle doit veiller à ne pas nuire ni porter atteinte à son environnement, à la santé de l'homme, aux biens ou à ses ressources ou celles d'autres États.

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Chapitre 2

Visites, délivrance des certificats et mesures de contrôle

Règle 5
Visites

1 Tout navire d'une jauge brute égale ou supérieure à 400 et toute installation de forage ou autre plate-forme fixe ou flottante doit être soumis aux visites spécifiées ci-après :

.1 une visite initiale avant sa mise en service ou avant que le certificat prescrit par la règle 6 de la présente Annexe ne lui soit délivré pour la première fois. Cette visite doit permettre de vérifier que le matériel, les systèmes, les équipements, les aménagements et les matériaux satisfont pleinement aux prescriptions applicables de la présente Annexe;

.2 une visite de renouvellement effectuée aux intervalles spécifiés par l'Administration, mais n'excédant pas cinq ans, sauf lorsque la règle 9.2, 9.5, 9.6 ou 9.7 de la présente Annexe s'applique. Cette visite doit permettre de vérifier que le matériel, les systèmes, les équipements, les aménagements et les matériaux satisfont pleinement aux prescriptions applicables de la présente Annexe;

.3 une visite intermédiaire effectuée dans un délai de trois mois avant ou après la deuxième date anniversaire ou dans un délai de trois mois avant ou après la troisième date anniversaire du certificat, qui doit remplacer l'une des visites annuelles spécifiées au paragraphe 1.4 de la présente règle. Cette visite doit permettre de vérifier que le matériel et les installations satisfont pleinement aux prescriptions applicables de la présente Annexe et sont en bon état de marche. Ces visites intermédiaires doivent être portées sur le certificat délivré en vertu de la règle 6 ou de la règle 7 de la présente Annexe;

.4 une visite annuelle effectuée dans un délai de trois mois avant ou après chaque date anniversaire du certificat, qui comprend une inspection générale du matériel, des systèmes, des équipements, des aménagements et des matériaux visés au paragraphe 1.1 de la présente règle, afin de vérifier qu'ils ont été maintenus dans les conditions prévues au paragraphe 4 de la présente règle et qu'ils restent satisfaisants pour le service auquel le navire est destiné. Ces visites annuelles doivent être portées sur le certificat délivré en vertu de la règle 6 ou de la règle 7 de la présente Annexe; et

.5 une visite supplémentaire, générale ou partielle selon le cas, qui doit être effectuée chaque fois que le navire subit des réparations ou rénovations importantes prescrites au paragraphe 4 de la présente règle ou à la suite d'une réparation résultant de l'enquête prescrite au paragraphe 5 de la présente règle. Cette visite doit permettre de vérifier que les réparations ou rénovations nécessaires ont été réellement effectuées, que les matériaux employés pour ces réparations ou rénovations et l'exécution des travaux sont à tous égards satisfaisants et que le navire satisfait à tous égards aux prescriptions de la présente Annexe.

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2 Dans le cas des navires d'une jauge brute inférieure à 400, l'Administration peut déterminer les mesures appropriées à prendre pour que soient respectées les dispositions applicables de la présente Annexe.

3 Les visites de navires, en ce qui concerne l'application des dispositions de la présente Annexe, doivent être effectuées par des fonctionnaires de l'Administration.

.1 Toutefois, l'Administration peut confier les visites soit à des inspecteurs désignés à cet effet, soit à des organismes reconnus par elle. Ces organismes doivent se conformer aux directives adoptées par l'Organisation*;

.2 la visite des moteurs diesel marins et du matériel destinée à vérifier que ceux-ci satisfont aux dispositions de la règle 13 de la présente Annexe doit être effectuée conformément au texte révisé du Code technique sur les NO_x 2008;

.3 lorsqu'un inspecteur désigné ou un organisme reconnu détermine que l'état du matériel ne correspond pas en substance aux indications du certificat, il doit veiller à ce que des mesures correctives soient prises et doit en informer l'Administration en temps utile. Si ces mesures correctives ne sont pas prises, le certificat devrait être retiré par l'Administration. Si le navire se trouve dans un port d'une autre Partie, les autorités compétentes de l'État du port doivent aussi être informées immédiatement. Lorsqu'un fonctionnaire de l'Administration, un inspecteur désigné ou un organisme reconnu a informé les autorités compétentes de l'État du port, le gouvernement de l'État du port intéressé doit accorder au fonctionnaire, à l'inspecteur ou à l'organisme en question toute l'assistance nécessaire pour lui permettre de s'acquitter de ses obligations en vertu de la présente règle; et

.4 dans tous les cas, l'Administration intéressée doit se porter pleinement garante de l'exécution complète et de l'efficacité de la visite et doit s'engager à prendre les dispositions nécessaires pour satisfaire à cette obligation.

4 Le matériel doit être maintenu dans un état conforme aux dispositions de la présente Annexe et aucun changement ne doit être apporté au matériel, aux systèmes, aux équipements, aux aménagements ou aux matériaux ayant fait l'objet de la visite, sans l'approbation expresse de l'Administration. Le simple remplacement de ce matériel et de ces équipements par un matériel et des équipements conformes aux dispositions de la présente Annexe est autorisé; et

5 Lorsqu'un accident survenu à un navire ou un défaut constaté à bord compromet fondamentalement l'efficacité ou l'intégralité du matériel visé par la présente Annexe, le capitaine ou le propriétaire du navire doit envoyer dès que possible un rapport à l'Administration, à l'inspecteur désigné ou à l'organisme reconnu chargé de délivrer le certificat pertinent.

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* Se reporter aux Directives pour l'habilitation des organismes agissant au nom de l'Administration, que l'Organisation a adoptées par la résolution A.739(18), telles qu'elles pourront être modifiées par l'Organisation, et aux Spécifications définissant les fonctions des organismes reconnus agissant au nom de l'Administration en matière de visites et de délivrance des certificats, que l'Organisation a adoptées par la résolution A.789(19), telles qu'elles pourront être modifiées par l'Organisation.

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Règle 6
Délivrance d'un certificat ou apposition d'un visa

1 Un certificat international de prévention de la pollution de l'atmosphère doit être délivré, après une visite initiale ou une visite de renouvellement effectuée conformément aux dispositions de la règle 5 de la présente Annexe,

.1 à tout navire d'une jauge brute égale ou supérieure à 400 qui effectue des voyages à destination de ports ou de terminaux au large relevant de la juridiction d'autres Parties; et

.2 aux installations de forage et plates-formes qui effectuent des voyages à destination d'eaux relevant de la souveraineté ou de la juridiction d'autres Parties.

2 Un certificat international de prévention de la pollution de l'atmosphère doit être délivré à un navire construit avant la date d'entrée en vigueur de l'Annexe VI, telle que modifiée, conformément au paragraphe 1) de la présente règle, au plus tard lors de la première mise en cale sèche prévue après la date de cette entrée en vigueur, mais en tout cas dans un délai maximal de trois ans après cette date.

3 Ce certificat doit être délivré, ou un visa doit y être apposé, soit par l'Administration, soit par une personne ou un organisme dûment autorisé par elle. Dans tous les cas, l'Administration assume l'entière responsabilité du certificat.

Règle 7
Délivrance d'un certificat ou apposition d'un visa par une autre Partie

1 Une Partie peut, à la requête de l'Administration, faire visiter un navire et, si elle est convaincue que les dispositions de la présente Annexe sont observées, elle délivre au navire un certificat international de prévention de la pollution de l'atmosphère ou en autorise la délivrance et, le cas échéant, appose un visa ou autorise son apposition sur le certificat dont est muni le navire, conformément à la présente Annexe.

2 Une copie du certificat et une copie du rapport de visite doivent être remises dès que possible à l'Administration qui a fait la demande.

3 Un certificat ainsi délivré doit comporter une déclaration indiquant qu'il a été délivré à la requête de l'Administration; il a la même valeur et est accepté dans les mêmes conditions qu'un certificat délivré en application de la règle 6 de la présente Annexe.

4 Il ne doit pas être délivré de certificat international de prévention de la pollution de l'atmosphère à un navire qui est autorisé à battre le pavillon d'un État qui n'est pas une Partie.

Règle 8
Forme du certificat

Le Certificat international de prévention de la pollution de l'atmosphère doit être établi conformément au modèle qui figure à l'appendice I à la présente Annexe et doit être rédigé en anglais, en espagnol ou en français, au moins. S'il est établi aussi dans une langue officielle du pays qui le délivre, c'est cette version qui fait foi en cas de différend ou de divergence.

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Règle 9
Durée et validité du certificat

1 Un certificat international de prévention de la pollution de l'atmosphère doit être délivré pour une période dont la durée est fixée par l'Administration, sans que cette durée puisse dépasser cinq ans.

2 Nonobstant les prescriptions du paragraphe 1 de la présente règle :

.1 lorsque la visite de renouvellement est achevée dans un délai de trois mois avant la date d'expiration du certificat existant, le nouveau certificat est valable à compter de la date d'achèvement de la visite de renouvellement jusqu'à une date qui n'est pas postérieure de plus de cinq ans à la date d'expiration du certificat existant;

.2 lorsque la visite de renouvellement est achevée après la date d'expiration du certificat existant, le nouveau certificat est valable à compter de la date d'achèvement de la visite de renouvellement jusqu'à une date qui n'est pas postérieure de plus de cinq ans à la date d'expiration du certificat existant; et

.3 lorsque la visite de renouvellement est achevée plus de trois mois avant la date d'expiration du certificat existant, le nouveau certificat est valable à compter de la date d'achèvement de la visite de renouvellement jusqu'à une date qui n'est pas postérieure de plus de cinq ans à la date d'achèvement de la visite de renouvellement.

3 Si un certificat est délivré pour une durée inférieure à cinq ans, l'Administration peut proroger la validité de ce certificat au-delà de la date d'expiration jusqu'au délai maximal prévu au paragraphe 1 de la présente règle, à condition que les visites spécifiées à la règle 5.1.3 et 5.1.4 de la présente Annexe, qui doivent avoir lieu lorsque le certificat est délivré pour cinq ans, soient effectuées selon qu'il convient.

4 Si une visite de renouvellement a été achevée et qu'un nouveau certificat ne peut être délivré ou remis au navire avant la date d'expiration du certificat existant, la personne ou l'organisme autorisé par l'Administration peut apposer un visa sur le certificat existant et ce certificat doit être accepté comme valable pour une nouvelle période qui ne doit pas dépasser cinq mois à compter de la date d'expiration.

5 Si, à la date d'expiration d'un certificat, le navire ne se trouve pas dans un port dans lequel il doit subir une visite, l'Administration peut proroger la validité de ce certificat mais une telle prorogation ne doit être accordée que pour permettre au navire d'achever son voyage vers le port dans lequel il doit être visité et ce, uniquement dans le cas où cette mesure apparaît comme opportune et raisonnable. Aucun certificat ne doit être ainsi prorogé pour une période de plus de trois mois et un navire auquel une prorogation est accordée n'est pas en droit, en vertu de cette prorogation, à son arrivée dans le port dans lequel il doit être visité, d'en repartir sans avoir obtenu un nouveau certificat. Lorsque la visite de renouvellement est achevée, le nouveau certificat est valable pour une période ne dépassant pas cinq ans à compter de la date d'expiration du certificat existant avant que la prorogation ait été accordée.

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6 Un certificat délivré à un navire effectuant des voyages courts, qui n'a pas été prorogé en vertu des dispositions précédentes de la présente règle, peut être prorogé par l'Administration pour une période de grâce ne dépassant pas un mois à compter de la date d'expiration indiquée sur ce certificat. Lorsque la visite de renouvellement est achevée, le nouveau certificat doit être valable pour une période ne dépassant pas cinq ans à compter de la date d'expiration du certificat existant avant que la prorogation ait été accordée.

7 Dans certains cas particuliers déterminés par l'Administration, il n'est pas nécessaire que la validité du nouveau certificat commence à la date d'expiration du certificat existant, comme cela est prescrit au paragraphe 2.1, 5 ou 6 de la présente règle. Dans ces cas particuliers, le nouveau certificat est valable pour une période ne dépassant pas cinq ans à compter de la date d'achèvement de la visite de renouvellement.

8 Si une visite annuelle ou une visite intermédiaire est achevée avant le délai spécifié à la règle 5 de la présente Annexe :

.1 la date anniversaire figurant sur le certificat est remplacée, au moyen de l'apposition d'un visa, par une date qui ne doit pas être postérieure de plus de trois mois à la date à laquelle la visite est achevée;

.2 la visite annuelle ou la visite intermédiaire suivante prescrite à la règle 5 de la présente Annexe doit être achevée aux intervalles prescrits par cette règle, calculés à partir de la nouvelle date anniversaire;

.3 la date d'expiration peut demeurer inchangée à condition qu'une ou plusieurs visites annuelles ou intermédiaires, selon le cas, soient effectuées de telle sorte que les intervalles maximaux entre visites prescrits à la règle 5 de la présente Annexe ne soient pas dépassés.

9 Un certificat délivré en vertu de la règle 6 ou de la règle 7 de la présente Annexe cesse d'être valable dans l'un quelconque des cas suivants :

.1 si les visites pertinentes ne se sont pas achevées dans les délais spécifiés à la règle 5.1 de la présente Annexe;

.2 si les visas prévus à la règle 5.1.3 ou 5.1.4 de la présente Annexe n'ont pas été apposés sur le certificat; ou

.3 si le navire passe sous le pavillon d'un autre État. Un nouveau certificat ne doit être délivré que lorsque le gouvernement délivrant le nouveau certificat s'est assuré que le navire satisfait aux prescriptions de la règle 5.4 de la présente Annexe. Dans le cas d'un transfert de pavillon entre Parties, si la demande lui en est faite dans un délai de trois mois à compter du transfert, le Gouvernement de la Partie dont le navire était autorisé précédemment à battre le pavillon doit adresser dès que possible à l'Administration des copies du certificat dont le navire était muni avant le transfert et des copies des rapports de visite pertinents, s'ils sont disponibles.

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Règle 10
Contrôle des normes d'exploitation par l'État du port

1 Un navire qui se trouve dans un port ou un terminal au large relevant de la juridiction d'une autre Partie est soumis à une inspection effectuée par des fonctionnaires dûment autorisés par cette Partie en vue de vérifier l'application des normes d'exploitation prévues par la présente Annexe, lorsqu'il existe de bonnes raisons de penser que le capitaine ou les membres de l'équipage ne sont pas au fait des procédures essentielles à appliquer à bord pour prévenir la pollution de l'atmosphère par les navires.

2 Dans les circonstances visées au paragraphe 1 de la présente règle, la Partie doit prendre les dispositions nécessaires pour empêcher le navire d'appareiller jusqu'à ce qu'il ait été remédié à la situation conformément aux prescriptions de la présente Annexe.

3 Les procédures relatives au contrôle par l'État du port prévues à l'article 5 de la présente Convention doivent s'appliquer dans le cas de la présente règle.

4 Aucune disposition de la présente règle ne doit être interprétée comme limitant les droits et obligations d'une Partie qui effectue le contrôle des normes d'exploitation expressément prévues dans la présente Convention.

Règle 11
Recherche des infractions et mise en application des dispositions

1 Les Parties doivent coopérer à la recherche des infractions et à la mise en application des dispositions de la présente Annexe en utilisant tous les moyens pratiques appropriés de recherche et de surveillance continue du milieu ainsi que des méthodes satisfaisantes de transmission des renseignements et de rassemblement des preuves.

2 Tout navire auquel s'applique la présente Annexe peut être soumis, dans tout port ou terminal au large d'une Partie, à une inspection effectuée par des fonctionnaires désignés ou autorisés par ladite Partie, en vue de vérifier s'il a émis l'une quelconque des substances visées par la présente Annexe en infraction aux dispositions de celle-ci. Au cas où l'inspection fait apparaître une infraction aux dispositions de la présente Annexe, un rapport doit être communiqué à l'Administration pour que celle-ci prenne des mesures appropriées.

3 Toute Partie doit fournir à l'Administration la preuve, si elle existe, que ce navire a émis l'une quelconque des substances visées par la présente Annexe en infraction aux dispositions de celle-ci. Dans toute la mesure du possible, l'infraction présumée doit être portée à la connaissance du capitaine du navire par l'autorité compétente de cette Partie.

4 Dès réception de cette preuve, l'Administration doit enquêter sur l'affaire et peut demander à l'autre Partie de lui fournir des éléments complémentaires ou plus concluants sur l'infraction présumée. Si l'Administration estime que la preuve est suffisante pour lui permettre d'intenter une action, elle doit engager des poursuites dès que possible et conformément à sa législation. L'Administration doit informer rapidement la Partie qui lui a signalé l'infraction présumée, ainsi que l'Organisation, des poursuites engagées.

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5 Une Partie peut aussi inspecter un navire auquel s'applique la présente Annexe lorsqu'il fait escale dans un port ou un terminal au large relevant de sa juridiction, si une autre Partie lui demande de procéder à une enquête et fournit des preuves suffisantes attestant que le navire a émis, dans un lieu quelconque, l'une quelconque des substances visées par la présente Annexe en infraction à celle-ci. Le rapport de cette enquête doit être envoyé à la Partie qui l'a demandée ainsi qu'à l'Administration afin que des mesures appropriées soient prises conformément aux dispositions de la présente Convention.

6 La législation internationale concernant la prévention, la réduction et le contrôle de la pollution du milieu marin par les navires, y compris la législation relative à la mise en application des dispositions et aux garanties, qui est en vigueur au moment de l'application ou de l'interprétation de la présente Annexe, s'applique, *mutatis mutandis*, aux règles et aux normes énoncées dans la présente Annexe.

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Chapitre 3

Prescriptions relatives au contrôle des émissions provenant des navires

Règle 12
Substances qui appauvrissent la couche d'ozone

1 La présente règle ne s'applique pas au matériel scellé de façon permanente qui ne comporte pas de branchements pour la recharge de produit réfrigérant ni d'éléments potentiellement amovibles contenant des substances qui appauvrissent la couche d'ozone.

2 Sous réserve des dispositions de la règle 3.1, toute émission délibérée de substances qui appauvrissent la couche d'ozone est interdite. Il faut considérer comme délibérées les émissions qui se produisent au cours de l'entretien, de la révision, de la réparation ou de la mise au rebut de systèmes ou de matériel, à l'exception des émissions de quantités minimes qui accompagnent la récupération ou le recyclage d'une substance qui appauvrit la couche d'ozone. Les émissions dues à des fuites de substances qui appauvrissent la couche d'ozone, qu'elles soient délibérées ou non, peuvent être réglementées par les Parties.

3.1 Les installations contenant des substances qui appauvrissent la couche d'ozone sont interdites :

.1 à bord des navires construits le 19 mai 2005 ou après cette date; ou

.2 dans le cas des navires construits avant le 19 mai 2005 dont la date de livraison contractuelle de leur équipement est le 19 mai 2005 ou après cette date ou, en l'absence d'une date de livraison contractuelle, dont la livraison effective de l'équipement au navire a été effectuée le 19 mai 2005 ou après cette date.

3.2 Les installations contenant des hydrochlorofluorocarbones sont interdites :

.1 à bord de navires construits le 1er janvier 2020 ou après cette date; ou

.2 dans le cas des navires construits avant le 1er janvier 2020 dont la date contractuelle de livraison de leur équipement au navire est le 1er janvier 2020 ou après cette date ou, en l'absence d'une date de livraison contractuelle, dont la livraison effective de l'équipement au navire est effectuée le 1er janvier 2020 ou après cette date.

4 Les substances visées par la présente règle et le matériel contenant de telles substances, lorsqu'ils sont enlevés des navires, doivent être livrés à des installations de réception appropriées.

5 Chaque navire soumis aux dispositions de la règle 6.1 doit tenir à jour une liste du matériel contenant des substances qui appauvrissent la couche d'ozone.*

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* Voir la section 2.1 du Supplément au Certificat international de prévention de la pollution de l'atmosphère (Certificat IAPP) (appendice I de l'Annexe VI, telle que modifiée).

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6 Chaque navire soumis aux dispositions de la règle 6.1 à bord duquel sont installés des dispositifs rechargeables contenant des substances qui appauvrissent la couche d'ozone doit tenir à jour un registre des substances qui appauvrissent la couche d'ozone. Ce registre peut faire partie d'un livre de bord existant ou d'un système d'enregistrement électronique approuvé par l'Administration.

7 Les mentions à porter dans le registre des substances qui appauvrissent la couche d'ozone doivent indiquer la masse (kg) de substance et doivent être portées sans tarder lors de chaque :

.1 recharge, complète ou partielle, de matériel contenant des substances qui appauvrissent la couche d'ozone;

.2 réparation ou entretien de matériel contenant des substances qui appauvrissent la couche d'ozone;

.3 émission dans l'atmosphère de substances qui appauvrissent la couche d'ozone :

.3.1 émission délibérée; et

.3.2 émission involontaire;

.4 rejet de substances qui appauvrissent la couche d'ozone dans des installations de réception à terre; et

.5 approvisionnement du navire en substances qui appauvrissent la couche d'ozone.

Règle 13
Oxydes d'azote (NO_x)

Application

1.1 La présente règle s'applique :

.1 à chaque moteur diesel marin d'une puissance de sortie supérieure à 130 kW installé à bord d'un navire; et

.2 à chaque moteur diesel marin d'une puissance de sortie supérieure à 130 kW qui subit une transformation importante le 1er janvier 2000 ou après cette date, sauf s'il a été démontré à la satisfaction de l'Administration que ce moteur est identique à celui qu'il remplace et n'est pas visé par les dispositions du paragraphe 1.1.1 de la présente règle.

1.2 La présente règle ne s'applique pas :

.1 aux moteurs diesel marins destinés à être utilisés uniquement en cas d'urgence ou uniquement pour faire fonctionner un dispositif ou un matériel destiné à être utilisé uniquement en cas d'urgence à bord du navire sur lequel il est installé, ni aux moteurs diesel marins installés à bord d'embarcations de sauvetage destinées à être utilisées uniquement en cas d'urgence; ni

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.2 aux moteurs diesel marins installés à bord d'un navire qui effectue uniquement des voyages dans des eaux relevant de la souveraineté ou de la juridiction de l'État dont le navire est autorisé à battre le pavillon, sous réserve que le moteur en question fasse l'objet d'une autre mesure de contrôle des NO_x établie par l'Administration.

1.3 Nonobstant les dispositions du paragraphe 1.1 de la présente règle, l'Administration peut exempter de l'application de la présente règle tout moteur diesel marin qui est installé à bord d'un navire construit avant le 19 mai 2005 ou tout moteur diesel marin ayant subi une transformation importante avant cette date, à condition que le navire à bord duquel le moteur est installé effectue uniquement des voyages à destination de ports ou de terminaux au large situés à l'intérieur de l'État dont le navire est autorisé à battre le pavillon.

Transformation importante

2.1 Aux fins de la présente règle, *transformation importante* désigne une modification subie le 1er janvier 2000 ou après cette date par un moteur diesel marin qui n'a pas encore été certifié conforme aux normes énoncées aux paragraphes 3, 4 ou 5.1.1 de la présente règle par laquelle :

.1 le moteur est remplacé par un moteur diesel marin ou un moteur diesel marin supplémentaire est installé, ou

.2 une modification importante, telle que définie dans le texte révisé du Code technique sur les NO_x, 2008, est apportée au moteur, ou

.3 la puissance maximale continue du moteur est accrue de plus de 10 % par rapport à la puissance maximale continue inscrite sur le certificat d'origine du moteur.

2.2 Dans le cas d'une transformation importante impliquant le remplacement d'un moteur diesel marin par un moteur diesel marin non identique ou l'installation d'un moteur diesel marin supplémentaire, les normes de la présente règle qui sont en vigueur au moment du remplacement du moteur ou de l'ajout d'un moteur s'appliquent. Le 1er janvier 2016, ou après cette date, uniquement dans le cas du remplacement d'un moteur, s'il n'est pas possible pour le moteur de remplacement de satisfaire aux normes énoncées au paragraphe 5.1.1 de la présente règle (niveau III), ce moteur de remplacement doit satisfaire aux normes énoncées au paragraphe 4 de la présente règle (niveau II). L'Organisation doit mettre au point des directives qui indiquent les critères d'après lesquels il n'est pas possible pour un moteur de remplacement de satisfaire aux normes du paragraphe 5.1.1 de la présente règle.

2.3 Les normes auxquelles doivent satisfaire les moteurs diesel marins visés au paragraphe 2.1.1 ou 2.1.3 de la présente règle sont les suivantes :

.1 pour les navires construits avant le 1er janvier 2000, les normes énoncées au paragraphe 3 de la présente règle; et

.2 pour les navires construits le 1er janvier 2000 ou après cette date, les normes qui étaient en vigueur au moment où le navire a été construit.

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Niveau I

3 Sous réserve des dispositions de la règle 3 de la présente Annexe, il est interdit de faire fonctionner un moteur diesel marin installé à bord d'un navire construit le 1er janvier 2000 ou après cette date et avant le 1er janvier 2011 lorsque la quantité d'oxydes d'azote émise par le moteur (calculée comme étant l'émission totale pondérée de NO_2) dépasse les limites suivantes, n représentant le régime nominal du moteur (tours du vilebrequin par minute) :

.1 17,0 g/kWh lorsque n est inférieur à 130 t/m;

.2 $45 \cdot n^{(-0,2)}$ g/kWh lorsque n est égal ou supérieur à 130 t/m mais inférieur à 2 000 t/m;

.3 9,8 g/kWh lorsque n est égal ou supérieur à 2 000 t/m.

Niveau II

4 Sous réserve des dispositions de la règle 3 de la présente Annexe, il est interdit de faire fonctionner un moteur diesel marin installé à bord d'un navire construit le 1er janvier 2011 ou après cette date lorsque la quantité d'oxydes d'azote émise par le moteur (calculée comme étant l'émission totale pondérée de NO_2) dépasse les limites suivantes, n représentant le régime nominal du moteur (tours du vilebrequin par minute) :

.1 14,4 g/kWh lorsque n est inférieur à 130 t/m;

.2 $44 \cdot n^{(-0,23)}$ g/kWh lorsque n est égal ou supérieur à 130 t/m mais inférieur à 2 000 t/m;

.3 7,7 g/kWh lorsque n est égal ou supérieur à 2 000 t/m.

Niveau III

5.1 Sous réserve des dispositions de la règle 3 de la présente Annexe, l'exploitation d'un moteur diesel marin installé à bord d'un navire construit le 1er janvier 2016 ou après cette date est :

.1 interdite lorsque la quantité d'oxydes d'azote émise par le moteur (calculée comme étant l'émission totale pondérée de NO_2) dépasse les limites suivantes, n représentant le régime nominal du moteur (tours du vilebrequin par minute) :

.1.1 3,4 g/kWh lorsque n est inférieur à 130 t/m;

.1.2 $9 \cdot n^{(-0,2)}$ g/kWh lorsque n est égal ou supérieur à 130 t/m mais inférieur à 2 000 t/m; et

.1.3 2,0 g/kWh lorsque n est égal ou supérieur à 2 000 t/m;

.2 soumise aux normes énoncées au paragraphe 5.1.1 de la présente règle lorsque le navire est exploité dans une zone de contrôle des émissions désignée en vertu du paragraphe 6 de la présente règle; et

.3 soumise aux normes énoncées au paragraphe 4 de la présente règle lorsque le navire est exploité à l'extérieur d'une zone de contrôle des émissions désignée en vertu du paragraphe 6 de la présente règle.

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5.2 Sous réserve du bilan prévu au paragraphe 10 de la présente règle, les normes énoncées au paragraphe 5.1.1 de la présente règle ne s'appliquent pas :

.1 aux moteurs diesel marins installés à bord d'un navire d'une longueur (*L*), telle que définie à la règle 1.19 de l'Annexe I de la présente Convention, inférieure à 24 m, qui a été conçu expressément pour être utilisé à des fins récréatives et est utilisé uniquement à ces fins; ni

.2 aux moteurs diesel marins installés à bord d'un navire dont la puissance nominale de propulsion combinée des moteurs diesel est inférieure à 750 kW s'il est démontré, à la satisfaction de l'Administration, que le navire ne peut pas satisfaire aux normes énoncées au paragraphe 5.1.1 de la présente règle en raison des limitations que lui impose sa conception ou sa construction.

Zone de contrôle des émissions

6 Aux fins de la présente règle, une zone de contrôle des émissions est toute zone maritime, y compris toute zone portuaire, désignée par l'Organisation conformément aux critères et procédures énoncés dans l'appendice III à la présente Annexe.

Moteurs diesel marins installés à bord de navires construits avant le 1er janvier 2000

7.1 Nonobstant les dispositions du paragraphe 1.1.1 de la présente règle, un moteur diesel marin d'une puissance de sortie supérieure à 5 000 kW et d'une cylindrée égale ou supérieure à 90 *l* installé à bord d'un navire construit le 1er janvier 1990 ou après cette date, mais avant le 1er janvier 2000, doit respecter les limites d'émissions énoncées au paragraphe 7.4 de la présente règle, à condition que l'Administration d'une Partie ait homologué une méthode approuvée pour ce moteur et qu'elle ait notifié cette homologation à l'Organisation. Il doit être démontré qu'il est satisfait au présent paragraphe de l'une des manières suivantes :

.1 application de la méthode approuvée homologuée, confirmée par une inspection effectuée conformément à la procédure de vérification décrite spécifiée dans le dossier de méthode approuvée, et mention sur le Certificat IAPP de la présence de cette méthode approuvée; ou

.2 certification du moteur, pour confirmer qu'il fonctionne dans les limites spécifiées aux paragraphes 3, 4 ou 5.1.1 de la présente règle, et mention appropriée de cette certification du moteur sur le Certificat IAPP du navire.

7.2 Le paragraphe 7.1 de la présente règle s'applique au plus tard à la première visite de renouvellement effectuée 12 mois ou plus après le dépôt de la notification mentionnée au paragraphe 7.1. Si le propriétaire d'un navire à bord duquel une méthode approuvée doit être installée peut démontrer, à la satisfaction de l'Administration, que cette méthode approuvée n'était pas disponible dans le commerce bien qu'il ait tout fait pour se la procurer, cette méthode approuvée doit être installée à bord du navire au plus tard lors de la visite annuelle suivante à effectuer après la date à laquelle la méthode approuvée est disponible dans le commerce.

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7.3 En ce qui concerne les moteurs diesel marins d'une puissance de sortie supérieure à 5 000 kW et d'une cylindrée égale ou supérieure à 90 *l* installés à bord de navires construits le 1er janvier 1990 ou après cette date, mais avant le 1er janvier 2000, le Certificat international de prévention de la pollution de l'atmosphère délivré pour un moteur diesel marin auquel les dispositions du paragraphe 7.1 de la présente règle s'appliquent doit indiquer qu'une méthode approuvée a été appliquée conformément au paragraphe 7.1.1 de la présente règle ou que le moteur a été certifié conformément au paragraphe 7.1.2 de la présente règle ou qu'aucune méthode approuvée n'existe encore ou n'est disponible dans le commerce, comme il est indiqué au paragraphe 7.2 de la présente règle.

7.4 Sous réserve des dispositions de la règle 3 de la présente Annexe, il est interdit de faire fonctionner un moteur diesel marin décrit au paragraphe 7.1 de la présente règle lorsque la quantité d'oxydes d'azote émise par le moteur (calculée comme étant l'émission totale pondérée de NO_2) dépasse les limites suivantes, n représentant le régime nominal du moteur (tours du vilebrequin par minute) :

.1 17,0 g/kWh, lorsque n est inférieur à 130 t/m;

.2 $45{,}0.n^{(-0{,}2)}$ g/kWh lorsque n est égal ou supérieur à 130 t/m mais inférieur à 2 000 t/m; et

.3 9,8 g/kWh lorsque n est égal ou supérieur à 2 000 t/m.

7.5 L'homologation d'une méthode approuvée doit se faire conformément aux dispositions du chapitre 7 du texte révisé du Code technique sur les NO_x, 2008, et doit inclure la vérification :

.1 par le concepteur du moteur diesel marin de référence auquel s'applique la méthode approuvée, que l'effet calculé de la méthode approuvée ne sera pas une réduction de la puissance nominale du moteur de plus de 1,0 %, une augmentation de la consommation de carburant de plus de 2,0 %, telle que mesurée conformément au cycle d'essai approprié décrit dans le texte révisé du Code technique sur les NO_x, 2008, ou ne compromettra pas la durabilité et fiabilité du moteur; et

.2 que le coût de la méthode approuvée n'est pas excessif, cela étant établi en comparant la réduction de la quantité de NO_x que la méthode approuvée a permis d'obtenir pour satisfaire à la norme énoncée au paragraphe 7.4 de la présente règle et le coût de l'achat et de l'installation de cette méthode approuvée.*

Certification

8 Les procédures de certification, de mise à l'essai et de mesure à suivre pour les normes énoncées dans la présente règle sont décrites dans le texte révisé du Code technique sur les NO_x, 2008.

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* Le coût d'une méthode approuvée ne doit pas être supérieur à 375 droits de tirage spéciaux/tonne de NO_x, calculé à l'aide de la formule de calcul du rapport coût-efficacité (Ce) suivante :

$$Ce = \frac{\text{Coût de la méthode approuvée} * 10^6}{\text{Puissance (kW)} * 0{,}768 * 6\,000 \text{ (h/an)} * 5 \text{ (ans)} * \Delta NO_x \text{ (g/KWh)}}$$

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9 Les procédures visant à calculer les émissions de NO_x qui sont décrites dans le Code technique sur les NO_x, 2008, sont censées être représentatives des conditions normales d'exploitation du moteur. Les dispositifs d'invalidation et les stratégies irrationnelles de contrôle des émissions vont à l'encontre de cet objectif et ne sont pas autorisés. La présente règle n'empêche pas d'utiliser des dispositifs de contrôle secondaires qui permettent de protéger le moteur et/ou son matériel auxiliaire lorsque les conditions d'exploitation risqueraient d'entraîner une avarie ou une défaillance ou qui permettent de faciliter le démarrage du moteur.

Bilan

10 À compter de 2012 et jusqu'en 2013 au plus tard, l'Organisation doit faire le bilan des innovations technologiques disponibles en vue d'appliquer les normes énoncées au paragraphe 5.1.1 de la présente règle et si cela s'avère nécessaire, modifier en conséquence les délais (date effective) indiqués dans ce paragraphe.

Règle 14
Oxydes de soufre (SO_x) et particules

Prescriptions générales

1 La teneur en soufre de tout fuel-oil utilisé à bord des navires ne doit pas dépasser les concentrations suivantes :

.1 4,50 % m/m avant le 1er janvier 2012;

.2 3,50 % m/m le 1er janvier 2012 ou après cette date; et

.3 0,50 % m/m le 1er janvier 2020 ou après cette date.

2 La teneur en soufre moyenne mondiale des fuel-oils résiduaires livrés en vue de leur utilisation à bord des navires doit être contrôlée compte tenu des directives élaborées par l'Organisation.*

Prescriptions applicables dans les zones de contrôle des émissions

3 Aux fins de la présente règle, les zones de contrôle des émissions sont :

.1 la zone de la mer Baltique, telle que définie à la règle 1.11.2 de l'Annexe I, la mer du Nord, telle que définie à la règle 5 1) f) de l'Annexe V; et

.2 toute autre zone maritime, y compris les zones portuaires, désignée par l'Organisation conformément aux critères et procédures énoncés à l'appendice III à la présente Annexe.

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* Résolution MEPC.82(43), intitulée "Directives pour le contrôle de la teneur en soufre moyenne mondiale des fuel-oils résiduaires livrés en vue de leur utilisation à bord des navires".

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4 Lorsque des navires sont exploités dans une zone de contrôle des émissions, la teneur en soufre du fuel-oil utilisé à leur bord ne doit pas dépasser les limites suivantes :

.1 1,50 % m/m avant le 1er juillet 2010;

.2 1,00 % m/m le 1er juillet 2010 ou après cette date; et

.3 0,10 % m/m le 1er janvier 2015 ou après cette date.

5 La teneur en soufre du fuel-oil mentionnée au paragraphe 1 et au paragraphe 4 de la présente règle doit être attestée par son fournisseur de la façon prescrite par la règle 18 de la présente Annexe.

6 Les navires qui utilisent des fuel-oils distincts pour satisfaire au paragraphe 4 de la présente règle et qui entrent dans une zone de contrôle des émissions indiquée au paragraphe 3 de la présente règle ou qui la quittent doivent disposer d'une procédure écrite indiquant comment doit se faire le changement de fuel-oil, en prévoyant suffisamment de temps pour que le circuit de distribution du fuel-oil se vide entièrement de tous les fuel-oils dont la teneur en soufre dépasse la limite applicable spécifiée au paragraphe 4 de la présente règle avant l'entrée dans une zone de contrôle des émissions. Le volume des fuel-oils à faible teneur en soufre dans chaque citerne ainsi que la date, l'heure et la position du navire au moment où l'opération de changement de fuel-oil a été achevée avant l'entrée dans une zone de contrôle des émissions ou a été entamée après la sortie d'une telle zone doivent être consignés dans le livre de bord prescrit par l'Administration.

7 Durant les douze premiers mois suivant immédiatement l'entrée en vigueur d'un amendement désignant une zone spécifique de contrôle des émissions en vertu du paragraphe 3.2 de la présente règle, les navires exploités dans cette zone de contrôle des émissions sont exemptés de l'application des prescriptions des paragraphes 4 et 6 de la présente règle, ainsi que des prescriptions du paragraphe 5 de la présente règle dans la mesure où elles concernent le paragraphe 4 de la présente règle.

Dispositions relatives au réexamen

8 Il faut procéder d'ici à 2018 à un réexamen de la norme énoncée au paragraphe 1.3 de la présente règle pour voir si l'on dispose des fuel-oils nécessaires pour satisfaire à la norme relative aux fuel-oils énoncée dans ce paragraphe et ce, en tenant compte des éléments suivants :

.1 l'offre et la demande qui sont constatées sur le marché mondial des fuel-oils nécessaires pour satisfaire au paragraphe 1.3 de la présente règle au moment où le réexamen est effectué;

.2 l'analyse des tendances observées sur les marchés des fuel-oils; et

.3 toute autre question pertinente.

9 L'Organisation doit constituer un groupe d'experts composé de représentant connaissant bien le marché des fuel-oils et ayant les compétences voulues dans les domaines maritime, environnemental, scientifique et juridique pour procéder au réexamen mentionné au paragraphe 8 de la présente règle. Ce groupe d'experts doit rassembler les renseignements nécessaires pour que les Parties puissent se prononcer en connaissance de cause.

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10 Les Parties, se fondant sur les renseignements rassemblés par le groupe d'experts, peuvent décider s'il est possible aux navires de respecter la date indiquée au paragraphe 1.3 de la présente règle. Si elles décident que cela est impossible, la norme énoncée dans cet alinéa prend effet le 1er janvier 2025.

Règle 15
Composés organiques volatils (COV)

1 Si les émissions de COV provenant d'un navire-citerne doivent être réglementées dans le ou les ports ou le ou les terminaux relevant de la juridiction d'une Partie, elles doivent l'être conformément aux dispositions de la présente règle.

2 Une Partie qui réglemente les émissions de COV des navires-citernes doit soumettre à l'Organisation une notification qui indique les dimensions des navires-citernes à contrôler, les cargaisons nécessitant des systèmes de contrôle des émissions de vapeurs et la date à laquelle ce contrôle prend effet. Cette notification doit être soumise au moins six mois avant cette date.

3 Une Partie qui désigne des ports ou terminaux dans lesquels les émissions de COV provenant des navires-citernes doivent être réglementées doit s'assurer que des systèmes de contrôle des émissions de vapeurs, approuvés par elle compte tenu des normes de sécurité applicables à ces systèmes élaborées par l'Organisation*, sont installés dans chaque port ou terminal désigné et sont exploités en toute sécurité et de manière à éviter de causer un retard indu aux navires.

4 L'Organisation doit diffuser une liste des ports et terminaux désignés par les Parties aux autres Parties et aux États Membres de l'Organisation, pour information.

5 Un navire-citerne auquel s'appliquent les dispositions du paragraphe 1 de la présente règle doit être pourvu d'un collecteur d'émissions de vapeurs approuvé par l'Administration compte tenu des normes de sécurité applicables à un tel système élaborées par l'Organisation* et doit utiliser ce système pendant le chargement des cargaisons pertinentes. Un port ou terminal qui a mis en place des systèmes de contrôle des émissions de vapeurs conformément à la présente règle peut accepter des navires-citernes qui ne sont pas pourvus de collecteurs de vapeurs pendant une période de trois ans après la date notifiée en application du paragraphe 2 de la présente règle.

6 Un navire-citerne transportant du pétrole brut doit avoir à bord et doit appliquer un plan de gestion des COV approuvé par l'Administration. Ce plan doit être établi compte tenu des directives élaborées par l'Organisation. Le plan de gestion des COV doit être propre à chaque navire et doit au moins :

.1 donner des consignes écrites visant à réduire au minimum les émissions de COV pendant le chargement, le voyage en mer et le déchargement de la cargaison;

.2 tenir compte des COV supplémentaires produits par le lavage au pétrole brut;

.3 désigner une personne responsable de l'exécution du plan; et

.4 pour les navires effectuant des voyages internationaux, être rédigé dans la langue de travail du capitaine et des officiers et, si la langue du capitaine et des officiers n'est ni l'anglais, ni l'espagnol, ni le français, comporter une traduction dans l'une de ces langues.

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* Circulaire MSC/Circ.585 - Normes relatives aux systèmes de contrôle des émissions de vapeurs.

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7 La présente règle s'applique aussi aux transporteurs de gaz uniquement si le type de systèmes de chargement et de confinement permet de conserver à bord en toute sécurité les COV ne contenant pas de méthane ou de les réacheminer en toute sécurité à terre.*

Règle 16
Incinération à bord

1 Sauf dans le cas prévu au paragraphe 4 de la présente règle, l'incinération à bord n'est autorisée que dans un incinérateur de bord.

2 L'incinération à bord des substances énumérées ci-après est interdite :

.1 résidus des cargaisons visées par les Annexes I, II ou III et matériaux contaminés utilisés pour leur conditionnement;

.2 biphényles polychlorés (PCB);

.3 ordures, telles que définies à l'Annexe V contenant plus que des traces de métaux lourds;

.4 produits pétroliers raffinés contenant des composés halogénés;

.5 boues d'épuration et boues d'hydrocarbures, ni les unes ni les autres n'étant produites à bord du navire; et

.6 résidus du dispositif d'épuration des gaz d'échappement.

3 L'incinération à bord de chlorures de polyvinyle (PVC) est interdite, sauf si elle a lieu dans des incinérateurs de bord pour lesquels des certificats OMI d'approbation par type** ont été délivrés.

4 L'incinération à bord de boues d'épuration ou de boues d'hydrocarbures produites pendant l'exploitation normale du navire peut également se faire dans les machines principales ou auxiliaires ou dans les chaudières mais dans ce cas, elle ne doit pas être effectuée dans des ports et des estuaires.

5 Aucune des dispositions de la présente règle :

.1 ne porte atteinte à l'interdiction ou aux autres prescriptions prévues dans la Convention de 1972 sur la prévention de la pollution des mers résultant de l'immersion de déchets, telle que modifiée, et dans le Protocole de 1996 y relatif, ni

.2 n'empêche la mise au point, l'installation et l'exploitation d'autres types d'appareils de traitement thermique des déchets à bord qui satisfont aux prescriptions de la présente règle ou à des prescriptions encore plus sévères.

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* Résolution MSC.30(61), intitulée "Recueil international de règles relatives à la construction et à l'équipement des navires transportant des gaz liquéfiés en vrac".

** Certificats d'approbation par type délivrés conformément à la résolution MEPC.59(33), intitulée "Directives révisées pour la mise en œuvre de l'Annexe V de MARPOL 73/78", ou à la résolution MEPC.76(40), intitulée "Spécification normalisée des incinérateurs de bord".

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6.1 Sauf dans le cas prévu au paragraphe 6.2 de la présente règle, chaque incinérateur qui se trouve à bord d'un navire construit le 1er janvier 2000 ou après cette date ou chaque incinérateur installé à bord d'un navire le 1er janvier 2000 ou après cette date doit satisfaire aux prescriptions de l'appendice IV à la présente Annexe. Chaque incinérateur visé par le présent paragraphe doit être approuvé par l'Administration compte tenu de la spécification normalisée applicable aux incinérateurs de bord qui a été élaborée par l'Organisation*; ou

6.2 L'Administration peut exempter de l'application du paragraphe 6.1 de la présente règle tout incinérateur qui est installé à bord d'un navire avant le 19 mai 2005, à condition que ce navire effectue uniquement des voyages dans des eaux relevant de la souveraineté ou de la juridiction de l'État dont il est autorisé à battre le pavillon.

7 Les incinérateurs installés conformément aux prescriptions du paragraphe 6.1 de la présente règle doivent être assortis d'un manuel d'exploitation du fabricant, lequel doit être conservé avec le dispositif et doit expliquer comment exploiter l'incinérateur dans les limites décrites au paragraphe 2 de l'appendice IV à la présente Annexe.

8 Le personnel responsable de l'exploitation d'un incinérateur installé conformément aux prescriptions du paragraphe 6.1 de la présente règle doit recevoir la formation voulue pour pouvoir appliquer les instructions fournies dans le manuel d'exploitation du fabricant conformément aux prescriptions du paragraphe 7 de la présente règle.

9 Dans le cas des incinérateurs installés conformément aux prescriptions du paragraphe 6.1 de la présente règle, la température des gaz à la sortie de la chambre de combustion doit être régulée en permanence lorsque l'appareil est en marche. S'il s'agit d'un incinérateur à chargement continu, aucun déchet ne doit y être chargé lorsque la température des gaz à la sortie de la chambre de combustion est inférieure à 850°C. S'il s'agit d'un incinérateur à chargement discontinu, l'appareil doit être conçu de manière à ce que la température des gaz à la sortie de la chambre de combustion atteigne 600°C dans un délai de 5 minutes après l'allumage et qu'elle se stabilise ensuite à un niveau qui ne soit pas inférieur à 850°C.

Règle 17
Installations de réception

1 Chaque Partie s'engage à faire assurer la mise en place d'installations adaptées aux :

.1 besoins des navires qui utilisent ses ports de réparation, pour la réception des substances qui appauvrissent la couche d'ozone et du matériel contenant ces substances lorsqu'ils sont enlevés des navires,

.2 besoins des navires qui utilisent ses ports, terminaux ou ports de réparation, pour la réception des résidus de l'épuration des gaz d'échappement qui proviennent d'un dispositif approuvé d'épuration des gaz d'échappement,

sans imposer de retards indus aux navires, et

.3 besoins, dans les installations de démolition des navires, pour la réception des substances qui appauvrissent la couche d'ozone et du matériel contenant ces substances lorsqu'ils sont enlevés des navires.

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* Se reporter à la résolution MEPC.76(40), intitulée "Spécification normalisée des incinérateurs de bord", telle que modifiée par la résolution MEPC.93(45).

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2 Si un port ou un terminal particulier d'une Partie est – compte tenu des directives que doit élaborer l'Organisation - éloigné ou dépourvu de l'infrastructure industrielle nécessaire pour gérer et traiter ces substances mentionnée au paragraphe 1 de la présente règle et, par conséquent, ne peut les accepter, la Partie doit faire connaître ce port ou terminal à l'Organisation afin que ces renseignements soient diffusés à toutes les Parties pour qu'elles puissent prendre les mesures qu'elles pourraient juger appropriées. La Partie qui a fourni de tels renseignements à l'Organisation doit également signaler à l'Organisation quels sont ses ports et terminaux dans lesquels des installations de réception sont disponibles pour gérer et traiter de telles substances.

3 Chaque Partie doit notifier à l'Organisation, pour communication aux Membres de l'Organisation, tous les cas où les installations prescrites par la présente règle ne sont pas disponibles ou sont estimées insuffisantes.

Règle 18
Disponibilité et qualité du fuel-oil

Disponibilité du fuel-oil

1 Chaque Partie doit faire tout ce qui est raisonnablement possible pour promouvoir la disponibilité de fuel-oils satisfaisant aux dispositions de la présente Annexe et informer l'Organisation de la disponibilité de fuel-oils conformes dans ses ports et terminaux.

2.1 Si une Partie constate qu'un navire ne satisfait pas aux normes applicables aux fuel-oils conformes énoncées dans la présente Annexe, l'autorité compétente de cette Partie est habilitée à exiger que ce navire :

.1 présente un compte rendu des mesures qu'il a prises dans le but de respecter les dispositions; et

.2 fournisse la preuve qu'il a cherché à acheter du fuel-oil conforme compte tenu de son plan de voyage et que, si ce fuel-oil n'était pas disponible à l'endroit prévu, il a essayé de trouver d'autres sources de fuel-oil conforme et que, malgré tous les efforts qu'il a faits pour se procurer du fuel-oil conforme, il n'y en avait pas à acheter.

2.2 Il ne devrait pas être exigé du navire qu'il s'écarte de la route prévue ni qu'il retarde indûment son voyage aux fins de satisfaire aux dispositions.

2.3 Si un navire fournit les renseignements indiqués au paragraphe 2.1 de la présente règle, une Partie doit tenir compte de toutes les circonstances pertinentes et des pièces justificatives présentées pour décider de la ligne d'action à adopter, y compris de ne prendre aucune mesure de contrôle.

2.4 Un navire doit notifier à son Administration et à l'autorité compétente du port de destination pertinent les cas où il ne peut pas acheter de fuel-oil conforme.

2.5 Une Partie doit notifier à l'Organisation les cas où un navire a présenté des pièces attestant qu'aucun fuel-oil conforme n'était disponible.

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Qualité du fuel-oil

3 Le fuel-oil qui est livré et utilisé aux fins de combustion à bord des navires auxquels s'applique la présente Annexe doit satisfaire aux prescriptions suivantes :

.1 sauf dans le cas prévu au paragraphe 3.2 de la présente règle :

.1.1 le fuel-oil doit être un mélange d'hydrocarbures résultant du raffinage du pétrole. Il peut toutefois incorporer de petites quantités d'additifs destinés à améliorer certains aspects liés à la performance;

.1.2 le fuel-oil doit être exempt d'acides inorganiques; et

.1.3 le fuel-oil ne doit contenir aucun additif ou déchet chimique qui :

.1.3.1 compromette la sécurité du navire ou affecte la performance des machines, ou

.1.3.2 soit nuisible pour le personnel, ou

.1.3.3 contribue globalement à accroître la pollution de l'atmosphère;

.2 le fuel-oil destiné à la combustion qui est obtenu par des procédés autres que le raffinage du pétrole ne doit pas :

.2.1 dépasser la teneur en soufre applicable indiquée à la règle 14 de la présente Annexe;

.2.2 provoquer un dépassement, par un moteur, de la limite d'émission de NO_x applicable spécifiée aux paragraphes 3, 4, 5.1.1 et 7.4 de la règle 13;

.2.3 contenir des acides inorganiques; ou

.2.4.1 compromettre la sécurité du navire ou affecter la performance des machines; ou

.2.4.2 être nuisible pour le personnel; ou

.2.4.3 contribuer globalement à accroître la pollution de l'atmosphère.

4 La présente règle ne s'applique pas au charbon sous forme solide, ni aux combustibles nucléaires. Les paragraphes 5, 6, 7.1, 7.2, 8.1, 8.2, 9.2, 9.3, et 9.4 de la présente règle ne s'appliquent pas aux combustibles gazeux tels que le gaz naturel liquéfié, le gaz naturel comprimé ou le gaz de pétrole liquéfié. La teneur en soufre des combustibles gazeux livrés à un navire aux seules fins de servir à la combustion à bord de ce navire doit être attestée par le fournisseur.

5 Pour chaque navire visé par les règles 5 et 6 de la présente Annexe, les détails du fuel-oil qui est livré et utilisé aux fins de combustion à bord doivent être consignés dans une note de livraison de soutes, laquelle doit contenir au moins les renseignements spécifiés à l'appendice V à la présente Annexe.

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6 La note de livraison de soutes doit être conservée à bord dans un endroit où elle soit facilement accessible aux fins d'inspection à tout moment raisonnable. Elle doit être conservée pendant une période de trois ans à compter de la livraison du fuel-oil à bord.

7.1 L'autorité compétente d'une Partie peut inspecter les notes de livraison de soutes à bord de tout navire auquel s'applique la présente Annexe alors que le navire se trouve dans son port ou terminal au large; elle peut faire une copie de chaque note de livraison et demander au capitaine ou à la personne responsable du navire de certifier que chaque copie est une copie conforme de la note de livraison de soutes en question. L'autorité compétente peut aussi vérifier le contenu de chaque note en contactant le port où la note a été délivrée.

7.2 Lorsqu'elle inspecte les notes de livraison de soutes et qu'elle fait établir des copies certifiées conformes en vertu du présent paragraphe, l'autorité compétente doit procéder le plus rapidement possible sans retarder indûment le navire.

8.1 La note de livraison de soutes doit être accompagnée d'un échantillon représentatif du fuel-oil livré compte tenu des directives élaborées par l'Organisation*. L'échantillon doit être scellé et recevoir la signature du représentant du fournisseur et celle du capitaine ou de l'officier chargé de l'opération de soutage, lorsque les opérations de soutage sont terminées, et il doit être conservé sous le contrôle du navire jusqu'à ce que le fuel-oil soit en grande partie consommé mais en tout cas pendant une période d'au moins douze mois à compter de la date de livraison.

8.2 Si une Administration exige que l'échantillon représentatif soit analysé, cette analyse doit être effectuée conformément à la procédure de vérification décrite à l'appendice VI pour déterminer si le fuel-oil satisfait aux prescriptions de la présente Annexe.

9 Les Parties s'engagent à faire en sorte que les autorités compétentes désignées par elles :

.1 tiennent un registre des fournisseurs locaux de fuel-oils;

.2 exigent des fournisseurs locaux qu'ils établissent la note de livraison de soutes et fournissent un échantillon conformément aux prescriptions de la présente règle, le fournisseur du fuel-oil attestant que le fuel-oil satisfait aux prescriptions des règles 14 et 18 de la présente Annexe;

.3 exigent des fournisseurs locaux qu'ils conservent une copie de la note de livraison de soutes pendant trois ans au moins aux fins d'inspection et de vérification par l'État du port, si nécessaire;

.4 prennent des mesures appropriées à l'encontre des fournisseurs de fuel-oils qui s'avèrent avoir livré du fuel-oil qui n'est pas conforme aux indications de la note de livraison de soutes;

.5 informent l'Administration de tout cas où un navire a reçu du fuel-oil qui s'est avéré ne pas satisfaire aux prescriptions de la règle 14 ou de la règle 18 de la présente Annexe; et

.6 informent l'Organisation, pour communication aux Parties et aux États Membres de l'Organisation, de tous les cas où des fournisseurs de fuel-oils n'ont pas satisfait aux prescriptions spécifiées dans la règle 14 ou la règle 18 de la présente Annexe.

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* Se reporter à la résolution MEPC.96(47), intitulée "Directives pour le prélèvement d'échantillons des fuel-oils en vue de déterminer la conformité avec l'Annexe VI de MARPOL 73/78".

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10 Dans le contexte des inspections des navires par l'État du port qui sont effectuées par des Parties, les Parties s'engagent en outre à :

.1 informer la Partie ou la non-Partie sous la juridiction de laquelle la note de livraison de soutes a été délivrée des cas de livraison de fuel-oil ne satisfaisant pas aux prescriptions, en fournissant tous les renseignements pertinents; et

.2 s'assurer que les mesures correctives nécessaires sont prises pour rendre conforme le fuel-oil qui s'est avéré ne pas satisfaire aux prescriptions.

11 Dans les cas des navires d'une jauge brute égale ou supérieure à 400 assurant un service régulier avec des escales fréquentes et régulières, une Administration peut décider, après avoir consulté les États concernés, que la conformité aux dispositions du paragraphe 6 de la présente règle peut être démontrée d'une autre manière, pour autant que celle-ci atteste avec le même degré de certitude du respect des règles 14 et 18 de la présente Annexe.

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Appendice I

Modèle de Certificat international de prévention de la pollution par les moteurs (IAPP)
(Règle 8)

CERTIFICAT INTERNATIONAL DE PRÉVENTION DE LA POLLUTION DE L'ATMOSPHÈRE PAR LES MOTEURS

Délivré en vertu des dispositions du Protocole de 1997, tel que modifié par la résolution MEPC.176(58) en 2008, modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif (ci-après dénommée "la Convention"), au nom du Gouvernement :

.....

(Nom officiel complet du pays)

par .....

(Titre officiel complet de la personne ou de l'organisme compétent autorisé en vertu des dispositions de la Convention)

Caractéristiques du navire[*]

Nom du navire .....

Numéro ou lettres distinctifs .....

Port d'immatriculation .....

Jauge brute .....

Numéro OMI[†] .....

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[*] Les caractéristiques du navire peuvent aussi être présentées horizontalement dans des cases.

[†] Conformément au Système de numéros OMI d'identification des navires, que l'Organisation a adopté par la résolution A.600(15).

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IL EST CERTIFIÉ :

1. que le navire a été visité conformément aux dispositions de la règle 5 de l'Annexe VI de la Convention; et

2. qu'à la suite de cette visite, il a été constaté que l'équipement, les systèmes, les aménagements et les matériaux étaient à tous égards conformes aux prescriptions applicables de l'Annexe VI de la Convention.

Date d'achèvement de la visite sur la base de laquelle le présent Certificat est délivré : ..... (jj/mm/aaaa)

Le présent Certificat est valable jusqu'au .....* sous réserve des visites prévues à la règle 5 de l'Annexe VI de la Convention.

Délivré à .....
(Lieu de délivrance du Certificat)

Le (jj/mm/aaaa) .. ..
(Date de délivrance)

.....
(Signature de l'agent dûment autorisé qui délivre le Certificat)

(Cachet ou tampon, selon le cas, de l'autorité qui délivre le Certificat)

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* Indiquer la date d'expiration fixée par l'Administration conformément à la règle 9.1 de l'Annexe VI de la Convention. Le jour et le mois correspondent à la date anniversaire telle que définie à la règle 2.3 de l'Annexe VI de la Convention, sauf si cette dernière date est modifiée en application de la règle 9.8 de l'Annexe VI de la Convention.

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Attestation de visites annuelles et intermédiaires

IL EST CERTIFIÉ que, lors d'une visite prescrite par la règle 5 de l'Annexe VI de la Convention, il a été constaté que le navire satisfaisait aux dispositions pertinentes de cette annexe :

Visite annuelle : Signé : .....
(Signature de l'agent dûment autorisé)

Lieu : .....

Date (jj/mm/aaaa) : .....

(Cachet ou tampon, selon le cas, de l'autorité)

Visite annuelle/intermédiaire* : Signé : .....
(Signature de l'agent dûment autorisé)

Lieu : .....

Date (jj/mm/aaaa) : .....

(Cachet ou tampon, selon le cas, de l'autorité)

Visite annuelle/intermédiaire* : Signé : .....
(Signature de l'agent dûment autorisé)

Lieu : .....

Date (jj/mm/aaaa) : .....

(Cachet ou tampon, selon le cas, de l'autorité)

Visite annuelle : Signé : .....
(Signature de l'agent dûment autorisé)

Lieu : .....

Date (jj/mm/aaaa) : .....

(Cachet ou tampon, selon le cas, de l'autorité)

* Rayer la mention inutile

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Visite annuelle/intermédiaire effectuée conformément à la règle 9.8.3

IL EST CERTIFIÉ que lors d'une visite annuelle/intermédiaire* effectuée conformément à la règle 9.8.3 de l'Annexe VI de la Convention, il a été constaté que le navire satisfaisait aux dispositions pertinentes de cette annexe :

Signé : .....
(*Signature de l'agent dûment autorisé*)

Lieu : .....

Date (jj/mm/aaaa) : .....

(*Cachet ou tampon, selon le cas, de l'autorité*)

Visa de prorogation du Certificat s'il est valable pour une durée inférieure à 5 ans, en cas d'application de la règle 9.3

Le navire satisfait aux dispositions pertinentes de la Convention et le présent Certificat, conformément à la règle 9.3 de l'Annexe VI de la Convention, est accepté comme valable jusqu'au (jj/mm/aaaa) .....

Signé : .....
(*Signature de l'agent dûment autorisé*)

Lieu : .....

Date (jj/mm/aaaa) : .....

(*Cachet ou tampon, selon le cas, de l'autorité*)

Visa de prorogation du Certificat après achèvement de la visite de renouvellement et en cas d'application de la règle 9.4

Le navire satisfait aux dispositions pertinentes de la Convention et le présent Certificat, conformément à la règle 9.4 de l'Annexe VI de la Convention, est accepté comme valable jusqu'au (jj/mm/aaaa) .....

Signé : .....
(*Signature de l'agent dûment autorisé*)

Lieu : .....

Date (jj/mm/aaaa) : .....

(*Cachet ou tampon, selon le cas, de l'autorité*)

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* Rayer la mention inutile.

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Visa de prorogation de la validité du Certificat jusqu'à ce que le navire arrive dans le port de visite ou pour une période de grâce en cas d'application de la règle 9.5 ou de la règle 9.6

Le présent Certificat, conformément à la règle 9.5 ou à la règle 9.6* de l'Annexe VI de la Convention, est accepté comme valable jusqu'au (jj/mm/aaaa).....

Signé : .....
(*Signature de l'agent dûment autorisé*)

Lieu : .....

Date (jj/mm/aaaa) : .....

(*Cachet ou tampon, selon le cas, de l'autorité*)

Visa pour l'avancement de la date anniversaire en cas d'application de la règle 9.8

Conformément à la règle 9.8 de l'Annexe VI de la Convention, la nouvelle date anniversaire est fixée au (jj/mm/aaaa) .....

Signé : .....
(*Signature de l'agent dûment autorisé*)

Lieu : .....

Date (jj/mm/aaaa) : .....

(*Cachet ou tampon, selon le cas, de l'autorité*)

Conformément à la règle 9.8 de l'Annexe VI de la Convention, la nouvelle date anniversaire est fixée au (jj/mm/aaaa) .....

Signé : .....
(*Signature de l'agent dûment autorisé*)

Lieu : .....

Date (jj/mm/aaaa) : .....

(*Cachet ou tampon, selon le cas, de l'autorité*)

* Rayer la mention inutile.

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SUPPLÉMENT AU CERTIFICAT INTERNATIONAL DE PRÉVENTION DE LA POLLUTION DE L'ATMOSPHÈRE (CERTIFICAT IAPP)

FICHE DE CONSTRUCTION ET D'ÉQUIPEMENT

Notes :

1 La présente fiche doit être jointe d'une manière permanente au Certificat IAPP. Le Certificat IAPP doit se trouver en permanence à bord du navire.

2 La fiche doit être rédigée en anglais, en français ou en espagnol, au moins. Si elle est établie aussi dans une langue officielle du pays qui la délivre, c'est cette version qui fait foi en cas de différend ou de divergence.

3 Pour répondre aux questions, insérer dans les cases le symbole (x) lorsque la réponse est "oui" ou "applicable" et le symbole (-) lorsque la réponse est "non" ou "non applicable", selon le cas.

4 Sauf indication contraire, les règles mentionnées dans la présente fiche sont les règles de l'Annexe VI de la Convention et les résolutions ou circulaires sont celles qui ont été adoptées par l'Organisation maritime internationale.

1 Caractéristiques du navire

1.1 Nom du navire .....

1.2 Numéro OMI .....

1.3 Date à laquelle la quille a été posée ou à laquelle la construction du navire se trouvait à un stade équivalent .....

1.4 Longueur (L)*, en mètres .....

2 Contrôle des émissions provenant des navires

2.1 *Substances qui appauvrissent la couche d'ozone (règle 12)*

2.1.1 Les dispositifs d'extinction de l'incendie, autres systèmes et matériel ci-après qui contiennent des substances qui appauvrissent la couche d'ozone, autres que des hydrochlorofluorocarbones, et ont été installés avant le 19 mai 2005 peuvent rester en service :

Dispositif/matériel	Emplacement à bord	Substance

* À indiquer uniquement pour les navires construits le 1er janvier 2016 ou après cette date qui sont conçus expressément pour être utilisés à des fins récréatives et sont utilisés uniquement à ces fins et auxquels, en vertu de la règle 13.5.2.1, les limites d'émission de NO_x spécifiées à la règle 13.5.1.1 ne s'appliqueront pas.

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2.1.2 Les dispositifs ci-après qui contiennent des hydrochlorofluorocarbones (HCFC) et ont été installés avant le 1er janvier 2020 peuvent rester en service :

Dispositif/matériel	Emplacement à bord	Substance

2.2 *Oxydes d'azote (NO_x) (règle 13)*

2.2.1 Les moteurs diesel marins ci-après installés à bord de ce navire respectent la limite d'émission de la règle 13 qui leur est applicable conformément au texte révisé du Code technique sur les NO_x, 2008 :

		Moteur n° 1	Moteur n° 2	Moteur n° 3	Moteur n° 4	Moteur n° 5	Moteur n° 6
Fabricant et modèle							
Numéro de série							
Utilisation							
Puissance de sortie (kW)							
Régime nominal (t/m)							
Date d'installation (jj/mm/aaaa)							
Date de la transformation importante (jj/mm/aaaa)	Conformément à la règle 13.2.2						
	Conformément à la règle 13.2.3						
Exempté en vertu de la règle 13.1.1.2		☐	☐	☐	☐	☐	☐
Niveau I Règle 13.3		☐	☐	☐	☐	☐	☐
Niveau II Règle 13.4		☐	☐	☐	☐	☐	☐
Niveau II Règle 13.2.2 ou 13.5.2		☐	☐	☐	☐	☐	☐
Niveau III Règle 13.5.1.1		☐	☐	☐	☐	☐	☐
Il existe une méthode approuvée		☐	☐	☐	☐	☐	☐
Méthode approuvée non disponible dans le commerce		☐	☐	☐	☐	☐	☐
Méthode approuvée installée		☐	☐	☐	☐	☐	☐

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2.3 *Oxydes de soufre (SO_x) et particules (règle 14)*

2.3.1 Lorsqu'il est exploité à l'intérieur d'une zone de contrôle des émissions de SO_x spécifiée à la règle 14.3, le navire utilise :

.1 un fuel-oil dont la teneur en soufre ne dépasse pas la valeur limite applicable, telle qu'attestée par les notes de livraison de soutes; ou ..... ☐

.2 un arrangement équivalent approuvé conformément à la règle 4.1, tel qu'indiqué au paragraphe 2.6 ..... ☐

2.4 *Composés organiques volatils (COV) (règle 15)*

2.4.1 Le navire-citerne dispose d'un collecteur de vapeurs installé et approuvé conformément à la circulaire MSC/Circ.585 ..... ☐

2.4.2.1 Les navires-citernes qui transportent du pétrole brut possèdent un plan de gestion des COV ..... ☐

2.4.2.2 Référence de l'approbation du plan de gestion des COV : .....

2.5 *Incinération à bord (règle 16)*

Le navire a un incinérateur :

.1 qui a été installé le 1er janvier 2000 ou après cette date qui satisfait aux dispositions de la résolution MEPC.76(40), telle que modifiée ..... ☐

.2 qui a été installé avant le 1er janvier 2000 et satisfait :

.2.1 aux dispositions de la résolution MEPC.59(33) ..... ☐

.2.2 aux dispositions de la résolution MEPC.76(40) ..... ☐

2.6 *Équivalents (règle 4)*

Le navire a été autorisé à utiliser à bord les installations, matériaux, dispositifs ou appareils ou autres procédures, fuel-oils de substitution ou méthodes visant au respect des dispositions qui sont indiqués ci-dessous en remplacement de ceux qui sont prescrits par la présente Annexe :

Dispositif ou équipement	Équivalent utilisé	Référence de l'approbation

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IL EST CERTIFIÉ que la présente fiche est correcte à tous égards.

Délivrée à .....
(Lieu de délivrance de la fiche)

Le (jj/mm/aaaa) .....
(Date de délivrance)

.....
(Signature du fonctionnaire dûment autorisé qui délivre la fiche)

(Cachet ou tampon, selon le cas, de l'autorité)

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Appendice II

Cycles d'essai et coefficients de pondération
(Règle 13)

Les cycles d'essai et coefficients de pondération ci-après doivent être appliqués aux fins de vérifier que les moteurs diesel marins ne dépassent pas la limite d'émission de NO_x qui leur est applicable en vertu de la règle 13 de la présente Annexe au moyen de la procédure d'essai et de la méthode de calcul qui sont décrites dans le texte révisé du Code technique sur les NO_x 2008.

.1 pour les moteurs marins à vitesse constante assurant la propulsion principale du navire, y compris la transmission diesel-électrique, le cycle d'essai E2 doit être appliqué;

.2 pour les installations à hélice à pas variable, le cycle d'essai E2 doit être appliqué;

.3 pour les moteurs principaux et auxiliaires adaptés à l'hélice, le cycle d'essai E3 doit être appliqué;

.4 pour les moteurs auxiliaires à vitesse constante, le cycle d'essai D2 doit être appliqué; et

.5 pour les moteurs auxiliaires à vitesse variable, à charge variable, qui n'appartiennent pas aux catégories ci-dessus, le cycle d'essai C1 doit être appliqué

Cycle d'essai pour les systèmes de *propulsion principale à vitesse constante* (y compris la transmission diesel-électrique et toutes les installations à hélice à pas variable)

Cycle d'essai du type E2	Vitesse	100 %	100 %	100 %	100 %
	Puissance	100 %	75 %	50 %	25 %
	Coefficient de pondération	0,2	0,5	0,15	0,15

Cycle d'essai pour les *moteurs principaux et auxiliaires adaptés à l'hélice*

Cycle d'essai du type E3	Vitesse	100 %	91 %	80 %	63 %
	Puissance	100 %	75 %	50 %	25 %
	Coefficient de pondération	0,2	0,5	0,15	0,15

Cycle d'essai pour les *moteurs auxiliaires à vitesse constante*

Cycle d'essai du type D2	Vitesse	100 %	100 %	100 %	100 %	100 %
	Puissance	100 %	75 %	50 %	25 %	10 %
	Coefficient de pondération	0,05	0,25	0,3	0,3	0,1

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Cycle d'essai pour les *moteurs auxiliaires à vitesse variable, à charge variable*

Cycle d'essai du type C1	Vitesse	Vitesse nominale				Vitesse intermédiaire			Ralenti
	Couple %	100 %	75 %	50 %	10 %	100 %	75 %	50 %	0 %
	Coefficient de pondération	0,15	0,15	0,15	0,1	0,1	0,1	0,1	0,15

Lorsqu'un moteur doit être certifié conformément aux dispositions du paragraphe 5.1.1 de la règle 13, l'émission spécifique à chaque point de mode particulier ne doit pas dépasser la limite applicable d'émission de NO_x de plus de 50 %, excepté dans les cas suivants :

.1 le point de mode 10 % dans le cycle d'essai D2;

.2 le point de mode 10 % dans le cycle d'essai C1;

.3 le point de mode au ralenti dans le cycle d'essai C1.

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Appendice **III**

Critères et procédures pour la désignation de zones de contrôle des émissions
(Règle 13.6 et règle 14.3)

1 ***Objectifs***

1.1 Le présent appendice a pour objet de fournir aux Parties les critères et procédures qui leur permettent de formuler et de soumettre des propositions pour la désignation de zones de contrôle des émissions et de présenter les éléments que l'Organisation doit prendre en considération lors de l'évaluation de ces propositions.

1.2 Les émissions de NO_x, de SO_x et de particules provenant des navires de mer contribuent à la pollution locale de l'atmosphère dans les villes et zones côtières du monde. Les effets préjudiciables de la pollution de l'atmosphère pour la santé de l'homme et l'environnement sont notamment une mortalité précoce, des maladies cardio-pulmonaires, le cancer des poumons, des affections respiratoires chroniques, l'acidification et l'eutrophisation.

1.3 L'Organisation devrait envisager d'adopter une zone de contrôle des émissions si la preuve lui est fournie qu'il est nécessaire d'y prévenir, réduire et contrôler les émissions de NO_x ou les émissions de SO_x et de particules ou les trois types d'émissions (ci-après dénommées émissions) provenant des navires.

2 ***Procédure pour la désignation de zones de contrôle des émissions***

2.1 Seules les Parties peuvent soumettre à l'Organisation une proposition visant à désigner une zone de contrôle des émissions de SO_x et de particules ou des émissions de NO_x ou des trois types d'émissions. Lorsque deux Parties ou davantage ont des intérêts communs dans une zone particulière, elles devraient formuler une proposition coordonnée.

2.2 Toute proposition visant à désigner une zone donnée comme zone de contrôle des émissions devrait être soumise à l'Organisation conformément aux règles et procédures établies par celle-ci.

3 ***Critères pour la désignation d'une zone de contrôle des émissions***

3.1 La proposition doit comprendre :

.1 une délimitation précise de la zone qu'il est proposé de désigner, assortie d'une carte de référence sur laquelle cette zone est indiquée;

.2 le ou les types d'émissions qu'il est proposé de contrôler (à savoir, NO_x ou SO_x et particules ou les trois types d'émissions);

.3 une description des populations et des zones de l'environnement qui sont susceptibles d'être affectées par les émissions des navires;

.4 une évaluation qui montre que les émissions provenant des navires exploités dans la zone proposée contribuent à la pollution locale de l'atmosphère ou aux effets préjudiciables pour l'environnement. Cette évaluation doit comprendre une description des effets que les émissions en question ont sur la santé de l'homme et l'environnement, tels que les effets préjudiciables pour les écosystèmes terrestres et aquatiques, les zones de productivité naturelle, les habitats critiques, la qualité de l'eau, la santé de l'homme et les zones importantes sur les plans culturel et

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scientifique, s'il y a lieu. Les sources des données pertinentes, y compris les méthodes utilisées, doivent être mentionnées;

.5 tout renseignement utile au sujet des conditions météorologiques de la zone proposée qui sont importantes pour les populations et les zones de l'environnement menacées, en particulier les caractéristiques des vents dominants, ou au sujet des conditions topographiques, géologiques, océanographiques, morphologiques ou autres qui contribuent à la pollution locale de l'atmosphère ou aux effets préjudiciables pour l'environnement;

.6 la nature du trafic maritime dans la zone où il est proposé de contrôler les émissions, y compris les courants de circulation et la densité du trafic;

.7 une description des mesures de contrôle que la ou les Parties soumettant la proposition ont prises pour remédier aux émissions de NO_x, SO_x et de particules provenant de sources à terre affectant les populations et les zones de l'environnement menacées et qui sont en place et déjà appliquées, ainsi que de celles qu'il est envisagé d'adopter en application des règles 13 et 14 de l'Annexe VI; et

.8 les coûts relatifs des mesures visant à réduire les émissions provenant des navires par rapport à ceux des mesures de contrôle à terre et les conséquences que ces mesures auraient, sur le plan économique, pour les navires qui effectuent des voyages internationaux.

3.2 Les limites géographiques d'une zone de contrôle des émissions seront établies sur la base des critères pertinents énoncés ci-dessus, y compris les émissions et les retombées provenant des navires qui naviguent dans la zone proposée, les courants de circulation et la densité du trafic, ainsi que les caractéristiques des vents dominants.

4 ***Procédures d'évaluation et d'adoption par l'organisation de zones de contrôle des émissions***

4.1 L'Organisation doit examiner chaque proposition qui lui est soumise par une ou plusieurs Parties.

4.2 Lorsqu'elle évalue la proposition, l'Organisation doit tenir compte des critères qui doivent être inclus dans chaque proposition qui lui est soumise pour adoption et qui sont énoncés dans la section 3 ci-dessus.

4.3 Une zone de contrôle des émissions doit être désignée comme telle par le biais d'un amendement à la présente Annexe qui est examiné, adopté et mis en vigueur conformément à l'article 16 de la présente Convention.

5 ***Fonctionnement des zones de contrôle des émissions***

5.1 Les Parties dont des navires naviguent dans la zone sont encouragées à faire part à l'Organisation de toutes les préoccupations qu'elles pourraient avoir au sujet du fonctionnement de la zone.

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Appendice IV

Approbation par type et limites d'exploitation des incinérateurs de bord (Règle 16)

1 Chaque incinérateur de bord décrit à la règle 16.6.1 qui se trouve à bord d'un navire doit obtenir un certificat OMI d'approbation par type. Pour obtenir un tel certificat, l'incinérateur doit être conçu et construit conformément à une norme approuvée, telle que décrite à la règle 16.6.1. Il faut soumettre chaque modèle, à l'usine ou dans un établissement d'essai agréé, à un essai de fonctionnement spécifié pour l'approbation par type, sous la responsabilité de l'Administration, en appliquant la spécification normalisée combustible/déchets ci-après pour déterminer si l'incinérateur fonctionne dans les limites spécifiées au paragraphe 2 du présent appendice :

Boues d'hydrocarbures composées de :	75 % de boues de fuel-oil lourd; 5 % d'huiles de graissage usées; et 20 % d'eau émulsifiée.
Déchets solides composés de :	50 % de déchets alimentaires; 50 % d'ordures contenant approximativement : 30 % de papier, 40 % de carton, 10 % de chiffons, 20 % de matières plastiques. Ce mélange aura jusqu'à 50 % d'eau et 7 % de solides incombustibles.

2 Les incinérateurs décrits à la règle 16.6.1 doivent fonctionner dans les limites indiquées ci-dessous :

Proportion de O_2 dans la chambre de combustion :	6 - 12 %
Quantité maximale de CO dans les gaz de combustion (moyenne) :	200 mg/MJ
Indice de suie maximal (moyenne) :	Bacharach 3 ou Ringelman 1 (opacité de 20 %) (un indice de suie plus élevé n'est acceptable que pendant de très brèves périodes, par exemple pendant le démarrage)
Éléments non brûlés dans les cendres résiduelles :	Maximum : 10 % en poids
Plage de températures des gaz à la sortie de la chambre de combustion :	850 - 1 200°C.

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Appendice V

Renseignements devant figurer dans la note de livraison de soutes
(Règle 18.5)

Nom et numéro OMI du navire destinataire

Port

Date à laquelle la livraison commence

Nom, adresse et numéro de téléphone du fournisseur du fuel-oil pour moteurs marins

Nom(s) du produit

Quantité en tonnes métriques

Densité à 15°C, en kg/m^3*

Teneur en soufre (% m/m)**

Déclaration signée par le représentant du fournisseur du fuel-oil et attestant que le fuel-oil livré est conforme au paragraphe applicable de la règle 14.1 ou 14.4 et de la règle 18.3 de la présente Annexe.

---

* Le fuel-oil doit être mis à l'essai conformément à la norme ISO 3675:1998 ou ISO 12185:1996.

** Le fuel-oil doit être mis à l'essai conformément à la norme ISO 8754:2003.

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Appendice VI

Procédure de vérification du combustible applicable aux échantillons de fuel-oil prescrits par l'Annexe VI de MARPOL.
(Règle 18.8.2)

Il faut appliquer la procédure ci-après pour déterminer si le fuel-oil livré et utilisé à bord des navires est conforme aux normes prescrites par l'Annexe VI de MARPOL.

1 *Prescriptions générales*

1.1 Il faut utiliser l'échantillon représentatif de fuel-oil qui est prescrit au paragraphe 8.1 de la règle 18 (l'"échantillon MARPOL") pour vérifier la teneur en soufre du fuel-oil livré à un navire.

1.2 Par l'intermédiaire de son autorité compétente, l'Administration gère la procédure de vérification.

1.3 Les laboratoires chargés de la procédure de vérification énoncée dans le présent appendice doivent être pleinement agréés* pour appliquer la ou des méthodes d'essai.

2 *Procédure de vérification - Étape 1*

2.1 L'échantillon MARPOL devrait être livré au laboratoire par l'autorité compétente.

2.2 Le laboratoire :

.1 consigne dans le procès-verbal d'essai les détails du numéro du scellé et de l'étiquette de l'échantillon;

.2 confirme que le scellé apposé sur l'échantillon MARPOL est intact; et

.3 rejette tout échantillon MARPOL dont le scellé a été rompu.

2.3 Si le scellé de l'échantillon MARPOL est intact, le laboratoire entame la procédure de vérification et :

.1 s'assure que l'échantillon MARPOL est parfaitement homogénéisé;

.2 prélève deux sous-échantillons de l'échantillon MARPOL; et

.3 rescelle l'échantillon MARPOL et consigne les détails du nouveau scellé dans le procès-verbal d'essai.

---

* L'agrément se fait conformément à la norme ISO 17025 ou à une norme équivalente.

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2.4 Les deux sous-échantillons doivent être mis à l'essai successivement, conformément à la méthode d'essai mentionnée à l'appendice V (deuxième note de bas de page). Aux fins de cette procédure de vérification, les résultats des analyses sont désignés par les lettres "A" et "B".

.1 Si les résultats de "A" et de "B" se situent dans l'intervalle de répétabilité (r) de la méthode d'essai, ils sont considérés comme valables.

.2 Si les résultats de "A" et de "B" ne se situent pas dans l'intervalle de répétabilité (r) de la méthode d'essai, ils sont rejetés et deux nouveaux sous-échantillons sont prélevés par le laboratoire et sont analysés. Le flacon à échantillon devrait être rescellé conformément aux dispositions du paragraphe 2.3.3 ci-dessus après que les nouveaux sous-échantillons ont été prélevés.

2.5 Si les résultats d'essai de "A" et de "B" sont valables, il faudrait faire la moyenne de ces deux résultats pour obtenir le résultat désigné par "X".

.1 Si le résultat de "X" est inférieur ou égal à la limite applicable prescrite par l'Annexe VI, le fuel-oil est jugé comme satisfaisant aux prescriptions.

.2 Si le résultat de "X" est supérieur à la limite applicable prescrite par l'Annexe VI, il faudrait procéder à l'étape 2 de la procédure de vérification; toutefois, si le résultat de "X" dépasse la limite spécifiée de $0.59R$ (où R est la reproductibilité de la méthode d'essai), le fuel-oil est considéré comme non conforme et il n'est pas nécessaire de poursuivre les essais.

3 ***Procédure de vérification – Étape 2***

3.1 Si l'étape 2 de la procédure de vérification s'impose en vertu du paragraphe 2.5.2 ci-dessus, l'autorité compétente envoie l'échantillon MARPOL à un deuxième laboratoire agréé.

3.2 À la réception de l'échantillon MARPOL, le laboratoire :

.1 consigne les détails du numéro du scellé et de l'étiquette de l'échantillon dans le procès-verbal d'essai;

.2 prélève deux sous-échantillons de l'échantillon MARPOL; et

.3 rescelle l'échantillon MARPOL et consigne les détails du nouveau scellé dans le procès-verbal d'essai.

3.3 Les deux sous-échantillons devraient être mis à l'essai successivement, conformément à la méthode d'essai mentionnée à l'appendice V (deuxième note de bas de page). Aux fins de cette procédure de vérification, les résultats des analyses sont désignés par les lettres "C" et "D".

.1 Si les résultats de "C" et de "D" se situent dans l'intervalle de répétabilité (r) de la méthode d'essai, ils sont considérés comme valables.

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.2 Si les résultats de "C" et de "D" ne se situent pas dans l'intervalle de répétabilité (*r*) de la méthode d'essai, ils sont rejetés et deux nouveaux sous-échantillons sont prélevés par le laboratoire et sont analysés. Le flacon à échantillon devrait être resecllé conformément aux dispositions du paragraphe 3.2.3 ci-dessus après que les nouveaux sous-échantillons ont été prélevés.

3.4 Si les résultats de "C" et de "D" sont valables et que les résultats de "A", "B", "C" et "D" se situent dans l'intervalle de reproductibilité (*R*) de la méthode d'essai, le laboratoire fait la moyenne de ces résultats, qui est désignée par la lettre "Y".

.1 Si le résultat de "Y" est inférieur ou égal à la limite applicable prescrite par l'Annexe VI, le fuel-oil est jugé comme satisfaisant aux prescriptions.

.2 Si le résultat de "Y" est supérieur à la limite applicable prescrite par l'Annexe VI, le fuel-oil ne satisfait pas aux normes prescrites par l'Annexe VI.

3.5 Si les résultats de "A", "B", "C" et "D" ne se situent pas dans l'intervalle de reproductibilité (*R*) de la méthode d'essai, l'Administration peut rejeter tous les résultats des essais et, si elle le juge opportun, recommencer la procédure complète de mise à l'essai.

3.6 Les résultats de la procédure de vérification sont définitifs.

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РЕЗОЛЮЦИЯ МЕРС.176(58)

Принята 10 октября 2008 года

ПОПРАВКИ К ПРИЛОЖЕНИЮ К ПРОТОКОЛУ 1997 ГОДА ОБ ИЗМЕНЕНИИ МЕЖДУНАРОДНОЙ КОНВЕНЦИИ ПО ПРЕДОТВРАЩЕНИЮ ЗАГРЯЗНЕНИЯ С СУДОВ 1973 ГОДА, ИЗМЕНЕННОЙ ПРОТОКОЛОМ 1978 ГОДА К НЕЙ

(Пересмотренное Приложение VI к Конвенции МАРПОЛ)

КОМИТЕТ ПО ЗАЩИТЕ МОРСКОЙ СРЕДЫ,

ССЫЛАЯСЬ на статью 38 a) Конвенции о Международной морской организации, касающуюся функций Комитета по защите морской среды (Комитет), возложенных на него международными конвенциями по предотвращению загрязнения моря и борьбе с ним,

ОТМЕЧАЯ статью 16 Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемой «Конвенция 1973 года»), статью VI Протокола 1978 года к Международной конвенции по предотвращению загрязнения с судов 1973 года (далее именуемого «Протокол 1978 года») и статью 4 Протокола 1997 года об изменении Международной конвенции по предотвращению загрязнения с судов 1973 года, измененной Протоколом 1978 года к ней (далее именуемого «Протокол 1997 года»), которые совместно устанавливают процедуру внесения поправок в Протокол 1997 года и возлагают на соответствующий орган Организации функцию рассмотрения и одобрения поправок к Конвенции 1973 года, измененной Протоколами 1978 и 1997 годов,

ОТМЕЧАЯ ТАКЖЕ, что к Конвенции 1973 года посредством Протокола 1997 года добавлено Приложение VI, озаглавленное «Правила предотвращения загрязнения воздушной среды с судов» (далее именуемое «Приложение VI»),

РАССМОТРЕВ проект поправок к Приложению VI к Конвенции МАРПОЛ,

1. ОДОБРЯЕТ в соответствии со статьей 16 2) d) Конвенции 1973 года поправки к Приложению VI, текст которых изложен в приложении к настоящей резолюции;

2. ПОСТАНОВЛЯЕТ в соответствии со статьей 16 2) f) iii) Конвенции 1973 года, что поправки считаются принятыми 1 января 2010 года, если до этой даты Организации не будут сообщены возражения против поправок не менее одной трети Сторон или Сторон, общая валовая вместимость торговых судов которых составляет не менее 50 процентов валовой вместимости судов мирового торгового флота;

3. ПРЕДЛАГАЕТ Сторонам принять к сведению, что в соответствии со статьей 16 2) g) ii) Конвенции 1973 года вышеупомянутые поправки вступают в силу 1 июля 2010 года после их принятия в соответствии с пунктом 2, выше;

4. ПРОСИТ Генерального секретаря, в соответствии со статьей 16 2) e) Конвенции 1973 года, направить всем Сторонам Конвенции 1973 года, измененной Протоколами 1978 и 1997 годов, заверенные копии настоящей резолюции и текста поправок, содержащегося в приложении;

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5. ПРОСИТ ДАЛЕЕ Генерального секретаря направить членам Организации, которые не являются Сторонами Конвенции 1973 года, измененной Протоколами 1978 и 1997 годов, копии настоящей резолюции и приложения к ней; и

6. ПРЕДЛАГАЕТ Сторонам Приложения VI к Конвенции МАРПОЛ и другим правительствам-членам довести поправки к Приложению VI к Конвенции МАРПОЛ до сведения собственников судов, операторов судов, судостроителей, изготовителей судовых дизельных двигателей, поставщиков судового топлива и любых других заинтересованных групп.

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ПРИЛОЖЕНИЕ

ПЕРЕСМОТРЕННОЕ ПРИЛОЖЕНИЕ VI К КОНВЕНЦИИ МАРПОЛ

Правила предотвращения загрязнения воздушной среды с судов

ГЛАВА 1

ОБЩИЕ ПОЛОЖЕНИЯ

Правило 1
Применение

Положения настоящего Приложения применяются ко всем судам, если специально не предусмотрено иное в правилах 3, 5, 6, 13, 15, 16 и 18 настоящего Приложения.

Правило 2
Определения

Для целей настоящего Приложения:

1 *Приложение* означает Приложение VI к Международной конвенции по предотвращению загрязнения с судов 1973 года (Конвенция МАРПОЛ), измененной Протоколом 1978 года к ней и измененной Протоколом 1997 года, с поправками, внесенными Организацией, при условии что такие поправки одобряются и вступают в силу в соответствии с положениями статьи 16 настоящей Конвенции.

2 *Подобная стадия постройки* означает стадию, на которой:

.1 начато строительство, которое можно отождествить с определенным судном; и

.2 начата сборка этого судна, причем масса использованного материала составляет по меньшей мере 50 тонн или один процент расчетной массы материала всех корпусных конструкций, в зависимости от того, что меньше.

3 *Ежегодная дата* означает день и месяц каждого года, которые будут соответствовать дате истечения срока действия Международного свидетельства о предотвращении загрязнения воздушной среды.

4 *Вспомогательное устройство управления* означает систему, функцию или средство контроля, установленные на судовом дизельном двигателе и используемые для защиты двигателя и/или его вспомогательного оборудования от условий эксплуатации, которые могут привести к повреждению или отказу, или используемые для облегчения пуска двигателя. Вспомогательное устройство управления может быть также средством или мерой, которые удовлетворительно демонстрируют, что они не являются регулировочно-управляющим устройством.

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5 *Постоянная подача* определяется как процесс, при котором отходы подаются в камеру сгорания без помощи человека, когда инсинератор находится в нормальном рабочем режиме с рабочей температурой в камере сгорания в пределах от 850°C до 1200°C.

6 *Регулировочно-управляющее устройство* означает устройство, которое измеряет, воспринимает или реагирует на эксплуатационные переменные (например, частота вращения двигателя, температура, давление на впуске или любой другой параметр) с целью включения, модулирования, задержки или отключения работы любого компонента или функции системы контроля выбросов таким образом, что эффективность системы контроля выбросов снижается в условиях, встречающихся во время обычной эксплуатации, если использование такого устройства в существенной мере не включено в применяемую методику сертификационных испытаний на выбросы.

7 *Выброс* означает любой выпуск с судов в атмосферу или в море веществ, подлежащих контролю на основании настоящего Приложения.

8 *Район контроля выбросов* означает район, в котором требуется принятие специальных обязательных мер в отношении выбросов с судов с целью предотвращения, сокращения и сохранения под контролем загрязнения воздушной среды NO_x или SO_x и твердыми частицами и их сопутствующего отрицательного воздействия на здоровье человека и на окружающую среду. Районы контроля выбросов включают районы, указанные в правилах 13 и 14 настоящего Приложения или назначенные на основании их.

9 *Жидкое топливо* означает любое топливо, поставляемое и предназначенное для целей сгорания для гребной установки или эксплуатации на судне, включая дистиллятное и остаточное топливо.

10 *Валовая вместимость* означает валовую вместимость, рассчитанную в соответствии с правилами обмера судов, содержащимися в Приложении I к Международной конвенции по обмеру судов 1969 года или в любой заменяющей ее конвенции.

11 *Установка* в отношении правила 12 настоящего Приложения означает установку на судне систем, оборудования, включая переносные огнетушители, изоляции или другого материала, но исключая ремонт или перезарядку ранее установленных систем, оборудования, изоляции или другого материала либо перезарядку переносных огнетушителей.

12 *Установленный* означает судовой дизельный двигатель, который установлен или предназначен к установке на судне, включая переносной вспомогательный судовой дизельный двигатель, только в том случае, если его система заправки топливом, охлаждения или выпуска отработавших газов является неотъемлемой частью судна. Система заправки топливом считается неотъемлемой частью судна только в том случае, если она постоянно установлена на судне. Настоящее определение включает судовой дизельный двигатель, который используется для дополнения или усиления установленной мощности судна и предназначен быть неотъемлемой частью судна.

13 *Нерациональное средство контроля выбросов* означает любое средство или меру, которые при эксплуатации судна в обычных условиях снижают эффективность системы контроля выбросов до уровня ниже того, который ожидается в рамках применимой методики испытаний на выбросы.

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14 *Судовой дизельный двигатель* означает любой поршневой двигатель внутреннего сгорания, работающий на жидком или двойном топливе, к которому применяется правило 13 настоящего Приложения, включая ускорительные/смесительные системы, если они применяются.

15 *Технический кодекс по NO_x* означает Технический кодекс по контролю за выбросами оксидов азота из судовых дизельных двигателей, одобренный резолюцией 2 Конференции МАРПОЛ 1997 года, с поправками, внесенными Организацией, при условии что такие поправки одобряются и вступают в силу в соответствии с положениями статьи 16 настоящей Конвенции.

16 *Озоноразрушающие вещества* означают регулируемые вещества, определенные в пункте 4 статьи 1 Монреальского протокола по веществам, разрушающим озоновый слой, 1987 года и указанные в Приложениях A, B, C или E к этому Протоколу, которые находятся в силе во время применения или толкования настоящего Приложения.

Озоноразрушающие вещества, которые могут быть обнаружены на судне, включают, не ограничиваясь этим:

галон 1211	бромхлордифторметан
галон 1301	бромтрифторметан
галон 2402	1,2-дибром-1,1,2,2-тетрафторэтан (также известен как галон 114B2)
ХФУ-11	трихлорфторметан
ХФУ-12	дихлордифторметан
ХФУ-113	1,1,2-трихлор-1,2,2-трифторэтан
ХФУ-114	1,2-дихлор-1,1,2,2-тетрафторэтан
ХФУ-115	хлорпентафторэтан

17 *Сжигание на судне* означает сжигание отходов или других материалов на судне, если такие отходы или другие материалы образовались в ходе обычной эксплуатации этого судна.

18 *Судовой инсинератор* означает судовую установку, предназначенную главным образом для целей сжигания.

19 *Суда, построенные* означают суда, киль которых заложены или которые находятся в подобной стадии постройки.

20 *Нефтяные остатки* означают осадки из топливных или масляных сепараторов, отработанное смазочное масло из главных или вспомогательных механизмов или нефтесодержащие отходы из сепараторов льяльных вод, оборудования для фильтрации нефти или поддонов.

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21 *Танкер* означает нефтяной танкер, как он определен в правиле 1 Приложения I, или танкер-химовоз, как он определен в правиле 1 Приложения II к настоящей Конвенции.

Правило 3
Исключения и изъятия

Общие положения

1 Правила настоящего Приложения не применяются к:

.1 любому выбросу в целях обеспечения безопасности судна или спасения человеческой жизни на море; или

.2 любому выбросу в результате повреждения судна или его оборудования:

.2.1 при условии что после повреждения или обнаружения выброса были приняты все разумные меры предосторожности для предотвращения или сведения к минимуму такого выброса; и

.2.2 за исключением случаев, когда собственник или капитан действовали либо с намерением вызвать повреждение, либо самонадеянно и сознавая, что это может привести к повреждению.

Испытания в области сокращения выбросов с судов и исследования технологии контроля

2 Администрация Стороны в сотрудничестве с другими Администрациями, если необходимо, может предоставить изъятие из конкретных положений настоящего Приложения для судна с целью проведения испытаний в области разработки технологий сокращения и контроля выбросов с судов, а также программ проектирования двигателей. Такое изъятие предоставляется только в том случае, если применение конкретных положений Приложения или пересмотренного Технического кодекса по NO_x 2008 года может затруднить исследования в области разработки таких технологий или программ. Разрешение на такое изъятие предоставляется только необходимому минимальному числу судов и подпадает под следующие положения:

.1 для судовых дизельных двигателей с объемом цилиндра до 30 литров продолжительность испытания на море не превышает 18 месяцев. Если требуется дополнительное время, выдающая разрешение Администрация или Администрации могут разрешить возобновление испытаний в течение одного дополнительного 18-месячного периода; или

.2 для судовых дизельных двигателей с объемом цилиндра 30 литров или более продолжительность испытаний на судне не превышает пяти лет и при этом требуется анализ проведения испытаний выдающей разрешение Администрацией или Администрациями при каждом промежуточном освидетельствовании. Разрешение может быть отменено на основании этого анализа, если испытания не проводились в соответствии с условиями разрешения или если установлено, что технология или программа не может привести к эффективным результатам в деле сокращения и контроля выбросов

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с судов. Если выполняющая анализ Администрация или Администрации установят, что требуется дополнительное время для проведения испытания конкретной технологии или программы, разрешение может быть возобновлено на дополнительный период, не превышающий пяти лет.

Выбросы в результате деятельности по разработке минеральных ресурсов морского дна

3.1 Выбросы, происходящие непосредственно вследствие разведки, разработки и связанных с ними процессов обработки в море минеральных ресурсов морского дна, согласно статье 2 3) b) ii) настоящей Конвенции освобождаются от соответствия положениям настоящего Приложения. Такие выбросы включают следующее:

.1 выбросы, происходящие при сжигании веществ, которые являются исключительно и непосредственно результатом разведки, разработки и связанных с ними процессов обработки в море минеральных ресурсов морского дна, включая, но не ограничиваясь этим, сжигание углеводородов в факеле и сжигание бурового шлама, буровых растворов и/или жидкостей для воздействия на пласт во время операций по заканчиванию и испытанию скважин, а также сжигание в факеле при высадке труб;

.2 выбросы газов и летучих соединений, увлекаемых буровыми растворами и шламом;

.3 выбросы, связанные исключительно и непосредственно с обработкой, перегрузкой или хранением минералов морского дна; и

.4 выбросы из судовых дизельных двигателей, используемых исключительно при разведке, разработке и связанных с ними процессах обработки в море минеральных ресурсов морского дна.

3.2 Требования правила 18 настоящего Приложения не применяются к использованию углеводородов, которые производятся и впоследствии используются на месте в качестве топлива, когда это одобрено Администрацией.

Правило 4
Эквиваленты

1 Администрация Стороны может разрешить применение на судне устройств, материалов, приспособлений или приборов либо других процедур, альтернативного жидкого топлива или методов обеспечения соответствия, отличных от требуемых настоящим Приложением, если такие устройства, материалы, приспособления или приборы либо другие процедуры, альтернативное жидкое топливо или методы обеспечения соответствия являются не менее эффективными с точки зрения сокращения выбросов, чем требуемые настоящим Приложением, включая любые стандарты, изложенные в правилах 13 и 14.

2 Администрация Стороны, которая разрешает применение устройства, материала, приспособления или прибора либо других процедур, альтернативного жидкого топлива или методов обеспечения соответствия, отличных от требуемых настоящим Приложением, сообщает подробные сведения об этом Организации для распространения среди Сторон с целью информации и принятия ими соответствующих мер, если таковые потребуются.

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3 Администрация Стороны должна учитывать любые соответствующие руководства, разработанные Организацией и относящиеся к эквивалентам, предусмотренным в настоящем правиле.

4 Администрация Стороны, которая разрешает применение какого-либо эквивалента, указанного в пункте 1 настоящего правила, стремится не ухудшать окружающую среду, здоровье человека, имущество или ресурсы – свои или других государств – или не причинять им ущерба.

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ГЛАВА II

ОСВИДЕТЕЛЬСТВОВАНИЕ, ВЫДАЧА СВИДЕТЕЛЬСТВ И СРЕДСТВА КОНТРОЛЯ

Правило 5
Освидетельствования

1 Каждое судно валовой вместимостью 400 и более, а также каждая стационарная и плавучая буровая установка и другие платформы подлежат перечисленным ниже освидетельствованиям:

.1 первоначальному освидетельствованию перед вводом судна в эксплуатацию или перед первичной выдачей Свидетельства, требуемого правилом 6 настоящего Приложения. Это освидетельствование проводится, чтобы удостовериться, что оборудование, системы, устройства, приспособления и материалы полностью удовлетворяют применимым к ним требованиям настоящего Приложения;

.2 освидетельствованию для возобновления свидетельства через промежутки времени, установленные Администрацией, но не превышающие пяти лет, за исключением тех случаев, когда применимы правила 9.2, 9.5, 9.6 или 9.7 настоящего Приложения. Освидетельствование для возобновления свидетельства проводится, чтобы удостовериться, что оборудование, системы, устройства, приспособления и материалы полностью удовлетворяют применимым к ним требованиям настоящего Приложения;

.3 промежуточному освидетельствованию в пределах трех месяцев до или после второй ежегодной даты или в пределах трех месяцев до или после третьей ежегодной даты Свидетельства, которое проводится вместо одного из ежегодных освидетельствований, указанных в пункте 1.4 настоящего правила. Промежуточное освидетельствование проводится, чтобы удостовериться, что оборудование и приспособления полностью удовлетворяют применимым к ним требованиям настоящего Приложения и находятся в хорошем рабочем состоянии. О таких промежуточных освидетельствованиях производится запись в Свидетельстве, выданном в соответствии с правилом 6 или 7 настоящего Приложения;

.4 ежегодному освидетельствованию в пределах трех месяцев до или после каждой ежегодной даты Свидетельства, включая общую проверку оборудования, систем, устройств, приспособлений и материалов, упомянутую в пункте 1.1 настоящего правила, чтобы удостовериться, что они содержатся в соответствии с пунктом 4 настоящего правила и продолжают удовлетворять условиям эксплуатации, для которых судно предназначено. О таких ежегодных освидетельствованиях производится запись в Свидетельстве, выданном в соответствии с правилом 6 или 7 настоящего Приложения; и

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.5 дополнительному общему либо частичному освидетельствованию, в зависимости от обстоятельств, которое должно проводиться каждый раз, когда производится какой-либо серьезный ремонт или замена, предписанные в пункте 4 настоящего правила, или после ремонта в результате обследований, предписанных в пункте 5 настоящего правила. Освидетельствование проводится, чтобы удостовериться, что необходимый ремонт или замена были произведены качественно, что материал и выполнение такого ремонта или замены во всех отношениях удовлетворительны и что судно во всех отношениях отвечает требованиям настоящего Приложения.

2 В отношении судов валовой вместимостью менее 400 Администрация может принять надлежащие меры для обеспечения выполнения тех положений настоящего Приложения, которые к ним применимы.

3 Освидетельствования судов во исполнение положений настоящего Приложения осуществляются должностными лицами Администрации.

.1 Однако Администрация может поручить проведение освидетельствований назначенным для этой цели инспекторам или признанным ею организациям. Такие организации должны отвечать руководству, принятому Организацией[1];

.2 освидетельствование судовых дизельных двигателей и оборудования для соответствия правилу 13 настоящего Приложения проводится в соответствии с пересмотренным Техническим кодексом по NO_x 2008 года;

.3 если назначенный инспектор или признанная организация устанавливает, что состояние оборудования существенно не соответствует данным Свидетельства, то они обеспечивают принятие мер по устранению недостатков и должным образом уведомляют об этом Администрацию. Если меры по устранению недостатков не выполняются, то Администрация изымает Свидетельство. Если же судно находится в порту другой Стороны, то об этом немедленно уведомляются также соответствующие власти государства порта. Если должностное лицо Администрации, назначенный инспектор или признанная организация уведомили соответствующие власти государства порта, то правительство заинтересованного государства порта оказывает такому должностному лицу, инспектору или организации любую необходимую помощь в выполнении их обязанностей в соответствии с настоящим правилом; и

.4 в каждом случае заинтересованная Администрация полностью гарантирует полноту и тщательность освидетельствования и обеспечивает принятие необходимых мер для выполнения этого обязательства.

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[1] См. Руководство по предоставлению полномочий организациям, действующим от имени Администрации, принятое Организацией резолюцией A.739(18), с поправками, которые могут быть внесены Администрацией, и Спецификации функций признанных организаций, действующих от имени Администрации, по освидетельствованию и выдаче свидетельств, принятые Организацией резолюцией A.789(19), с поправками, которые могут быть внесены Администрацией.

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4 Состояние оборудования должно поддерживаться в соответствии с положениями настоящего Приложения и без явного одобрения Администрации не допускается производить никаких изменений в оборудовании, системах, устройствах, приспособлениях или материалах, подвергшихся освидетельствованию. Разрешается прямая замена такого оборудования и устройств оборудованием и устройствами, которые отвечают положениям настоящего Приложения.

5 Каждый раз, когда с судном происходит авария или на нем обнаруживается неисправность, которая существенным образом влияет на эффективность или комплектность его оборудования, на которое распространяется настоящее Приложение, капитан или собственник судна при первой же возможности сообщают об этом Администрации, назначенному инспектору или признанной организации, ответственным за выдачу соответствующего Свидетельства.

Правило 6
Выдача и подтверждение Свидетельства

1 Международное свидетельство о предотвращении загрязнения воздушной среды выдается после первоначального освидетельствования или освидетельствования для возобновления свидетельства в соответствии с положениями правила 5 настоящего Приложения:

.1 любому судну валовой вместимостью 400 и более, совершающему рейсы в порты или к удаленным от берега терминалам, находящимся под юрисдикцией других Сторон; и

.2 платформам и буровым установкам, совершающим рейсы в воды, находящиеся под суверенитетом или юрисдикцией других Сторон.

2 Судну, построенному до даты вступления в силу Приложения VI для Администрации такого судна, выдается Международное свидетельство о предотвращении загрязнения воздушной среды в соответствии с пунктом 1 настоящего правила не позднее первого планового докования после даты этого вступления в силу, но ни в коем случае не позднее чем через три года после этой даты.

3 Такое Свидетельство выдается или подтверждается Администрацией либо лицом или организацией, должным образом ею уполномоченными. В каждом случае Администрация несет полную ответственность за Свидетельство.

Правило 7
Выдача Свидетельства другой Стороной

1 Сторона может по просьбе Администрации принять к освидетельствованию судно и, удостоверившись, что на судне выполнены все положения настоящего Приложения, выдает или уполномочивает выдать судну Международное свидетельство о предотвращении загрязнения воздушной среды, а в соответствующих случаях подтверждает или уполномочивает подтвердить это имеющееся на судне Свидетельство в соответствии с настоящим Приложением.

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2 Копия Свидетельства и копия акта об освидетельствовании передаются как можно скорее Администрации, по просьбе которой осуществляется освидетельствование.

3 Выданное таким образом Свидетельство должно содержать запись о том, что оно выдано по просьбе Администрации, имеет такую же силу и получает такое же признание, как и Свидетельство, выданное в соответствии с правилом 6 настоящего Приложения.

4 Международное свидетельство о предотвращении загрязнения воздушной среды не выдается судну, которое имеет право плавать под флагом государства, не являющегося Стороной.

Правило 8
Форма Свидетельства

Международное свидетельство о предотвращении загрязнения воздушной среды составляется по форме, соответствующей образцу, приведенному в дополнении I к настоящему Приложению, и должно быть оформлено по меньшей мере на английском, испанском или французском языках. Если используется также официальный язык выдающей страны, то в случае спора или разночтения предпочтение отдается этому языку.

Правило 9
Срок действия и действительность Свидетельства

1 Международное свидетельство о предотвращении загрязнения воздушной среды выдается на срок, установленный Администрацией, но не превышающий пяти лет.

2 Независимо от требований пункта 1 настоящего правила:

.1 когда освидетельствование для возобновления свидетельства закончено в пределах трех месяцев до даты истечения срока действия существующего Свидетельства, новое Свидетельство действительно с даты окончания освидетельствования для возобновления свидетельства до даты, не превышающей пяти лет с даты истечения срока действия существующего Свидетельства;

.2 когда освидетельствование для возобновления свидетельства закончено после даты истечения срока действия существующего Свидетельства, новое Свидетельство действительно с даты окончания освидетельствования для возобновления свидетельства до даты, не превышающей пяти лет с даты истечения срока действия существующего Свидетельства; и

.3 когда освидетельствование для возобновления свидетельства закончено более чем за три месяца до даты истечения срока действия существующего Свидетельства, новое Свидетельство действительно с даты окончания освидетельствования для возобновления свидетельства до даты, не превышающей пяти лет с даты окончания освидетельствования для возобновления свидетельства.

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3 Если Свидетельство выдается на срок менее пяти лет, Администрация может продлить действие Свидетельства с даты истечения срока действия до максимального срока, установленного в пункте 1 настоящего правила, при условии что проведены соответствующие освидетельствования, упомянутые в правилах 5.1.3 и 5.1.4 настоящего Приложения, применяемые, когда Свидетельство выдается на пятилетний период.

4 Если освидетельствование для возобновления свидетельства было закончено, а новое Свидетельство не может быть выдано или передано на судно до даты истечения срока действия существующего Свидетельства, то лицо или организация, уполномоченные Администрацией, могут подтвердить существующее Свидетельство, и такое Свидетельство должно признаваться действительным на дальнейший срок, который не должен превышать пяти месяцев с даты истечения указанного в нем срока действия.

5 Если в момент истечения срока действия Свидетельства судно не находится в порту, в котором оно должно быть освидетельствовано, Администрация может продлить срок действия Свидетельства, но такое продление предоставляется только для того, чтобы дать возможность судну закончить свой рейс в порту, в котором оно должно быть освидетельствовано, и только в тех случаях, когда такое продление окажется необходимым и целесообразным. Никакое Свидетельство не должно продлеваться на срок, превышающий три месяца, и судно, которому предоставляется такое продление, не имеет права по прибытии в порт, в котором оно должно быть освидетельствовано, покинуть этот порт в силу этого продления без нового Свидетельства. Когда закончено освидетельствование для возобновления свидетельства, новое Свидетельство действительно до даты, не превышающей пяти лет с даты истечения срока действия существующего Свидетельства, установленной до предоставления продления.

6 Свидетельство, выданное судну, совершающему короткие рейсы, которое не было продлено в соответствии с вышеупомянутыми положениями настоящего правила, может быть продлено Администрацией на льготный срок до одного месяца с даты истечения указанного в нем срока действия. Когда произведено освидетельствование для возобновления свидетельства, новое Свидетельство действительно до даты, не превышающей пяти лет с даты истечения срока действия существующего Свидетельства, установленной до предоставления продления.

7 В особых случаях, определенных Администрацией, новое Свидетельство может не выдаваться с даты истечения срока действия существующего Свидетельства, как требуется пунктами 2.1, 5 или 6 настоящего правила. В этих особых случаях новое Свидетельство действительно до даты, не превышающей пяти лет с даты окончания освидетельствования для возобновления свидетельства.

8 Если ежегодное или промежуточное освидетельствование закончено до срока, установленного в правиле 5 настоящего Приложения, то:

.1 ежегодная дата, указанная в Свидетельстве, должна быть изменена внесением записи на дату, которая должна быть не позднее трех месяцев после даты, на которую было закончено освидетельствование;

.2 последующее ежегодное или промежуточное освидетельствование, требуемое правилом 5 настоящего Приложения, должно быть закончено в периоды, предписываемые этим правилом, используя новую ежегодную дату; и

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.3 дата истечения срока действия может оставаться без изменения при условии, что одно или более ежегодных или промежуточных освидетельствований, в зависимости от случая, проводятся так, чтобы не были превышены максимальные периоды между освидетельствованиями, предписанными правилом 5 настоящего Приложения.

9 Свидетельство, выданное на основании правила 6 или 7 настоящего Приложения, теряет силу в любом из следующих случаев:

.1 если соответствующие освидетельствования не закончены в сроки, указанные в правиле 5.1 настоящего Приложения;

.2 если Свидетельство не подтверждено в соответствии с правилом 5.1.3 или 5.1.4 настоящего Приложения; и

.3 при передаче судна под флаг другого государства. Новое Свидетельство выдается только тогда, когда правительство, выдающее новое Свидетельство, полностью удовлетворено тем, что судно соответствует требованиям правила 5.4 настоящего Приложения. В случае передачи судна между Сторонами, если в пределах трех месяцев после передачи будет сделан запрос, правительство Стороны, под флагом которой это судно ранее имело право плавать, в возможно короткий срок передает Администрации копии Свидетельства, имевшегося на судне до его передачи, и, если имеются, – копии соответствующих актов об освидетельствовании.

Правило 10
Контроль государства порта за выполнением эксплуатационных требований

1 Судно во время пребывания в порту или у удаленного от берега терминала, находящихся под юрисдикцией какой-либо другой Стороны, подлежит инспектированию должностными лицами, надлежащим образом уполномоченными этой Стороной, которое касается выполнения эксплуатационных требований согласно настоящему Приложению, если имеются явные основания полагать, что капитан или экипаж не знают важнейших судовых процедур, относящихся к предотвращению загрязнения воздушной среды с судов.

2 При обстоятельствах, приведенных в пункте 1 настоящего правила, Сторона принимает меры, обеспечивающие, чтобы судно не отошло до тех пор, пока положение дел не будет исправлено в соответствии с требованиями настоящего Приложения.

3 К настоящему правилу применяется предписанный в статье 5 настоящей Конвенции порядок проведения контроля государством порта.

4 Ничто в настоящем правиле не должно истолковываться как ограничивающее права и обязанности Стороны, осуществляющей контроль за выполнением эксплуатационных требований, специально предусмотренных в настоящей Конвенции.

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Правило 11
Обнаружение нарушений и обеспечение выполнения

1 Стороны сотрудничают в обнаружении нарушений и обеспечении выполнения положений настоящего Приложения, используя все подходящие и практически доступные средства обнаружения нарушений и наблюдения за окружающей средой, а также соответствующие способы передачи сообщений и сбора доказательств.

2 Судно, к которому применяется настоящее Приложение, в любом порту или у удаленного от берега терминала Стороны может быть подвергнуто инспектированию должностными лицами, назначенными или уполномоченными этой Стороной, чтобы проверить, не произвело ли это судно выброса какого-либо из веществ, охватываемых настоящим Приложением, в нарушение положений настоящего Приложения. Если в результате инспектирования будет обнаружено нарушение положений настоящего Приложения, то Администрации направляется сообщение об этом для принятия соответствующих мер.

3 Каждая Сторона представляет Администрации доказательства, если таковые имеются, того, что судно произвело выброс любого из веществ, охватываемых настоящим Приложением, в нарушение положений настоящего Приложения. Если это практически осуществимо, компетентные власти этой Стороны уведомляют капитана судна о предполагаемом нарушении.

4 По получении таких доказательств Администрация производит расследование дела и может просить другую Сторону представить дополнительные или более убедительные доказательства предполагаемого нарушения. Если Администрация убедится в наличии достаточных доказательств, позволяющих возбудить преследование в отношении предполагаемого нарушения, она дает распоряжение о возбуждении как можно скорее такого преследования в соответствии со своим законодательством. Администрация незамедлительно информирует о принятых ею мерах Сторону, сообщившую о предполагаемом нарушении, а также Организацию.

5 Сторона может также подвергнуть инспектированию судно, к которому применяется настоящее Приложение, когда оно заходит в порты или подходит к удаленным от берега терминалам, находящимся под ее юрисдикцией, если от любой другой Стороны получена просьба о расследовании вместе с достаточными доказательствами того, что это судно произвело в каком-либо месте выброс любого из веществ, охватываемых Приложением, в нарушение настоящего Приложения. Сообщение о таком расследовании направляется Стороне, просившей о расследовании, и Администрации, с тем чтобы могли быть приняты соответствующие меры согласно положениям настоящей Конвенции.

6 К нормам и стандартам, установленным в настоящем Приложении, применяется *mutatis mutandis* международное право, касающееся предотвращения, сокращения и сохранения под контролем загрязнения морской среды с судов, включая международное право, относящееся к обеспечению выполнения и гарантиям, которое находится в силе во время применения или толкования настоящего Приложения.

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ГЛАВА III

ТРЕБОВАНИЯ В ОТНОШЕНИИ КОНТРОЛЯ ЗА ВЫБРОСАМИ С СУДОВ

Правило 12
Озоноразрушающие вещества

1 Настоящее правило не применяется к постоянно герметичному оборудованию, у которого нет соединений для зарядки хладагента или потенциально съемных компонентов, содержащих озоноразрушающие вещества.

2 При условии соблюдения положений правила 3.1 любые преднамеренные выбросы озоноразрушающих веществ запрещаются. Преднамеренные выбросы включают выбросы, происходящие в ходе технического обслуживания, ухода, ремонта или удаления систем или оборудования, однако преднамеренные выбросы не включают минимальные выбросы, связанные с улавливанием или рециркуляцией озоноразрушающего вещества. Выбросы, являющиеся результатом утечек озоноразрушающего вещества, независимо от того, являются эти утечки преднамеренными или нет, могут регулироваться Сторонами.

3.1 Установки, содержащие озоноразрушающие вещества, не являющиеся гидрохлорфторуглеродами, запрещаются:

.1 на судах, построенных 19 мая 2005 года или после этой даты; или

.2 в отношении судов, построенных до 19 мая 2005 года, договорная поставка оборудования на которые осуществляется 19 мая 2005 года или после этой даты или, в случае отсутствия даты договорной поставки, фактическая поставка оборудования на которые осуществляется 19 мая 2005 года или после этой даты.

3.2 Установки, содержащие гидрохлорфторуглероды, запрещаются:

.1 на судах, построенных 1 января 2020 года или после этой даты; или

.2 в отношении судов, построенных до 1 января 2020 года, договорная поставка оборудования на которые осуществляется 1 января 2020 года или после этой даты или, в случае отсутствия даты договорной поставки, фактическая поставка оборудования на которые осуществляется 1 января 2020 года или после этой даты.

4 Вещества, упомянутые в настоящем правиле, и оборудование, содержащее такие вещества, при удалении их с судов доставляются на надлежащие приемные сооружения.

5 На каждом судне, подпадающем под действие правила 6.1, имеется перечень оборудования, содержащего озоноразрушающие вещества[2].

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[2] См. дополнение I – добавление к Международному свидетельству о предотвращении загрязнения воздушной среды (Свидетельство IAPP), раздел 2.1.

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6 На каждом судне, подпадающем под действие правила 6.1, на котором имеются перезаряжаемые системы, содержащие озоноразрушающие вещества, ведется Журнал озоноразрушающих веществ. Этот журнал может составлять часть существующего судового журнала или системы электронной регистрации, одобренной Администрацией.

7 Записи в Журнале озоноразрушающих веществ регистрируются с точки зрения массы (кг) вещества и в каждом случае безотлагательно вносятся в отношении следующего:

.1 перезарядки, полной или частичной, оборудования, содержащего озоноразрушающие вещества;

.2 ремонта или технического обслуживания оборудования, содержащего озоноразрушающие вещества;

.3 выброса озоноразрушающих веществ в атмосферу:

.3.1 преднамеренного; и

.3.2 непреднамеренного;

.4 сброса озоноразрушающих веществ в находящиеся на судне приемные сооружения; и

.5 поставки озоноразрушающих веществ на судно.

Правило 13
Окислы азота (NO_x)

Применение

1.1 Настоящее правило применяется к:

.1 каждому судовому дизельному двигателю выходной мощностью более 130 кВт, установленному на судне; и

.2 каждому судовому дизельному двигателю выходной мощностью более 130 кВт, который подвергается значительному переоборудованию 1 января 2000 года или после этой даты, за исключением случаев, когда продемонстрировано к удовлетворению Администрации, что такой двигатель является идентичной заменой двигателя, который он заменяет, и иным образом не охвачен пунктом 1.1.1 настоящего правила.

1.2 Настоящее правило не применяется к:

.1 судовому дизельному двигателю, предназначенному для использования исключительно в аварийных ситуациях или исключительно для приведения в действие любого устройства или оборудования, предназначенного для использования исключительно в аварийных ситуациях на судне, на котором он установлен, либо судовому дизельному двигателю, установленному на спасательных плюпках, предназначенных для использования исключительно в аварийных ситуациях; и

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.2 судовому дизельному двигателю, установленному на судне, совершающем рейсы исключительно в водах, находящихся под суверенитетом или юрисдикцией государства, под флагом которого судно имеет право плавать, при условии что такой двигатель подпадает под альтернативную меру контроля выбросов NO_x, установленную Администрацией.

1.3 Несмотря на положения подпункта 1.1 настоящего пункта, Администрация может предоставить исключение из применения настоящего правила для любого судового дизельного двигателя, который установлен на судне, построенном до 19 мая 2005 года, или для любого судового дизельного двигателя, который подвергается значительному переоборудованию до этой даты, при условии что судне, на котором установлен двигатель, совершает рейсы исключительно в порты или к удаленным от берега терминалам в пределах государства, под флагом которого судно имеет право плавать.

Значительное переоборудование

2.1 Для целей настоящего правила *значительное переоборудование* означает модификацию 1 января 2000 года или после этой даты судового дизельного двигателя, который еще не сертифицирован в соответствии со стандартами, изложенными в пункте 3, 4 или 5.1.1 настоящего правила, при которой:

.1 двигатель заменяется судовым дизельным двигателем или устанавливается дополнительный судовой дизельный двигатель, или

.2 двигатель подвергается любой значительной модификации, как она определена в пересмотренном Техническом кодексе по NO_x 2008 года, или

.3 максимальная длительная выходная мощность двигателя увеличивается более чем на 10% по сравнению с максимальной длительной выходной мощностью двигателя при его первоначальной сертификации.

2.2 В отношении значительного переоборудования, связанного с заменой судового дизельного двигателя неидентичным судовым дизельным двигателем или установкой дополнительного судового дизельного двигателя, применяются стандарты настоящего правила, действующие во время замена или добавления двигателя, 1 января 2016 года или после этой даты только в отношении заменяющих двигателей, если такой заменяющий двигатель не может отвечать стандартам, изложенным в пункте 5.1.1 настоящего правила (ярус III), то этот заменяющий двигатель должен отвечать стандартам, изложенным в пункте 4 настоящего правила (ярус II). Организация должна разработать руководство, излагающее критерии того, в каких случаях заменяющий двигатель не может отвечать стандартам пункта 5.1.1 настоящего правила.

2.3 Судовой дизельный двигатель, упомянутый в пункте 2.1.2 или 2.1.3, отвечает следующим стандартам:

.1 для судов, построенных до 1 января 2000 года, применяются стандарты, изложенные в пункте 3 настоящего правила; и

.2 для судов, построенных 1 января 2000 года или после этой даты, применяются стандарты, действующие во время постройки судна.

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Ярус I

3 При условии соблюдения правила 3 настоящего Приложения эксплуатация судового дизельного двигателя, который установлен на судне, построенном 1 января 2000 года или после этой даты и до 1 января 2011 года, запрещается, за исключением случаев, когда выброс окислов азота (рассчитанный как полный взвешенный выброс NO_2) из двигателя находится в следующих пределах, где n – номинальная частота вращения двигателя (обороты коленчатого вала в минуту):

.1 17,0 г/кВт·ч при n менее 130 об/мин;

.2 $45,0 \cdot n^{(-0,2)}$ г/кВт·ч при n, равном или более 130, но менее 2000 об/мин;

.3 9,8 г/кВт·ч при n, равном или более 2000 об/мин.

Ярус II

4 При условии соблюдения правила 3 настоящего Приложения эксплуатация судового дизельного двигателя, который установлен на судне, построенном 1 января 2011 года или после этой даты, запрещается, за исключением случаев, когда выброс окислов азота (рассчитанный как полный взвешенный выброс NO_2) из двигателя находится в следующих пределах, где n – номинальная частота вращения двигателя (обороты коленчатого вала в минуту):

.1 14,4 г/кВт·ч при n менее 130 об/мин;

.2 $44 \cdot n^{(-0,23)}$ г/кВт·ч при n, равном или более 130, но менее 2000 об/мин;

.3 7,7 г/кВт·ч при n, равном или более 2000 об/мин.

Ярус III

5.1 При условии соблюдения правила 3 настоящего Приложения эксплуатация судового дизельного двигателя, который установлен на судне, построенном 1 января 2016 года или после этой даты:

.1 запрещается, за исключением случаев, когда выброс окислов азота (рассчитанный как полный взвешенный выброс NO_2) из двигателя находится в следующих пределах, где n – номинальная частота вращения двигателя (обороты коленчатого вала в минуту):

.1.1 3,4 г/кВт·ч при n менее 130 об/мин;

.1.2 $9 \cdot n^{(-0,2)}$ г/кВт·ч при n, равном или более 130, но менее 2000 об/мин; и

.1.3 2,0 г/кВт·ч при n, равном или более 2000 об/мин;

.2 подпадает под стандарты, изложенные в пункте 5.1.1, когда судно эксплуатируется в районе контроля выбросов, назначенном согласно пункту 6 настоящего правила; и

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.3 подпадает под стандарты, изложенные в пункте 4 настоящего правила, когда судно эксплуатируется за пределами района контроля выбросов, назначенного согласно пункту 6 настоящего правила.

5.2 При условии обзора, изложенного в пункте 10 настоящего правила, стандарты, изложенные в пункте 5.1.1 настоящего правила, не применяются к:

.1 судовому дизельному двигателю, установленному на судне длиной (L), как она определена в правиле 1.19 Приложения I к настоящей Конвенции, менее 24 метров, если оно специально спроектировано и используется исключительно для целей отдыха; или

.2 судовому дизельному двигателю, установленному на судне, общая мощность дизельных двигателей которого, указанная на марке изготовителя, менее 750 кВт.ч, если к удовлетворению Администрации продемонстрировано, что судно не может соответствовать стандартам, изложенным в пункте 5.1.1 настоящего правила, из-за проектных или конструктивных ограничений судна.

Район контроля выбросов

6 Для целей настоящего правила районом контроль выбросов является любой морской район, включая любой портовый район, назначенный Организацией в соответствии с критериями и процедурами, изложенными в дополнении III к настоящему Приложению.

Судовые дизельные двигатели, установленные на судне, построенном до 1 января 2000 года

7.1 Несмотря на пункт 1.1.1 настоящего правила судовой дизельный двигатель выходной мощностью более 5000 кВт и с объемом цилиндра, составляющим 90 литров или более, установленный на судне, построенном 1 января 1990 года или после этой даты, но до 1 января 2000 года, соответствует пределам выбросов, изложенным в пункте 7.4, при условии что Администрация Стороны сертифицировала одобренное средство для этого двигателя и сертифицировавшая Администрация представила Организации уведомление об этой сертификации. Соответствие настоящему пункту должно быть продемонстрировано посредством одного из следующего:

.1 установки сертифицированного одобренного средства, подтвержденного освидетельствованием с использованием процедуры проверки, указанной в документации одобренного средства, включая соответствующее указание в судовом Международном свидетельстве о предотвращении загрязнения воздушной среды на наличие одобренного средства; и

.2 сертификации двигателя, подтверждающей, что он эксплуатируется в пределах, изложенных в пункте 3, 4 или 5.1.1 настоящего правила, и соответствующего указания на сертификацию двигателя в судовом Международном свидетельстве о предотвращении загрязнения воздушной среды.

7.2 Пункт 7.1 применяется не позднее первого освидетельствования для возобновления свидетельства, которое проводится через 12 месяцев или более после сдачи на хранение уведомления, указанного в пункте 7.1. Если собственник судна, на котором должно быть установлено одобренное средство, может продемонстрировать к удовлетворению Администрации, что одобренное средство коммерчески недоступно, несмотря на все усилия,

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направляемые на его приобретение, то это одобренное средство устанавливается на судне не позднее следующего ежегодного освидетельствования этого судна, которое проводится после того, как одобренное средство станет коммерчески доступным.

7.3 В отношении судна с судовым дизельным двигателем выходной мощностью более 5000 кВт и с объемом цилиндра, составляющим 90 литров или более, установленным на судне, построенном 1 января 1990 года или после этой даты, но до 1 января 2000 года, в Международном свидетельстве о предотвращении загрязнения воздушной среды для судового дизельного двигателя, к которому применяется пункт 7.1 настоящего правила, указывается, что одобренное средство применяется в соответствии с пунктом 7.1.1 настоящего правила или двигатель сертифицирован в соответствии с пунктом 7.1.2 настоящего правила или что одобренное средство еще не существует либо коммерчески недоступно, как указано в пункте 7.2 настоящего правила.

7.4 При условии соблюдения правила 3 настоящего Приложения эксплуатация судового дизельного двигателя, указанного в пункте 7.1, запрещается, за исключением случаев, когда выброс окислов азота (рассчитанный как полный взвешенный выброс NO_2) из двигателя находится в следующих пределах, где n – номинальная частота вращения двигателя (обороты коленчатого вала в минуту):

.1 17,0 г/кВт·ч при n менее 130 об/мин;

.2 $45,0 \cdot n^{(-0,2)}$ г/кВт·ч при n, равном или более 130, но менее 2000 об/мин; и

.3 9,8 г/кВт·ч при n, равном или более 2000 об/мин.

7.5 Сертификация одобренного средства осуществляется в соответствии с главой 7 пересмотренного Технического кодекса по NO_x 2008 года и включает проверку:

.1 конструктором базового судового дизельного двигателя, к которому применяется одобренное средство, того, что расчетный эффект одобренного средства уменьшит мощность двигателя не более чем на 1,0%, повысит потребление топлива не более чем на 2,0%, как это измерено в соответствии с надлежащим испытательным циклом, изложенным в пересмотренном Техническом кодексе по NO_x 2008 года, или не окажет отрицательного воздействия на износостойкость или надежность двигателя; и

.2 того, что стоимость одобренного средства не является чрезмерной, что определяется путем сравнения количества NO_x, сокращенного с помощью одобренного средства для достижения стандарта, изложенного в пункте 7.4, и расходов на приобретение и установку такого одобренного средства[2].

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[2] Стоимость одобренного средства не должна превышать 375 единиц специальных прав заимствования на метрическую тонну NO_x, рассчитанных по формуле затраты-эффективность, ниже

$$Ce = \frac{\text{Стоимость одобренного средства} \cdot 10^3}{P(\text{кВт}) \cdot 0,768 \cdot 6000(\text{часов/год}) \cdot 5\ (\text{лет}) \cdot \Delta NO_x(\text{г/кВт·ч})}$$

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Сертификация

8 К процедурам сертификации, испытаний и измерений в отношении стандартов, изложенных в настоящем правиле, применяется пересмотренный Технический кодекс по NO_x 2008 года.

9 Преследуется цель, чтобы процедуры определения выбросов NO_x, изложенные в пересмотренном Техническом кодексе по NO_x 2008 года, были типичными для обычной эксплуатации двигателя. Регулировочно-управляющие устройства и нерациональные средства контроля выбросов подрывают эту цель и не допускаются. Настоящее правило не препятствует использованию вспомогательных устройств управления для защиты двигателя и/или его вспомогательного оборудования от условий эксплуатации, которые могут привести к повреждению или отказу или которые применяются для облегчения пуска двигателя.

Обзор

10 Начиная в 2012 году и заканчивая не позднее 2013 года, Организация проведет обзор состояния технических разработок в области осуществления стандартов, изложенных в пункте 5.1.1 настоящего правила, и, если это будет доказано необходимым, откорректирует периоды времени, изложенные в этом пункте.

Правило 14
Оксиды серы (SO_x) и твердые частицы

Общие требования

1 Содержание серы в любом жидком топливе, используемом на судах, не должно превышать следующих пределов:

.1 4,50% по массе до 1 января 2012 года;

.2 3,50% по массе 1 января 2012 года и после этой даты, и

.3 0,50% по массе 1 января 2020 года и после этой даты.

2 Мировое среднее содержание серы в остаточном жидком топливе, поставляемом для использования на судах, контролируется с учетом руководства, разработанного Организацией[2].

Требования, применяемые в пределах районов контроля выбросов

3 Для целей настоящего правила районы контроля выбросов включают:

.1 район Балтийского моря, как он определен в правиле 1.11.2 Приложения I, район Северного моря, как он определен в правиле 5.1) f) Приложения V; и

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[2] MEPC.82(43) «Руководство по мониторингу мирового среднего показателя содержания серы в остаточном жидком топливе, поставляемом для использования на судах».

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.2 любой другой морской район, включая портовые районы, назначенный Организацией в соответствии с критериями и процедурами, изложенными в дополнении III к настоящему Приложению.

4 Когда суда эксплуатируются в районах контроля выбросов, содержание серы в жидком топливе, используемом на судах, не должно превышать следующих пределов:

.1 1,50% по массе до 1 июля 2010 года;

.2 1,00% по массе 1 июля 2010 года и после этой даты; и

.3 0,10% по массе 1 января 2015 года и после этой даты.

5 Содержание серы в жидком топливе, упомянутое в пункте 1 и пункте 4 настоящего правила, документируется его поставщиком, как требуется правилом 18 настоящего Приложения.

6 На судах, использующих иные виды жидкого топлива в целях соответствия пункту 4 настоящего правила и входящих в какой-либо район контроля выбросов, указанный в пункте 3 настоящего правила, или выходящих из него, имеется письменная процедура, показывающая, каким образом должна выполняться операция по изменению состава топлива, предусматривая достаточное время для того, чтобы до входа в район контроля выбросов система подачи жидкого топлива была полностью промыта от всех видов жидкого топлива с содержанием серы, превышающим применимую величину, установленную в пункте 4 настоящего правила. Объем низкосернистого жидкого топлива в каждом танке, а также дата, время и местонахождение судна в момент завершения любой операции по изменению состава жидкого топлива до входа в район контроля выбросов или в момент начала такой операции после выхода из этого района регистрируются в судовом журнале, предписанном Администрацией.

7 В течение первых двенадцати месяцев непосредственно после внесения поправки, согласно которой назначается конкретный район контроля выбросов в соответствии с пунктом 3.2 настоящего правила, суда, эксплуатирующиеся в этом районе контроля выбросов, освобождаются от выполнения требований пунктов 4 и 6 настоящего правила, а также требований пункта 5 настоящего правила в той степени, в какой они относятся к пункту 4 настоящего правила.

Обеспечение обзора

8 Для определения наличия жидкого топлива в целях соответствия стандарту жидкого топлива, изложенному в пункте 1.3 настоящего правила, к 2018 году завершается обзор этого стандарта и при этом учитываются следующие элементы:

.1 спрос и предложение на мировом рынке жидкого топлива для соответствия пункту 1.3 настоящего правила, которые отмечаются во время проведения обзора;

.2 анализ тенденций рынков жидкого топлива; и

.3 любой другой соответствующий вопрос.

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9 Организация учреждает группу экспертов, состоящую из представителей, обладающих надлежащими специальными знаниями в области рынка жидкого топлива и надлежащими морскими, экологическими, научными и юридическими специальными знаниями, для проведения обзора, упомянутого в пункте 8 настоящего правила. Группа экспертов разрабатывает соответствующие данные для информирования о решении, которое будет принято Сторонами.

10 На основании разработанных группой экспертов данных Стороны могут решить, возможно ли для судов соблюдать дату, указанную в пункте 1.3 настоящего правила. Если принято решение, что суда не могут ее соблюдать, то указанный в этом пункте стандарт начинает действовать 1 января 2025 года.

Правило 15
Летучие органические соединения (ЛОС)

1 Если выбросы ЛОС с танкера должны регулироваться в порту или портах либо на терминале или терминалах, находящихся под юрисдикцией Стороны, то они регулируются в соответствии с положениями настоящего правила.

2 Сторона, регулирующая танкеры в отношении выбросов ЛОС, направляет Организации уведомление. Это уведомление включает информацию о размерах танкеров, подлежащих контролю, грузах, для которых требуются системы контроля выбросов паров, и дате вступления в силу такого контроля. Уведомление представляется по меньшей мере за шесть месяцев до даты вступления в силу.

3 Сторона, назначающая порты или терминалы, в пределах которых выбросы ЛОС с танкеров должны регулироваться, обеспечивает, чтобы в любом назначенном порту или на терминале были предусмотрены и эксплуатировались, безопасно и без необоснованной задержки судна, системы контроля выбросов паров, одобренные этой Стороной с учетом стандартов безопасности для таких систем, разработанных Организацией[5].

4 Организация рассылает перечень портов и терминалов, назначенных Сторонами, другим Сторонам и государствам-членам Организации для их информации.

5 Танкер, к которому применяется пункт 1 настоящего правила, обеспечивается системой сбора выбрасываемых паров, одобренной Администрацией с учетом стандартов безопасности для таких систем, разработанных Организацией[5], и использует эту систему во время погрузки соответствующих грузов. Порт или терминал, где установлены системы контроля выбросов паров в соответствии с настоящим правилом, могут принимать танкеры, которые не оборудованы системами сбора паров, в течение трех лет после даты вступления в силу, указанной в пункте 2 настоящего правила.

6 На танкере, перевозящем сырую нефть, имеется и выполняется план управления ЛОС, одобренный Администрацией. Такой план подготавливается с учетом руководства, разработанного Организацией. План является конкретным для каждого судна и по меньшей мере:

.1 содержит письменные процедуры по сведению к минимуму выбросов ЛОС во время погрузки, морского рейса и выгрузки груза;

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[5] Циркуляр MSC/Circ.585: Standards for vapour emission control systems.

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.2 учитывает дополнительные ЛОС, образующиеся в результате мойки сырой нефтью;

.3 содержит указание на лицо, отвечающее за выполнение плана; и

.4 в отношении судов, совершающих международные рейсы, составляется на рабочем языке капитана и лиц командного состава и, если рабочим языком капитана и лиц командного состава не является английский, испанский или французский язык, включает перевод на один из этих языков.

7 Настоящее правило применяется также к газовозам только в том случае, если тип грузовой системы и системы емкостей допускает безопасное хранение на судне нефтяных ЛОС или их безопасную передачу на берег".

Правило 16
Сжигание на судне

1 За исключениями, предусмотренными пунктом 4 настоящего правила, сжигание на судне допускается только в судовом инсинераторе.

2 Запрещается сжигание на судне следующих веществ:

.1 остатков грузов, подпадающих под действие Приложений I, II и III, или связанных с ними загрязненных упаковочных материалов;

.2 полихлорированных бифенилов (ПХБ);

.3 мусора, как он определен в Приложении V, содержащего тяжелые металлы в объеме, бо́льшем чем микропримеси;

.4 очищенных нефтепродуктов, содержащих галогенные соединения;

.5 осадков сточных вод и нефтяных остатков, которые не образуются на судне; и

.6 остатков из систем очистки отработавших газов.

3 Сжигание на судне поливинилхлоридов (ПВХ) запрещается, за исключением сжигания в судовых инсинераторах, в отношении которых выданы свидетельства ИМО об одобрении типа[/].

4 Сжигание на судне осадков сточных вод и нефтяных остатков, образующихся в ходе обычной эксплуатации судна, может также производиться в главной или вспомогательной силовой установке или котлах, но в этом случае оно не должно производиться в пределах портов, гаваней и эстуариев.

" MSC.30(61): «Международный кодекс постройки и оборудования судов, перевозящих сжиженные газы наливом», глава 5.

Свидетельства об одобрении типа, выданные в соответствии с резолюцией МЕРС.59(33) или МЕРС.76(40).

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5 Ничто в настоящем правиле:

.1 не затрагивает запрещения или других требований, установленных в Конвенции по предотвращению загрязнения моря сбросами отходов и других материалов 1972 года с поправками и Протоколе 1996 года к ней, или

.2 не препятствует разработке, установке и эксплуатации альтернативных судовых устройств для термической обработки отходов, которые удовлетворяют требованиям настоящего правила или превышают их.

6.1 За исключениями, предусмотренными пунктом 6.2, каждый инсинератор на судне, построенном 1 января 2000 года или после этой даты, или инсинератор, установленный на судне 1 января 2000 года или после этой даты, должен удовлетворять требованиям, содержащимся в дополнении IV к настоящему Приложению. Каждый инсинератор, подпадающий под действие этого пункта, одобряется Администрацией с учетом стандартных технических требований к судовым инсинераторам, разработанных Организацией[8]; или

6.2 Администрация может допустить исключение из применения пункта 6.1 для любого инсинератора, который установлен на судне до 19 мая 2005 года, при условии что судно совершает рейсы исключительно в водах, находящихся под суверенитетом или юрисдикцией государства, под флагом которого оно имеет право плавать.

7 Инсинераторы, установленные в соответствии с требованиями пункта 6.1 настоящего правила, снабжаются руководством завода-изготовителя по эксплуатации, которое должно храниться вместе с установкой и в котором определен порядок эксплуатации инсинератора в пределах, указанных в пункте 2 дополнения IV к настоящему Приложению.

8 Персонал, ответственный за эксплуатацию инсинератора, установленного в соответствии с требованиями пункта 6.1 настоящего правила, должен быть подготовлен выполнять инструкции, предусмотренные в руководстве завода-изготовителя по эксплуатации, требуемом пунктом 7 настоящего правила.

9 Для инсинераторов, установленных в соответствии с требованиями пункта 6.1 настоящего правила, должен осуществляться постоянный мониторинг, когда эксплуатируется установка, температуры топочного газа на выходе из камеры сгорания. Если это инсинератор непрерывной подачи, отходы не должны подаваться в установку, когда температура топочного газа на выходе из камеры сгорания ниже 850°C. Если это инсинератор с дозированной загрузкой, установка должна иметь такую конструкцию, чтобы температура топочного газа на выходе из камеры сгорания достигала 600°C в течение пяти минут после пуска и после этого стабилизировалась на отметке не менее 850°C.

Правило 17
Приемные сооружения

1 Каждая Сторона обязуется обеспечивать предоставление сооружений, достаточных для удовлетворения:

.1 потребностей судов, использующих ее ремонтные порты для приема удаляемых с судов озоноразрушающих веществ и оборудования, содержащего такие вещества;

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[8] См. резолюцию MEPC.76(40): Стандартные технические требования к судовым инсинераторам.

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.2 потребностей судов, использующих ее порты, терминалы или ремонтные порты для приема остатков очистки отработавших газов из системы очистки отработавших газов,

без необоснованной задержки судов; и

.3 потребностей в сооружениях, на которых производится разборка судов на сом, для приема удаляемых с судов озоноразрушающих веществ и оборудования, содержащего такие вещества.

2 Если конкретный порт или терминал Стороны, учитывая руководство, которое должно быть разработано Организацией, расположен на удалении от промышленной инфраструктуры, необходимой для обращения с этими веществами, упомянутыми в пункте 1 настоящего правила, и их переработки, либо не имеет такой инфраструктуры и поэтому не может принимать такие вещества, то Сторона информирует Организацию о любом таком порте или терминале, с тем чтобы эта информация могла быть разослана всем Сторонам и государствам-членам Организации для их информации и любых соответствующих действий. Каждая Сторона, которая предоставила Организации такую информацию, также уведомляет Организацию о ее портах и терминалах, где имеются приемные сооружения для обращения с такими веществами и их переработки.

3 Каждая Сторона уведомляет Организацию для извещения членов Организации о всех случаях отсутствия предусмотренных настоящим правилом сооружений или их предполагаемого несоответствия установленным требованиям.

Правило 18
Наличие и качество жидкого топлива

Наличие жидкого топлива

1 Каждая Сторона принимает все разумные меры для содействия наличию жидкого топлива, соответствующего настоящему Приложению, и информирует Организацию о наличии соответствующего требованиям жидкого топлива в своих портах и на своих терминалах.

2.1 Если Сторона устанавливает, что судно не соответствует стандартам отвечающего требованиям жидкого топлива, изложенным в настоящем Приложении, то компетентный орган Стороны имеет право потребовать, чтобы судно:

.1 представило сведения о мерах, принятых в попытке обеспечить соответствие; и

.2 предоставило доказательство того, что оно предприняло попытку приобрести соответствующее требованиям жидкое топливо в соответствии со своим планом рейса и, если оно не было приобретено, где планировалось, что были предприняты попытки выявить альтернативные источники такого жидкого топлива, и что, несмотря на все усилия, направленные на приобретение соответствующего требованиям жидкого топлива, такого жидкого топлива не имелось в наличии для приобретения.

2.2 От судна не должно требоваться отклонения от предполагаемого рейса или необоснованной задержки рейса с целью обеспечения соответствия.

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2.3 Если судно предоставляет информацию, изложенную в пункте 2.1, Сторона учитывает все соответствующие обстоятельства и представленные доказательства для установления соответствующих мер, которые должны быть приняты, включая непринятие мер контроля.

2.4 Судно уведомляет свою Администрацию и компетентный орган соответствующего порта назначения о случаях, когда оно не может приобрести соответствующее требованиям жидкое топливо.

2.5 Сторона уведомляет Организацию о случаях представления судном доказательств отсутствия соответствующего требованиям жидкого топлива.

Качество жидкого топлива

3 Жидкое топливо для целей сгорания, поставляемое и используемое на судах, к которым применяется настоящее Приложение, должно удовлетворять следующим требованиям:

.1 за исключениями, предусмотренными подпунктом 3.2:

.1.1 жидкое топливо должно являться смесью углеводородов, полученных в процессе переработки нефти. Это не препятствует добавлению небольших количеств присадок, предназначенных для улучшения некоторых рабочих характеристик;

.1.2 жидкое топливо не должно содержать неорганических кислот; и

.1.3 жидкое топливо не должно содержать никаких добавок или химических отходов, которые:

.1.3.1 угрожают безопасности судов или отрицательно влияют на работу механизмов, или

.1.3.2 вредны для персонала, или

.1.3.3 в целом способствуют дополнительному загрязнению воздушной среды;

.2 жидкое топливо для целей сгорания, полученное иными методами, чем переработка нефти, не должно:

.2.1 содержать серы в количестве, превышающем применимое количество, установленное в правиле 14 настоящего Приложения;

.2.2 приводить к тому, чтобы двигатель превышал применимые пределы выбросов NO_x, установленные в пунктах 3, 4, 5.1.1 и 7.4 правила 13;

.2.3 содержать неорганических кислот; или

.2.4.1 угрожать безопасности судов или отрицательно влиять на работу механизмов, или

.2.4.2 быть вредным для персонала, или

.2.4.3 в целом способствовать дополнительному загрязнению воздушной среды

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4 Настоящее правило не применяется к углю в твердом состоянии или ядерному топливу. Пункты 5, 6, 7.1, 7.2, 8.1, 8.2, 9.2, 9.3 и 9.4 настоящего правила не применяются к такому газовому топливу, как сжиженный природный газ, сжатый природный газ или сжиженный нефтяной газ. Поставщик должен документально подтверждать содержание серы в газовом топливе, поставляемом на судно специально для целей сгорания на этом судне.

5 В отношении каждого судна, подпадающего под действие правил 5 и 6 настоящего Приложения, подробные сведения о жидком топливе для целей сгорания, поступающем и используемом на борту, регистрируются посредством накладной на поставку бункерного топлива, которая содержит по меньшей мере информацию, указанную в дополнении V к настоящему Приложению.

6 Накладная на поставку бункерного топлива хранится на судне в таком месте, чтобы она была легкодоступной для проверки в любое разумное время. Она хранится в течение трех лет после поставки жидкого топлива на судно.

7.1 Компетентный орган Стороны может проверять накладные на поставку бункерного топлива на любом судне, к которому применяется настоящее Приложение, когда судно находится в ее порту или у удаленного от берега терминала, может снимать копии с каждой накладной на поставку и может потребовать от капитана или лица, ответственного за судно, заверить, что каждая копия является подлинной копией такой накладной на поставку бункерного топлива. Компетентный орган может также проверить содержание каждой накладной путем консультаций с портом, где была выдана накладная.

7.2 Проверка накладных на поставку бункерного топлива и снятие заверенных копий компетентным органом согласно настоящему пункту осуществляются как можно быстрее, не вызывая необоснованной задержки судна.

8.1 Накладная на поставку бункерного топлива сопровождается типичным образцом поставленного топлива с учетом руководства, разработанного Организацией[9]. Образец должен быть опечатан и подписан представителем поставщика и капитаном или лицом командного состава, ответственным за бункеровку, после завершения бункеровки и храниться под контролем судна до тех пор, пока жидкое топливо не будет в значительной степени израсходовано, но в любом случае в течение не менее 12 месяцев с момента поставки.

8.2 Если Администрация требует анализа типичного образца, то анализ выполняется в соответствии с процедурой проверки, изложенной в дополнении VI, с тем чтобы установить, отвечает ли жидкое топливо требованиям настоящего Приложения.

9 Стороны обязуются обеспечивать, чтобы назначенные ими компетентные власти:

.1 вели реестр местных поставщиков жидкого топлива;

.2 требовали от местных поставщиков предоставлять накладную на поставку бункерного топлива и образец, требуемые настоящим правилом, заверенные поставщиком жидкого топлива в том, что жидкое топливо удовлетворяет требованиям правил 14 и 18 настоящего Приложения;

.3 требовали от местных поставщиков сохранять копию накладной на поставку бункерного топлива в течение по меньшей мере трех лет для инспекции и проверки государством порта, если это будет необходимо;

---

[9] См. резолюцию MEPC.96(45) «Руководство по отбору образцов жидкого топлива для установления соответствия Приложению VI к МАРПОЛ 73/78».

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.4 принимали соответствующие меры в отношении поставщиков жидкого топлива, которые, как установлено, поставили жидкое топливо, не соответствующее указанному в накладной на поставку бункерного топлива;

.5 информировали Администрацию о любом судне, принимающем жидкое топливо, которое, как установлено, не соответствует требованиям правил 14 или 18 настоящего Приложения; и

.6 информировали Организацию для извещения Сторон о всех случаях невыполнения поставщиками жидкого топлива требований, указанных в правилах 14 или 18 настоящего Приложения.

10 В связи с инспекциями государства порта, проводимыми Сторонами, Стороны далее обязуются:

.1 информировать Сторону или государство, не являющееся Стороной, под юрисдикцией которых была выдана накладная на поставку бункерного топлива, о случаях поставки не соответствующего требованиям жидкого топлива, предоставляя всю соответствующую информацию; и

.2 обеспечивать принятие надлежащих корректирующих мер для приведения обнаруженного несоответствующего требованиям жидкого топлива в соответствие с такими требованиями.

11 В отношении каждого судна валовой вместимостью 400 и более, совершающего плановые рейсы с частыми и регулярными заходами в порты, Администрация, после заявки и консультаций с затронутыми государствами, может решить, что соответствие пункту 8 настоящего правила может быть задокументировано альтернативным способом, который указывает на подобную достоверность соответствия правилам 14 и 18 настоящего Приложения.

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ДОПОЛНЕНИЕ I

Форма Международного свидетельства о предотвращении загрязнения воздушной среды (Свидетельство IAPP)
(Правило 8)

МЕЖДУНАРОДНОЕ СВИДЕТЕЛЬСТВО О ПРЕДОТВРАЩЕНИИ ЗАГРЯЗНЕНИЯ ВОЗДУШНОЙ СРЕДЫ

Выдано на основании положений Протокола 1997 года, с поправками, внесенными резолюцией МЕРС.176(58) в 2008 году, об изменении Международной конвенции по предотвращению загрязнения с судов 1973 года, измененной Протоколом 1978 года к ней (далее именуемой «Конвенция»), по уполномочию правительства:

.....

(полное наименование страны)

.....

(полное название компетентного лица или организации, уполномоченных на основании положений Конвенции)

Сведения о судне*

Название судна.....

Регистровый номер или позывной сигнал.....

Порт регистрации.....

Валовая вместимость.....

Номер ИМО†.....

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* По выбору, сведения о судне могут быть помещены в таблицу.

† В соответствии с системой опознавательных номеров судов ИМО, принятой Организацией резолюцией A.600(15).

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НАСТОЯЩИМ УДОСТОВЕРЯЕТСЯ:

1 что судно освидетельствовано в соответствии с правилом 5 Приложения VI к Конвенции; и

2 что освидетельствованием установлено, что оборудование, системы, устройства, приспособления и материалы полностью отвечают применимым требованиям Приложения VI к Конвенции.

Дата окончания освидетельствования, на основании которого выдано настоящее Свидетельство:.....(дд.мм.гггг)

Настоящее Свидетельство действительно до .....* при условии проведения освидетельствований в соответствии с правилом 5 Приложения VI к Конвенции.

Выдано в .....
(Место выдачи Свидетельства)

(дд.мм.гггг):.....
(Дата выдачи)

.....
(Подпись уполномоченного должностного лица, выдавшего Свидетельство)

(Печать или штамп полномочной организации)

---

* Внести дату истечения срока действия, установленную Администрацией в соответствии с правилом 9.1 Приложения VI к Конвенции. День и месяц этой даты соответствуют ежегодной дате, определенной в правиле 2.3 Приложения VI к Конвенции, если не внесены поправки в соответствии с правилом 9.8 Приложения VI к Конвенции.

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Подтверждение ежегодного и промежуточного освидетельствований

НАСТОЯЩИМ УДОСТОВЕРЯЕТСЯ, что при освидетельствовании, требуемом правилом 5 Приложения VI к Конвенции, установлено, что судно отвечает соответствующим положениям этого Приложения:

Ежегодное освидетельствование: Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг): .....

(Печать или штамп полномочной организации)

Ежегодное/промежуточное* освидетельствование: Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг): .....

(Печать или штамп полномочной организации)

Ежегодное/промежуточное* освидетельствование: Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг): .....

(Печать или штамп полномочной организации)

Ежегодное освидетельствование: Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг): .....

(Печать или штамп полномочной организации)

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* Ненужное зачеркнуть.

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Ежегодное/промежуточное освидетельствование
в соответствии с правилом 9.8.3

НАСТОЯЩИМ УДОСТОВЕРЯЕТСЯ, что при ежегодном/промежуточном* освидетельствовании в соответствии с правилом 9.8.3 Приложения VI к Конвенции установлено, что судно отвечает соответствующим положениям этого Приложения:

Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг):.....

(Печать или штамп полномочной организации)

Подтверждение продления свидетельства, если срок его действия менее 5 лет, в случае применения правила 9.3

Судно отвечает соответствующим положениям Приложения, и настоящее Свидетельство в соответствии с правилом 9.3 Приложения VI к Конвенции признается действительным до (дд.мм.гггг):.....

Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг):.....

(Печать или штамп полномочной организации)

Подтверждение в случае проведения освидетельствования для возобновления свидетельства и применения правила 9.4

Судно отвечает соответствующим положениям Приложения, и настоящее Свидетельство в соответствии с правилом 9.4 Приложения VI к Конвенции признается действительным до (дд.мм.гггг):.....

Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг): .....

(Печать или штамп полномочной организации)

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* Ненужное зачеркнуть.

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Подтверждение продления срока действия свидетельства до прибытия в порт освидетельствования или на льготный срок в случае применения правила 9.5 или 9.6

Настоящее Свидетельство в соответствии с правилом 9.5 или 9.6* Приложения VI к Конвенции признается действительным до (дд.мм.гггг):.....

Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг):.....

(Печать или штамп полномочной организации)

Подтверждение переноса ежегодной даты в случае применения правила 9.8

В соответствии с правилом 9.8 Приложения VI к Конвенции новой ежегодной датой является (дд.мм.гггг):.....

Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг).....

(Печать или штамп полномочной организации)

В соответствии с правилом 9.8 Приложения VI к Конвенции новой ежегодной датой является (дд.мм.гггг):.....

Подписано: .....
(Подпись уполномоченного должностного лица)

Место: .....

Дата (дд.мм.гггг):.....

(Печать или штамп полномочной организации)

Ненужное зачеркнуть.

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ДОБАВЛЕНИЕ К МЕЖДУНАРОДНОМУ СВИДЕТЕЛЬСТВУ О ПРЕДОТВРАЩЕНИИ ЗАГРЯЗНЕНИЯ ВОЗДУШНОЙ СРЕДЫ (СВИДЕТЕЛЬСТВО IAPP)

ОПИСАНИЕ КОНСТРУКЦИИ И ОБОРУДОВАНИЯ

Примечания:

1 Настоящее Описание должно быть постоянно приложено к Свидетельству IAPP. Свидетельство IAPP должно постоянно находиться на судне.

2 Описание должно быть составлено по меньшей мере на английском, испанском или французском языках. Если используется также официальный язык выдающей страны, то в случае спора или разночтения предпочтение отдается этому языку.

3 Записи в клеточках должны производиться путем проставления знака (x) для ответов «да» и «применяется» или знака (-) для ответов «нет» и «не применяется», в зависимости от случая.

4 Если не установлено иное, правилами, упомянутыми в настоящем Описании, являются правила Приложения VI к Конвенции, а резолюциями или циркулярами – те, которые приняты Международной морской организацией.

1 Сведения о судне

1.1 Название судна.....

1.2 Номер ИМО.....

1.3 Дата закладки киля или дата, на которую судно находилось в подобной стадии постройки .....

1.4 Длина (L) # метров.....

Заполняется только в отношении судов, построенных 1 января 2016 года или после этой даты, которые специально спроектированы и используются исключительно в для целей отдыха и к которым в соответствии с правилом 13.5.2.1 не применяются пределы выбросов NO_x, приведенные в правиле 13.5.1.1.

2 Контроль за выбросами с судов

2.1 *Озоноразрушающие вещества (правило 12)*

2.1.1 Может быть продолжена эксплуатация следующих систем пожаротушения, других систем и оборудования, содержащих озоноразрушающие вещества, не являющиеся гидрохлорфторуглеродами, которые установлены до 19 мая 2005 года:

Система или оборудование	Расположение на судне	Вещество

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2.1.2 Может быть продолжена эксплуатация следующих систем, содержащих гидрохлорфторуглероды (ГХФУ), установленных до 1 января 2020 года:

Система или оборудование	Расположение на судне	Вещество

2.2 *Окислы азота (NO_x) (правило 13)*

2.2.1 Следующие судовые дизельные двигатели, установленные на данном судне, соответствуют применимым пределам, предусмотренным правилом 13, в соответствии с пересмотренным Техническим кодексом по NO_x 2008 года:

		Двигатель #1	Двигатель #2	Двигатель #3	Двигатель #4	Двигатель #5	Двигатель #6
Завод-изготовитель и модель							
Серийный номер							
Использование							
Выходная мощность (кВт)							
Номинальная частота вращения (об/мин)							
Дата установки (дд.мм.гггг)							
Дата значительного переоборудования (дд.мм.гггг)	В соответствии с пр. 13.2.2						
	В соответствии с пр. 13.2.3						
Изъято правилом 13.1.1.2		☐	☐	☐	☐	☐	☐
Ярус I – пр. 13.3		☐	☐	☐	☐	☐	☐
Ярус II – пр. 13.4		☐	☐	☐	☐	☐	☐
Ярус II – пр. 13.2.2 или 13.5.2		☐	☐	☐	☐	☐	☐
Ярус III – пр.13.5.1.1		☐	☐	☐	☐	☐	☐
Одобренное средство имеется		☐	☐	☐	☐	☐	☐
Одобренное средство коммерчески недоступно		☐	☐	☐	☐	☐	☐
Одобренное средство установлено		☐	☐	☐	☐	☐	☐

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2.3 *Оксиды серы (SO_x) и твердые частицы (правило 14)*

2.3.1 Когда судно эксплуатируется в районе контроля выбросов, указанном в правиле 14.3, на нем используется:

.1 жидкое топливо с содержанием серы, не превышающим применимой предельной величины, как документально оформлено накладными на поставку бункерного топлива; или ..... ☐

.2 эквивалентная мера, одобренная в соответствии с правилом 4.1, указанная в 2.6 ..... ☐

2.4 *Летучие органические соединения (ЛОС) (правило 15.*

2.4.1 Танкер имеет систему сбора паров, установленную и одобренную в соответствии с циркуляром MSC/Circ.585. ..... ☐

2.4.2.1 Для танкера, перевозящего сырую нефть, имеется одобренный план управления ЛОС ..... ☐

2.4.2.2 Ссылка на одобрение плана управления ЛОС: ..... ☐

2.5 *Судовой инсинератор (правило 16)*

На судне имеется инсинератор:

.1 установленный 1 января 2000 года или после этой даты, который соответствует резолюции МЕРС.76(40) с поправками ..... ☐

.2 установленный до 1 января 2000 года, который соответствует:

.2.1 резолюции МЕРС.59(33) ..... ☐

.2.2 резолюции МЕРС.76(40) ..... ☐

2.6 *Эквиваленты (правило 4)*

На судне разрешено применение следующих устройств, материалов, приспособлений или приборов, которые будут установлены на нем, или других пропелур, альтернативного жидкого топлива или методов обеспечения соответствия, используемых в качестве альтернативы требуемым настоящим Приложением:

Система или оборудование	Используемый эквивалент	Ссылка на одобрение

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НАСТОЯЩИМ УДОСТОВЕРЯЕТСЯ, что настоящее Описание содержит достоверные во всех отношениях сведения.

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ДОПОЛНЕНИЕ II

ИСПЫТАТЕЛЬНЫЕ ЦИКЛЫ И ВЕСОВЫЕ КОЭФФИЦИЕНТЫ
(Правило 13)

Для проверки соответствия судовых дизельных двигателей пределам выбросов NO_x, указанным в правиле 13 настоящего Приложения, применяются следующие испытательные циклы и весовые коэффициенты с использованием методики испытаний и метода расчетов, установленных в пересмотренном Техническом кодексе по NO_x 2008 года.

.1 Для судовых двигателей с постоянной частотой вращения, используемых для главной судовой двигательной установки, включая дизель-электрический привод, применяется испытательный цикл E2;

.2 для гребных установок с винтом регулируемого шага применяется испытательный цикл E2;

.3 для главных и вспомогательных двигателей, работающих по винтовой характеристике, применяется испытательный цикл E3;

.4 для вспомогательных двигателей с постоянной частотой вращения применяется испытательный цикл D2; и

.5 для вспомогательных двигателей с переменной частотой вращения и переменной нагрузкой, не охваченных выше, применяется испытательный цикл C1.

Испытательный цикл для *главной двигательной установки с постоянной частотой вращения* (включая дизель-электрический привод и все гребные установки с винтом регулируемого шага)

Испытательный цикл типа E2	Частота вращения	100%	100%	100%	100%
	Мощность	100%	75%	50%	25%
	Весовой коэффициент	0,2	0,5	0,15	0,15

Испытательный цикл для *главных и вспомогательных двигателей, работающих по винтовой характеристике*

Испытательный цикл типа E3	Частота вращения	100%	91%	80%	63%
	Мощность	100%	75%	50%	25%
	Весовой коэффициент	0.2	0,5	0.15	0,15

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Испытательный цикл для *вспомогательного двигателя с постоянной частотой вращения*

Испытательный цикл типа D2	Частота вращения	100%	100%	100%	100%	100%
	Мощность	100%	75%	50%	25%	10%
	Весовой коэффициент	0,05	0,25	0,3	0,3	0,1

Испытательный цикл для *вспомогательного двигателя с переменной частотой вращения и переменной нагрузкой*

Испытательный цикл типа C1	Частота вращения	Номинальная				Промежуточная			Холостой ход
	Крутящий момент	100%	75%	50%	10%	100%	75%	50%	0%
	Весовой коэффициент	0,15	0,15	0,15	0,1	0,1	0,1	0,1	0,15

В отношении двигателя, который должен быть сертифицирован в соответствии с пунктом 5.1.1 правила 13, удельный выброс в каждой отдельной точке режима не должен превышать применимой предельной величины выбросов NO_x более чем на 50%, за исключением следующего.

.1 Точки режима 10% в испытательном цикле D2.

.2 Точки режима 10% в испытательном цикле C1.

.3 Точки холостого хода в испытательном цикле C1.

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ДОПОЛНЕНИЕ III

КРИТЕРИИ И ПРОЦЕДУРЫ НАЗНАЧЕНИЯ РАЙОНОВ КОНТРОЛЯ ВЫБРОСОВ
(Правило 13.6 и правило 14.3)

1 ЦЕЛИ

1.1 Целью настоящего дополнения является установление для Сторон критериев и процедур формулирования и представления предложений о назначении районов контроля выбросов, а также изложение факторов, которые должны учитываться при оценке таких предложений Организацией.

1.2 Выбросы NO_x, SO_x и твердых частиц с морских судов способствуют повышению фоновых концентраций загрязнения воздушной среды в городах и прибрежных районах во всем мире. Отрицательное воздействие на здоровье людей и окружающую среду, связанное с загрязнением воздушной среды, включает преждевременную смертность, сердечно-легочные заболевания, рак легких, хронические респираторные заболевания, подкисление и эвтрофикацию.

1.3 Предложение о принятии Организацией района контроля выбросов рассматривается в том случае, если оно подтверждается доказанной необходимостью предотвращения, сокращения и сохранения под контролем выбросов NO_x или SO_x и твердых частиц или всех трех типов выбросов (далее именуемых «выбросы») с судов.

2 ПРОЦЕСС НАЗНАЧЕНИЯ РАЙОНОВ КОНТРОЛЯ ВЫБРОСОВ

2.1 Предложение о назначении контроля выбросов NO_x или SO_x и твердых частиц или всех трех типов выбросов может быть представлено Организации только Сторонами. Если две Стороны или более имеют общий интерес в определенном районе, им следует сформулировать согласованное предложение.

2.2 Предложение о назначении определенного района в качестве района контроля выбросов должно представляться Организации в соответствии с правилами и процедурами, установленными Организацией.

3 КРИТЕРИИ НАЗНАЧЕНИЯ РАЙОНА КОНТРОЛЯ ВЫБРОСОВ

3.1 Предложение должно включать:

.1 четкую делимитацию предлагаемого района применения мер, а также справочную карту, на которой обозначен район;

.2 тип или типы выбросов, контроль которых предлагается (т.е. NO_x или SO_x и твердые частицы или все три типа выбросов);

.3 описание населения и экологических районов, находящихся под угрозой воздействия выбросов с судов;

.4 оценку того, что выбросы с судов, эксплуатируемых в предлагаемом районе применения мер, способствуют повышению фоновых концентраций загрязнения воздушной среды или отрицательному воздействию на окружающую среду. Такая оценка должна включать описание воздействия

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соответствующих выбросов на здоровье человека и окружающую среду, такого как отрицательное воздействие на наземные и водные экосистемы, районы природной продуктивности, критические среды обитания, качество воды, здоровье человека, а также районы культурного и научного значения, если это применимо. Должны быть указаны источники соответствующих данных, включая используемые методологии;

.5 соответствующую информацию о метеорологических условиях в районе, о таком районе применения мер с точки зрения населения и экологических районов, находящихся под угрозой, в частности преобладающих ветрах, либо о топографических, геологических, океанографических, морфологических или других условиях, которые способствуют повышению фоновых концентраций загрязнения воздушной среды или отрицательному воздействию на окружающую среду;

.6 характер судоходства в предлагаемом районе контроля выбросов, включая структуру и интенсивность такого судоходства;

.7 описание контрольных мер, принятых и осуществляемых предлагающей Стороной или Сторонами в отношении наземных источников и выбросов NO_x, SO_x и твердых частиц, затрагивающих находящиеся под угрозой население и экологические районы, а также мер, которые предлагается принять в соответствии с положениями правил 13 и 14 Приложения VI; и

.8 относительные расходы на сокращение выбросов с судов по сравнению с принимаемыми мерами контроля на суше, а также экономическое воздействие на суда, осуществляющие международные перевозки.

3.2 Географические границы района контроля выбросов будут основываться на соответствующих критериях, изложенных выше, включая выбросы и осадки с судов, совершающих плавание в предлагаемом районе, структуру и интенсивность судоходства, а также ветровой режим.

4 ПРОЦЕДУРЫ ОЦЕНКИ И ПРИНЯТИЯ ОРГАНИЗАЦИЕЙ РАЙОНОВ КОНТРОЛЯ ВЫБРОСОВ

4.1 Организация рассматривает каждое предложение, представленное ей Стороной или Сторонами.

4.2 При оценке предложения Организация принимает во внимание критерии, которые должны быть включены в каждое предложение для принятия, как изложено в разделе 3, выше.

4.3 Район контроля выбросов назначается путем внесения в настоящее Приложение поправки, рассмотренной, одобренной и вступившей в силу в соответствии со статьей 16 настоящей Конвенции.

5 ДЕЙСТВИЕ РАЙОНОВ КОНТРОЛЯ ВЫБРОСОВ

5.1 Сторонам, которые имеют суда, совершающие плавание в районе, рекомендуется сообщать Организации о любых вызывающих обеспокоенность вопросах, связанных с действием района.

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ДОПОЛНЕНИЕ IV

ОДОБРЕНИЕ ТИПА И ПРЕДЕЛЫ ЭКСПЛУАТАЦИИ СУДОВЫХ ИНСИНЕРАТОРОВ
(Правило 16)

1 Судовые инсинераторы, описанные в правиле 16.6.1, должны иметь свидетельство ИМО об одобрении типа для каждого инсинератора. В целях получения такого свидетельства инсинератор должен быть спроектирован и изготовлен по одобренному стандарту, описанному в правиле 16.6.1. Каждая модель должна пройти рабочее испытание для одобрения конкретного типа на заводе или одобренном испытательном стенде и под ответственность Администрации с использованием следующих стандартных спецификаций топлива/отходов при испытании для одобрения типа, с тем чтобы определить, работает ли инсинератор в пределах, установленных в пункте 2 настоящего дополнения:

Нефтяные остатки, состоящие из:	75% остатков тяжелого жидкого топлива; 5% отработанного смазочного масла; и 20% эмульгированной воды.
Твердые отходы, состоящие из:	50% пищевых отходов; 50% мусора, содержащего приблиз. 30% бумаги, " 40% картона, " 10% ветоши, " 20% пластмассы. Смесь будет иметь до 50% влаги и 7% несгораемых твердых частиц.

2 Инсинераторы, описанные в правиле 16.6.1, должны работать в следующих пределах:

O_2 в камере сгорания:	6–12%
Максимальное среднее содержание CO в топочном газе:	200 мг/МДж
Максимальное среднее число сажи:	БАКАРАК-3 или РИНГЕЛЬМАН-1 (20% непрозрачности) (Более высокое число сажи допустимо только в течение очень коротких промежутков времени, например в течение пуска)
Несгоревшие компоненты в остатках золы:	Максимум 10% по весу
Диапазон температур топочного газа на выходе из камеры сгорания:	850–1200°C

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ДОПОЛНЕНИЕ V

ИНФОРМАЦИЯ, ВКЛЮЧАЕМАЯ В НАКЛАДНУЮ НА ПОСТАВКУ БУНКЕРНОГО ТОПЛИВА (Правило 18.5)

Название и номер ИМО принимающего судна

Порт

Дата начала поставки

Наименование, адрес и номер телефона поставщика судового жидкого топлива

Наименование(ия) продукта(ов)

Количество в метрических тоннах

Плотность при 15°C, кг/м^3*

Содержание серы (% по массе)†

Декларация, подписанная и заверенная представителем поставщика жидкого топлива, о том, что поставленное жидкое топливо соответствует применимому подпункту правила 14.1 или 14.4 и правилу 18.3 настоящего Приложения.

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* Жидкое топливо должно испытываться в соответствии со стандартом ISO 3675: 1998 или ISO 12185:1996.

† Жидкое топливо должно испытываться в соответствии со стандартом ISO 8754: 2003.

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ДОПОЛНЕНИЕ VI

ПРОЦЕДУРА ПРОВЕРКИ ЖИДКОГО ТОПЛИВА В ОТНОШЕНИИ ОБРАЗЦОВ ЖИДКОГО ТОПЛИВА СОГЛАСНО ПРИЛОЖЕНИЮ VI К КОНВЕНЦИИ МАРПОЛ
(Правило 18.8.2)

Нижеследующая процедура используется для установления, соответствует ли жидкое топливо, поставляемое и используемое на судах, пределам серы, требуемым правилом 14 Приложения VI.

1 Общие требования

1.1 Типичный образец жидкого топлива, который требуется пунктом 8.1 правила 18 («образец, МАРПОЛ»), используется для проверки содержания серы в жидком топливе, поставленном на судно.

1.2 Администрация через свой компетентный орган управляет процедурой проверки.

1.3 Лаборатории, ответственные за процедуру проверки, изложенную в настоящем дополнении, получают полную аккредитацию* с целью проведения испытаний.

2 Этап 1 процедуры проверки

2.1 Образец МАРПОЛ должен быть доставлен компетентным органом в лабораторию.

2.2 Лаборатория:

.1 регистрирует в протоколе испытаний данные о номере пломбы и ярлыке образца;

.2 подтверждает, что состояние пломбы образца МАРПОЛ не нарушено; и

.3 не принимает любой образец МАРПОЛ, у которого повреждена пломба.

2.3 Если пломба образца МАРПОЛ не повреждена, лаборатория осуществляет процедуру проверки и:

.1 обеспечивает, чтобы образец МАРПОЛ был тщательно гомогенизирован;

.2 производит выборку двух отдельных образцов из образца МАРПОЛ; и

.3 повторно опломбировывает образец МАРПОЛ и регистрирует в протоколе испытаний данные о новой пломбе.

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* Аккредитация осуществляется в соответствии со стандартом ISO 17025 или эквивалентным стандартом.

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2.4 Два отдельных образца должны испытываться последовательно в соответствии с установленным методом испытаний, упомянутым в дополнении V. Для целей этой процедуры проверки результаты анализа испытаний обозначаются как «A» и «B»:

.1 Если результаты «A» и «B» находятся в пределах повторяемости (r) метода испытаний, то результаты считаются действительными.

.2 Если результаты «A» и «B» не находятся в пределах повторяемости (r) метода испытаний, то оба результата отклоняются и лаборатория должна произвести выборку и анализ двух новых отдельных образцов. После выборки новых отдельных образцов скоянка с образцом должна быть вновь опломбирована в соответствии с пунктом 2.3.3, выше.

2.5 Если результаты испытаний «A» и «B» действительны, то должно быть рассчитано среднее значение этих двух результатов, дающее, таким образом, результат, обозначаемый как «X»:

.1 Если результат «X» соответствует применимому пределу, требуемому Приложением VI, или ниже его, то жидкое топливо считается отвечающим требованиям.

.2 Если результат «X» превышает применимый предел, требуемый Приложением VI, то следует выполнить этап 2 процедуры проверки; однако если результат «X» превышает предел спецификации на 0,59R (где R – воспроизводимость метода испытаний), то жидкое топливо считается не соответствующим требованиям и дополнительные испытания не требуются.

3 **Этап 2 процедуры проверки**

3.1 Если в соответствии с пунктом 2.5.2, выше, необходим этап 2 процедуры проверки, компетентный орган направляет образец МАРПОЛ во вторую аккредитованную лабораторию.

3.2 Получив образец МАРПОЛ, лаборатория:

.1 регистрирует в протоколе испытаний данные о номере пломбы, применяемые в соответствии с 2.3.3, и ярлыке образца;

.2 производит выборку двух отдельных образцов из образца МАРПОЛ, и

.3 повторно опломбировывает образец МАРПОЛ и регистрирует в протоколе испытаний данные о новой пломбе.

3.3 Два отдельных образца должны испытываться последовательно в соответствии с методом испытаний, указанным в дополнении V. Для целей этой процедуры проверки результаты анализа испытаний обозначаются как «C» и «D»:

.1 Если результаты «C» и «D» находятся в пределах повторяемости (r) метода испытаний, то результаты считаются действительными.

.2 Если результаты «C» и «D» не находятся в пределах повторяемости (r) метода испытаний, то оба результата отклоняются и лаборатория производит выборку и анализ двух новых отдельных образцов. После выборки новых отдельных образцов скоянка с образцом должна быть вновь опломбирована в соответствии с пунктом 3.2.3.

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3.4 Если результаты испытаний «C» и «D» действительны, а результаты «A», «B», «C» и «D» находятся в пределах воспроизводимости (R) метода испытаний, то лаборатория усредняет результаты, которые обозначаются как «Y»:

.1 Если результат «Y» соответствует применимому пределу, требуемому Приложением VI, или ниже его, то жидкое топливо считается отвечающим требованиям.

.2 Если результат «Y» превышает применимый предел, требуемый Приложением VI, то жидкое топливо не отвечает стандартам, требуемым Приложением VI.

3.5 Если результаты «A», «B», «C» и «D» не находятся в пределах воспроизводимости (R) метода испытаний, то Администрация может отвергнуть все результаты испытаний и на свое усмотрение повторить весь процесс испытаний.

3.6 Результаты, полученные на основании процедуры провозки, являются окончательными.

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RESOLUCIÓN MEPC.176(58)

Adoptada el 10 de octubre de 2008

ENMIENDAS AL ANEXO DEL PROTOCOLO DE 1997 QUE ENMIENDA EL CONVENIO INTERNACIONAL PARA PREVENIR LA CONTAMINACIÓN POR LOS BUQUES, 1973, MODIFICADO POR EL PROTOCOLO DE 1978

(Anexo VI revisado del Convenio MARPOL)

EL COMITÉ DE PROTECCIÓN DEL MEDIO MARINO,

RECORDANDO el artículo 38 a) del Convenio constitutivo de la Organización Marítima Internacional, que trata de las funciones del Comité de Protección del Medio Marino (el Comité) conferidas por los convenios internacionales relativos a la prevención y contención de la contaminación del mar,

TOMANDO NOTA del artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Convenio de 1973"), el artículo VI del Protocolo de 1978 relativo al Convenio internacional para prevenir la contaminación por los buques, 1973 (en adelante denominado "Protocolo de 1978"), y el artículo 4 del Protocolo de 1997 que enmienda el Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978 (en adelante denominado "Protocolo de 1997"), en los que conjuntamente se especifica el procedimiento para enmendar el Protocolo de 1997 y se confiere al órgano pertinente de la Organización la función de examinar y adoptar enmiendas al Convenio de 1973 modificado por los Protocolos de 1978 y de 1997,

TOMANDO NOTA TAMBIÉN de que, en virtud del Protocolo de 1997, el Anexo VI, titulado "Reglas para prevenir la contaminación atmosférica ocasionada por los buques", se agrega al Convenio de 1973 (en adelante denominado "Anexo VI"),

HABIENDO EXAMINADO el proyecto de enmiendas al Anexo VI del Convenio MARPOL,

1. ADOPTA, de conformidad con lo dispuesto en el artículo 16 2) d) del Convenio de 1973, las enmiendas al Anexo VI cuyo texto figura en el anexo de la presente resolución;

2. DECIDE, de conformidad con lo dispuesto en el artículo 16 2) f) iii) del Convenio de 1973, que las enmiendas se considerarán aceptadas el 1 de enero de 2010, salvo que, con anterioridad a esa fecha, un tercio cuando menos de las Partes, o aquellas Partes cuyas flotas mercantes combinadas representen como mínimo el 50 % del tonelaje bruto de la flota mercante mundial, hayan notificado a la Organización que rechazan las enmiendas;

3. INVITA a las Partes a que tomen nota de que, de conformidad con lo dispuesto en el artículo 16 2) g) ii) del Convenio de 1973, dichas enmiendas entrarán en vigor el 1 de julio de 2010, una vez aceptadas de conformidad con lo estipulado en el párrafo 2 anterior;

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4. PIDE al Secretario General que, de conformidad con lo dispuesto en el artículo 16 2) e) del Convenio de 1973, remita a todas las Partes en el Convenio de 1973 modificado por los Protocolos de 1978 y 1997 copias certificadas de la presente resolución y del texto de las enmiendas que figura en el anexo;

5. PIDE TAMBIÉN al Secretario General que remita copias de la presente resolución y de su anexo a los Miembros de la Organización que no son Partes en el Convenio de 1973 modificado por los Protocolos de 1978 y 1997;

6. INVITA a las Partes en el Anexo VI del Convenio MARPOL y a otros Gobiernos Miembros a que pongan las enmiendas al Anexo VI del Convenio MARPOL en conocimiento de los propietarios de buques, armadores, constructores de buques, fabricantes de motores diésel marinos, proveedores de combustibles para usos marinos y cualquier otro grupo interesado.

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ANEXO

ANEXO VI REVISADO DEL CONVENIO MARPOL

Reglas para prevenir la contaminación atmosférica ocasionada por los buques

CAPÍTULO I

GENERALIDADES

Regla 1
Ámbito de aplicación

Las disposiciones del presente anexo se aplicarán a todos los buques, salvo que se disponga expresamente otra cosa en las reglas 3, 5, 6, 13, 15, 16 y 18 del presente anexo.

Regla 2
Definiciones

A los efectos del presente anexo:

1 Por *anexo* se entiende el Anexo VI del Convenio internacional para prevenir la contaminación por los buques, 1973 (MARPOL), modificado por el Protocolo de 1978, y modificado por el Protocolo de 1997, con las enmiendas que introduzca la Organización, a condición de que dichas enmiendas se adopten y hagan entrar en vigor de conformidad con lo dispuesto en el artículo 16 del presente Convenio.

2 Por *cuya construcción se halle en una fase equivalente* se entiende la fase en que:

.1 comienza la construcción que puede identificarse como propia de un buque concreto; y

.2 ha comenzado el montaje del buque de que se trate, utilizando al menos 50 toneladas del total estimado del material estructural o un 1 % de dicho total, si este segundo valor es menor.

3 Por *fecha de vencimiento anual* se entiende el día y el mes que correspondan, cada año, a la fecha de expiración del Certificado internacional de prevención de la contaminación atmosférica.

4 Por *dispositivo de control auxiliar* se entiende un sistema, función o estrategia de control instalado en un motor diésel marino que se utiliza para proteger el motor y/o su equipo auxiliar de condiciones de funcionamiento que pudieran ocasionar daños o averías, o para facilitar el arranque del motor. Un dispositivo de control auxiliar también puede ser una estrategia o medida que haya demostrado satisfactoriamente no ser un dispositivo manipulador.

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5 Por *alimentación continua* se entiende el proceso mediante el cual se alimenta de desechos una cámara de combustión sin intervención humana, estando el incinerador en condiciones de funcionamiento normal, con la temperatura de trabajo de la cámara de combustión entre 850 °C y 1 200 °C.

6 Por *dispositivo manipulador* se entiende un dispositivo que mida, sea sensible o responda a variables de funcionamiento (por ejemplo, régimen del motor, temperatura, presión de admisión o cualquier otro parámetro) con objeto de activar, modular, diferir o desactivar el funcionamiento de cualquier parte o función del sistema de control de emisiones de manera tal que se reduzca la eficacia de dicho sistema en las circunstancias que se presentan durante el funcionamiento normal, a menos que la utilización del mencionado dispositivo esté incluida sustancialmente en los procedimientos de prueba de certificación de las emisiones aplicados.

7 Por *emisión* se entiende toda liberación a la atmósfera o al mar por los buques de sustancias sometidas a control en virtud del presente anexo.

8 Por *zona de control de las emisiones* se entiende una zona en la que es necesario adoptar medidas especiales de carácter obligatorio para prevenir, reducir y contener la contaminación atmosférica por NO_x o SO_x y materia particulada, o los tres tipos de emisiones, y sus consiguientes efectos negativos en la salud de los seres humanos y el medio ambiente. Son zonas de control de las emisiones las enumeradas en las reglas 13 y 14 del presente anexo o las designadas en virtud de las mismas.

9 Por *fueloil* se entiende cualquier combustible entregado y destinado a la combustión a fines de la propulsión o el funcionamiento a bordo del buque, incluidos los combustibles destilados o residuales.

10 Por *arqueo bruto* se entiende el arqueo bruto calculado de acuerdo con las reglas para la determinación del arqueo recogidas en el Anexo I del Convenio internacional sobre arqueo de buques, 1969, o en cualquier convenio que suceda a éste.

11 Por *instalaciones*, en relación con la regla 12 del presente anexo, se entiende la instalación en un buque de sistemas y equipo, incluidas las unidades portátiles de extinción de incendios, aislamiento u otros materiales, pero no la reparación o recarga de sistemas y equipo aislamiento y otros materiales previamente instalados, ni la recarga de las unidades portátiles de extinción de incendios.

12 Por *instalado* se entiende un motor diésel marino instalado o destinado a ser instalado en un buque, incluido un motor diésel marino auxiliar portátil, sólo en el caso de que su sistema de aprovisionamiento de combustible, de enfriamiento o de escape sea parte integrante del buque. Se considera que un sistema de aprovisionamiento de combustible es parte integrante del buque únicamente si está permanentemente fijado al buque. La presente definición también abarca los motores diésel marinos que se utilicen para complementar o aumentar la capacidad de potencia instalada del buque y que estén destinados a ser parte integrante de éste.

13 Por *estrategia irracional de control de las emisiones* se entiende cualquier estrategia o medida que, en condiciones normales de funcionamiento del buque, reduzca la eficacia de un sistema de control de emisiones a un nivel inferior al previsto en los procedimientos de prueba de emisiones aplicables.

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14 Por *motor diésel marino* se entiende todo motor alternativo de combustión interna que funcione con combustible líquido o mixto y al que se aplique la regla 13 del presente anexo, incluidos los sistemas de sobrealimentación o mixtos, en caso de que se empleen.

15 Por *Código Técnico sobre los NO_x* se entiende el Código técnico relativo al control de las emisiones de óxidos de nitrógeno de los motores diésel marinos, adoptado mediante la resolución 2 de la Conferencia MARPOL de 1997, con las enmiendas que introduzca la Organización, a condición de que dichas enmiendas se adopten y hagan entrar en vigor de conformidad con lo dispuesto en el artículo 16 del presente Convenio.

16 Por *sustancias que agotan la capa de ozono* se entiende las sustancias controladas definidas en el párrafo 4 del artículo 1 del Protocolo de Montreal relativo a las sustancias que agotan la capa de ozono, de 1987, que figuren en los anexos A, B, C y E de dicho Protocolo vigentes en el momento de aplicar o interpretar el presente anexo.

A bordo de los buques puede haber, sin que esta lista sea exhaustiva, las siguientes sustancias que agotan la capa de ozono:

Halón 1211 Bromoclorodifluorometano

Halón 1301 Bromotrifluorometano

Halón 2402 1,2-Dibromo-1,1,2,2-tetrafluoroetano (también denominado halón 114B2)

CFC-11 Triclorofluorometano

CFC-12 Diclorodifluorometano

CFC-113 1,1,2-Tricloro-1,2,2-trifluoroetano

CFC-114 1,2-Dicloro-1,1,2,2-tetrafluoretano

CFC-115 Cloropentafluoroetano

17 Por *incineración a bordo* se entiende la incineración de desechos u otras materias a bordo de un buque si dichos desechos u otras materias se han producido durante la explotación normal de dicho buque.

18 Por *incinerador de a bordo* se entiende la instalación proyectada con la finalidad principal de incinerar a bordo.

19 Por *buque construido* se entiende todo buque cuya quilla haya sido colocada o cuya construcción se halle en una fase equivalente.

20 Por *fangos oleosos* se entiende todo fango proveniente de los separadores de fueloil o aceite lubricante, los desechos de aceite lubricante de las máquinas principales o auxiliares y los desechos oleosos de los separadores de aguas de sentina, el equipo filtrador de hidrocarburos o las bandejas de goteo.

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21 Por *buque tanque* se entiende un petrolero definido en la regla 1 del Anexo I o un buque tanque quimiquero definido en la regla 1 del Anexo II del presente Convenio.

Regla 3
Excepciones y exenciones

Generalidades

1 Las reglas del presente anexo no se aplicarán:

.1 a las emisiones necesarias para proteger la seguridad del buque o salvar vidas en el mar; ni

.2 a las emisiones resultantes de averías sufridas por un buque o por su equipo:

.2.1 siempre que después de producirse la avería o de descubrirse la emisión se hayan tomado todas las precauciones razonables para prevenir o reducir al mínimo tal emisión; y

.2.2 salvo que el propietario o el capitán hayan actuado ya sea con la intención de causar la avería, o con imprudencia temeraria y a sabiendas de que probablemente se produciría una avería.

Ensayos para la investigación de tecnologías de reducción y control de las emisiones de los buques

2 La Administración de una Parte, en colaboración con otras Administraciones según proceda, podrá conceder una exención respecto de disposiciones específicas del presente anexo a un buque para realizar ensayos de desarrollo de tecnologías de reducción y control de las emisiones de los buques y programas de proyecto de motores. Dicha exención sólo se concederá si la aplicación de disposiciones específicas del anexo o del Código Técnico sobre los NO_x revisado de 2008 puede obstaculizar la investigación sobre el desarrollo de dichas tecnologías o programas. Un permiso para una exención de este tipo sólo se concederá al menor número de buques posible y estará sujeto a las disposiciones siguientes:

.1 en el caso de motores diésel marinos con una cilindrada inferior a 30 litros, la duración del ensayo en el mar no será superior a 18 meses. Si es necesario que dure más tiempo, la Administración o Administraciones que hayan otorgado el permiso podrán autorizar que el plazo se prorrogue por un periodo adicional de 18 meses; o

.2 en el caso de motores diésel marinos con una cilindrada igual o superior a 30 litros, la duración del ensayo en el mar no será superior a cinco años y requerirá que la Administración o Administraciones que hayan otorgado el permiso realicen un examen de la situación en cada reconocimiento intermedio. El permiso puede retirarse a partir de ese examen si las pruebas no se han ajustado a las condiciones de dicho permiso o si se determina que no es probable que la tecnología o el programa tengan efectos positivos en la reducción y el control de las emisiones procedentes de los buques. Si la Administración o Administraciones que hayan realizado el examen determinan que es necesario disponer de más tiempo para probar una tecnología o programa concretos, el permiso podrá prorrogarse durante un periodo de tiempo adicional no superior a cinco años.

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Emisiones procedentes de actividades relacionadas con los recursos minerales del lecho marino

3.1 Las emisiones que procedan directamente de la exploración, la explotación y el consiguiente tratamiento mar adentro de los recursos minerales del lecho marino quedan exentas de las prescripciones del presente anexo, de conformidad con lo dispuesto en el artículo 2 3) b) ii) del presente Convenio. Tales emisiones incluyen:

.1 las emisiones procedentes de la incineración de sustancias resultantes única y directamente de la exploración, la explotación y el consiguiente tratamiento mar adentro de los recursos minerales del lecho marino, incluidas, sin que la enumeración sea exhaustiva, la combustión de hidrocarburos en antorcha y la quema de virutas de perforación, lodos o fluidos de estimulación durante las operaciones de terminación y prueba de los pozos, y la combustión en antorcha debida a circunstancias excepcionales;

.2 el desprendimiento de gases y compuestos volátiles presentes en los fluidos y las virutas de perforación;

.3 las emisiones relacionadas única y directamente con el tratamiento, la manipulación o el almacenamiento de minerales del lecho marino, y

.4 las emisiones de los motores diésel marinos dedicados exclusivamente a la exploración, la explotación y el consiguiente tratamiento mar adentro de los recursos minerales del lecho marino.

3.2 Las prescripciones de la regla 18 del presente anexo no se aplicarán a la utilización de los hidrocarburos que se producen y utilizan ulteriormente *in situ* como combustible, cuando así lo apruebe la Administración.

Regla 4
Equivalentes

1 La Administración de una Parte podrá autorizar la utilización a bordo de un buque de accesorios, materiales, dispositivos o aparatos u otros procedimientos, tipos de fueloil o métodos de cumplimiento como alternativa a los prescritos en el presente anexo, si tales accesorios, materiales, dispositivos o aparatos u otros procedimientos, tipos de fueloil o métodos de cumplimiento son por lo menos tan eficaces en cuanto a la reducción de las emisiones como los prescritos en el presente anexo, incluidos los niveles indicados en las reglas 13 y 14.

2 La Administración de una Parte que autorice la utilización de accesorios, materiales, dispositivos o aparatos u otros procedimientos, tipos de fueloil o métodos de cumplimiento como alternativa a los prescritos en el presente anexo comunicará a la Organización los pormenores de los mismos a fin de que ésta los notifique a las Partes para su información y para que adopten las medidas oportunas, si es necesario.

3 La Administración de una Parte debería tener en cuenta las directrices pertinentes que elabore la Organización en relación con los equivalentes previstos en la presente regla.

4 La Administración de una Parte que autorice la utilización de uno de los equivalentes indicados en el párrafo 1 de la presente regla hará todo lo posible por no dañar ni perjudicar el medio ambiente, la salud de los seres humanos, los bienes o los recursos, ni los de otros Estados.

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CAPÍTULO II

RECONOCIMIENTO, CERTIFICACIÓN Y MEDIOS DE CONTROL

Regla 5
Reconocimientos

1 Todo buque de arqueo bruto igual o superior a 400 y todas las torres de perforación y otras plataformas, fijas o flotantes, serán objeto de los reconocimientos que se especifican a continuación:

.1 un reconocimiento inicial antes de que el buque entre en servicio o de que se expida por primera vez el certificado prescrito en la regla 6 del presente anexo. Este reconocimiento se realizará de modo que garantice que el equipo, los sistemas, los accesorios, las instalaciones y los materiales cumplen plenamente las prescripciones aplicables del presente anexo;

.2 un reconocimiento de renovación a intervalos especificados por la Administración, pero que no excederán de cinco años, salvo en los casos en que sean aplicables las reglas 9.2, 9.5, 9.6 ó 9.7 del presente anexo. El reconocimiento de renovación se realizará de modo que garantice que el equipo, los sistemas, los accesorios, las instalaciones y los materiales cumplen plenamente las prescripciones aplicables del presente anexo;

.3 un reconocimiento intermedio dentro de los tres meses anteriores o posteriores a la segunda o a la tercera fecha de vencimiento anual del certificado, el cual sustituirá a uno de los reconocimientos anuales estipulados en el apartado 1.4 de la presente regla. El reconocimiento intermedio se realizará de modo que garantice que el equipo y las instalaciones cumplen plenamente las prescripciones aplicables del presente anexo y están en buen estado de funcionamiento. Estos reconocimientos intermedios se consignarán en el certificado expedido en virtud de las reglas 6 ó 7 del presente anexo;

.4 un reconocimiento anual dentro de los tres meses anteriores o posteriores a cada fecha de vencimiento anual del certificado, que comprenderá una inspección general del equipo, los sistemas, los accesorios, las instalaciones y los materiales mencionados en el apartado 1.1 de la presente regla, a fin de garantizar que se han mantenido de conformidad con lo dispuesto en el párrafo 4 de la presente regla y que continúan siendo satisfactorios para el servicio al que el buque esté destinado. Estos reconocimientos anuales se consignarán en el certificado expedido en virtud de lo dispuesto en las reglas 6 ó 7 del presente anexo; y

.5 también se efectuará un reconocimiento adicional, ya general, ya parcial, según dicten las circunstancias, después de la realización de reparaciones o renovaciones importantes prescritas en el párrafo 4 de la presente regla o tras una reparación resultante de las investigaciones prescritas en el párrafo 5 de la presente regla. El reconocimiento será tal que garantice que se realizaron de modo efectivo las reparaciones o renovaciones necesarias, que los materiales utilizados en tales reparaciones o renovaciones y la calidad de éstas son satisfactorios en todos los sentidos y que el buque cumple plenamente lo dispuesto en el presente anexo.

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2 En el caso de los buques de arqueo bruto inferior a 400, la Administración podrá establecer las medidas pertinentes para garantizar el cumplimiento de las disposiciones aplicables del presente anexo.

3 El reconocimiento de buques, por lo que respecta a la aplicación de lo prescrito en el presente anexo, será realizado por funcionarios de la Administración.

.1 No obstante, la Administración podrá confiar los reconocimientos a inspectores nombrados al efecto o a organizaciones reconocidas por ella. Tales organizaciones cumplirán las directrices adoptadas por la Organización[1];

.2 el reconocimiento de los motores diésel marinos y del equipo para determinar si cumplen lo dispuesto en la regla 13 del presente anexo se realizará de conformidad con lo dispuesto en el Código Técnico sobre los NO, revisado de 2008;

.3 cuando el inspector nombrado o la organización reconocida dictaminen que el estado del equipo no corresponde en lo esencial a los pormenores del certificado, el inspector o la organización harán que se tomen medidas correctivas e informarán oportunamente de ello a la Administración. Si no se toman dichas medidas correctivas, la Administración retirará el certificado. Si el buque se encuentra en un puerto de otra Parte, también se dará notificación inmediata a las autoridades competentes del Estado rector del puerto. Una vez que un funcionario de la Administración, un inspector nombrado o una organización reconocida hayan informado a las autoridades competentes del Estado rector del puerto, el Gobierno de dicho Estado prestará al funcionario, al inspector o a la organización mencionados toda la asistencia necesaria para el cumplimiento de las obligaciones impuestas por la presente regla; y

.4 en todos los casos, la Administración interesada garantizará incondicionalmente la integridad y eficacia del reconocimiento y se comprometerá a hacer que se tomen las disposiciones necesarias para dar cumplimiento a esta obligación.

4 Se mantendrá el equipo de modo que se ajuste a las disposiciones del presente anexo y no se efectuará ningún cambio del equipo, los sistemas, los accesorios, las instalaciones o los materiales que fueron objeto del reconocimiento, sin la autorización expresa de la Administración. Se permitirá la simple sustitución de dicho equipo o accesorios por equipo y accesorios que se ajusten a las disposiciones del presente anexo.

5 Siempre que un buque sufra un accidente o se descubra algún defecto que afecte considerablemente a la eficacia o la integridad del equipo al que se aplique el presente anexo, el capitán o el propietario del buque informarán lo antes posible a la Administración, al inspector nombrado o a la organización reconocida encargados de expedir el certificado pertinente.

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[1] Véanse las Directrices relativas a la autorización de las organizaciones que actúen en nombre de la Administración, adoptadas por la Organización mediante la resolución A.739(18), según sean enmendadas por la Organización, y las Especificaciones relativas a las funciones de reconocimiento y certificación de las organizaciones reconocidas que actúen en nombre de la Administración, adoptadas por la Organización mediante la resolución A.789(19), según sean enmendadas por la Organización.

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Regla 6
Expedición o refrendo del certificado

1 Se expedirá un Certificado internacional de prevención de la contaminación atmosférica, tras un reconocimiento inicial o de renovación efectuado de conformidad con las disposiciones de la regla 5 del presente anexo:

.1 a todo buque de arqueo bruto igual o superior a 400 que realice viajes a puertos o terminales mar adentro sometidos a la jurisdicción de otras Partes; y

.2 a las plataformas y torres de perforación que realicen viajes a aguas sometidas a la soberanía o jurisdicción de otras Partes.

2 En el caso de un buque construido antes de la fecha de entrada en vigor del Anexo VI, la Administración de dicho buque expedirá un Certificado internacional de prevención de la contaminación atmosférica conforme a lo dispuesto en el párrafo 1 de la presente regla, a más tardar en la primera entrada programada en dique seco posterior a dicha fecha de entrada en vigor, y en ningún caso después de que hayan transcurrido tres años desde dicha fecha.

3 Tal certificado será expedido o refrendado por la Administración o por cualquier persona u organización debidamente autorizada por ella. En cualquier caso, la Administración asume la plena responsabilidad del certificado.

Regla 7
Expedición del certificado por otra Parte

1 Una Parte podrá, a requerimiento de la Administración, hacer que un buque sea objeto de reconocimiento y, si estima que cumple las disposiciones del presente anexo, expedirá o autorizará la expedición a ese buque de un Certificado internacional de prevención de la contaminación atmosférica y, cuando corresponda, refrendará o autorizará el refrendo del certificado que haya a bordo, de conformidad con el presente anexo.

2 Se remitirá lo antes posible a la Administración que haya pedido el reconocimiento una copia del certificado y otra del informe relativo al reconocimiento.

3 Este certificado, en el que se hará constar que el certificado ha sido expedido a petición de la Administración, tendrá la misma fuerza y gozará del mismo reconocimiento que el expedido en virtud de la regla 6 del presente anexo.

4 No se expedirá el Certificado internacional de prevención de la contaminación atmosférica a ningún buque con derecho a enarbolar el pabellón de un Estado que no sea Parte.

Regla 8
Modelo de certificado

El Certificado internacional de prevención de la contaminación atmosférica se elaborará conforme al modelo que figura en el apéndice I del presente anexo y estará redactado como mínimo en español, francés o inglés. Cuando se use también un idioma oficial del país expedidor, dará fe el texto en dicho idioma en caso de controversia o discrepancia.

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Regla 9
Duración y validez del certificado

1 El Certificado internacional de prevención de la contaminación atmosférica se expedirá para un periodo que especificará la Administración y que no excederá de cinco años.

2 No obstante lo prescrito en el párrafo 1 de la presente regla:

.1 cuando el reconocimiento de renovación se efectúe dentro de los tres meses anteriores a la fecha de expiración del certificado existente, el nuevo certificado será válido a partir de la fecha en que finalice el reconocimiento de renovación, por un periodo que no excederá de cinco años contados a partir de la fecha de expiración del certificado existente;

.2 cuando el reconocimiento de renovación se efectúe después de la fecha de expiración del certificado existente, el nuevo certificado será válido a partir de la fecha en que finalice el reconocimiento de renovación, por un periodo que no excederá de cinco años contados a partir de la fecha de expiración del certificado existente; y

.3 cuando el reconocimiento de renovación se efectúe con más de tres meses de antelación a la fecha de expiración del certificado existente, el nuevo certificado será válido a partir de la fecha en que finalice el reconocimiento de renovación, por un periodo que no excederá de cinco años contados a partir de dicha fecha.

3 Si un certificado se expide para un periodo de menos de cinco años, la Administración podrá prorrogar su validez más allá de la fecha de expiración hasta el periodo máximo especificado en el párrafo 1 de la presente regla, siempre que los reconocimientos citados en las reglas 5.1.3 y 5.1.4 del presente anexo, aplicables cuando se expide un certificado para un periodo de cinco años, se hayan efectuado como proceda.

4 Si se ha efectuado un reconocimiento de renovación y no ha sido posible expedir o facilitar al buque un nuevo certificado antes de la fecha de expiración del certificado existente, la persona o la organización autorizada por la Administración podrá refrendar el certificado existente, el cual será aceptado como válido por un periodo adicional que no excederá de cinco meses contados a partir de la fecha de expiración.

5 Si en la fecha de expiración de un certificado el buque no se encuentra en el puerto en que haya de ser objeto de reconocimiento, la Administración podrá prorrogar la validez del certificado, pero esta prórroga sólo se concederá con el fin de que el buque pueda proseguir su viaje hasta el puerto en que haya de ser objeto de reconocimiento, y aun así únicamente en los casos en que se estime oportuno y razonable hacerlo. No se prorrogará ningún certificado por un periodo superior a tres meses, y el buque al que se le haya concedido tal prórroga no quedará autorizado en virtud de ésta, cuando llegue al puerto en que haya de ser objeto de reconocimiento, a salir de dicho puerto sin haber obtenido previamente un nuevo certificado. Una vez finalizado el reconocimiento de renovación, el nuevo certificado será válido por un periodo que no excederá de cinco años contados a partir de la fecha de expiración del certificado existente antes de que se concediera la prórroga.

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6 Todo certificado expedido a un buque dedicado a viajes cortos que no haya sido prorrogado en virtud de las disposiciones precedentes de la presente regla podrá ser prorrogado por la Administración por un periodo de gracia no superior a un mes a partir de la fecha de expiración indicada en el mismo. Cuando se haya finalizado el reconocimiento de renovación, el nuevo certificado será válido por un periodo que no excederá de cinco años contados a partir de la fecha de expiración del certificado existente antes de que se concediera la prórroga.

7 En circunstancias especiales, que determinará la Administración, no será necesario, contrariamente a lo prescrito en los párrafos 2.1. 5 ó 6 de la presente regla, que la validez de un nuevo certificado comience a partir de la fecha de expiración del certificado existente. En esas circunstancias especiales, el nuevo certificado será válido por un periodo que no excederá de cinco años contados a partir de la fecha en que finalice el reconocimiento de renovación.

8 Cuando se efectúe un reconocimiento anual o intermedio antes del periodo especificado en la regla 5 del presente anexo:

.1 la fecha de vencimiento anual que figure en el certificado se modificará mediante refrendo sustituyéndola por una fecha que no sea más de tres meses posterior a la fecha en que terminó el reconocimiento;

.2 el reconocimiento anual o intermedio subsiguiente prescrito en la regla 5 del presente anexo se efectuará según los intervalos prescritos en dicha regla, teniendo en cuenta la nueva fecha de vencimiento anual; y

.3 la fecha de expiración podrá permanecer inalterada a condición de que se efectúen uno o más reconocimientos anuales o intermedios, según proceda, de manera que no se excedan entre los distintos reconocimientos los intervalos máximos prescritos en la regla 5 del presente anexo.

9 Todo certificado expedido en virtud de las reglas 6 ó 7 del presente anexo perderá su validez en cualquiera de los casos siguientes:

.1 si los reconocimientos pertinentes no se han efectuado dentro de los plazos prescritos en la regla 5.1 del presente anexo;

.2 si el certificado no es refrendado de conformidad con lo dispuesto en las reglas 5.1.3 ó 5.1.4 del presente anexo; y

.3 cuando el buque cambie su pabellón por el de otro Estado. Sólo se expedirá un nuevo certificado cuando el Gobierno que lo expida se haya cerciorado plenamente de que el buque cumple lo prescrito en la regla 5.4 del presente anexo. Si se produce un cambio de pabellón entre Partes, el Gobierno de la Parte cuyo pabellón el buque tenía previamente derecho a enarbolar transmitirá lo antes posible a la Administración, previa petición de ésta cursada dentro de los tres meses siguientes al cambio de pabellón, copias del certificado que llevaba el buque antes del cambio y, si están disponibles, copias de los informes de los reconocimientos pertinentes.

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Regla 10
Supervisión de las prescripciones operacionales por el Estado rector del puerto

1 Un buque que se encuentre en un puerto o una terminal mar adentro sometido a la jurisdicción de otra Parte podrá ser objeto de una inspección por funcionarios debidamente autorizados por dicha Parte en lo que respecta a las prescripciones operacionales del presente anexo si existen motivos fundados para pensar que el capitán o la tripulación no están familiarizados con los procedimientos esenciales de a bordo relativos a la prevención de la contaminación atmosférica ocasionada por los buques.

2 En las circunstancias indicadas en el párrafo 1 de la presente regla, la Parte interesada tomará medidas para garantizar que el buque no se haga a la mar hasta que la situación se haya remediado conforme a lo prescrito en el presente anexo.

3 Los procedimientos relativos a la supervisión por el Estado rector del puerto prescritos en el artículo 5 del presente Convenio se aplicarán a la presente regla.

4 Nada de lo dispuesto en la presente regla se interpretará como una limitación de los derechos y obligaciones de una Parte que supervise las prescripciones operacionales específicamente previstas en el presente Convenio.

Regla 11
Detección de transgresiones y cumplimiento

1 Las Partes cooperarán en toda gestión que conduzca a la detección de las transgresiones y al cumplimiento de las disposiciones del presente anexo utilizando cualquier medida apropiada y practicable de detección y de vigilancia ambiental, los procedimientos adecuados de notificación y el acopio de pruebas.

2 Todo buque al que se aplique el presente anexo podrá ser objeto de inspección, en cualquier puerto o terminal mar adentro de una Parte, por los funcionarios que nombre o autorice dicha Parte a fin de verificar si el buque ha emitido alguna de las sustancias a las que se aplica el presente anexo, transgrediendo lo dispuesto en el mismo. Si la inspección indica que hubo transgresión del presente anexo se enviará un informe a la Administración para que ésta tome las medidas oportunas.

3 Toda Parte facilitará a la Administración pruebas, si las hubiere, de que un buque ha emitido alguna de las sustancias a las que se aplica el presente anexo, transgrediendo lo dispuesto en el mismo. Cuando sea posible, la autoridad competente de dicha Parte notificará al capitán del buque la transgresión que se le imputa.

4 Al recibir tales pruebas, la Administración investigará el asunto y podrá solicitar de la otra Parte que le facilite más o mejores pruebas de la presunta transgresión. Si la Administración estima que hay pruebas suficientes para incoar un procedimiento respecto a la presunta transgresión, hará que se inicie tal procedimiento lo antes posible de conformidad con su legislación. La Administración informará inmediatamente a la Parte que haya notificado la presunta transgresión, y a la Organización, de las medidas que se hayan tomado.

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5 Toda Parte podrá asimismo proceder a la inspección de un buque al que sea de aplicación el presente anexo cuando el buque entre en los puertos o terminales mar adentro bajo su jurisdicción, si ha recibido de cualquier otra Parte una solicitud de investigación junto con pruebas suficientes de que ese buque ha emitido, dondequiera que sea, alguna de las sustancias a las que se aplica el presente anexo, transgrediendo lo dispuesto en el mismo. El informe de la investigación se transmitirá tanto a la Parte que la solicitó como a la Administración, a fin de que puedan tomarse las medidas oportunas con arreglo al presente Convenio.

6 Las normas de derecho internacional relativas a la prevención, reducción y contención de la contaminación del medio marino ocasionada por los buques, incluidas las relativas a ejecución y garantías, que estén en vigor en el momento de la aplicación o interpretación del presente anexo se aplicarán *mutatis mutandis* a las reglas y normas establecidas en el mismo.

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CAPÍTULO III

PRESCRIPCIONES PARA EL CONTROL DE LAS EMISIONES DE LOS BUQUES

Regla 12
Sustancias que agotan la capa de ozono

1 La presente regla no se aplica al equipo permanentemente sellado que no tenga conexiones de carga de refrigerante ni componentes potencialmente desmontables que contengan sustancias que agotan la capa de ozono.

2 A reserva de lo dispuesto en la regla 3.1, se prohíbe toda emisión deliberada de sustancias que agotan la capa de ozono. Las emisiones deliberadas incluyen las que se producen durante el mantenimiento, la revisión, la reparación o la eliminación de sistemas o equipo, pero no la liberación de cantidades mínimas durante la recuperación o el reciclaje de una sustancia que agota la capa de ozono. Las emisiones debidas a fugas de una sustancia que agota la capa de ozono, independientemente de que las fugas sean o no deliberadas, podrán ser reglamentadas por las Partes.

3.1 Se prohibirán las instalaciones que contengan sustancias que agotan la capa de ozono que no sean hidroclorofluorocarbonos:

.1 en los buques construidos el 19 de mayo de 2005 o posteriormente; o

.2 en los buques construidos antes del 19 de mayo de 2005, si la fecha contractual de entrega del equipo al buque es el 19 de mayo de 2005 o posteriormente, o en ausencia de una fecha contractual de entrega, si el equipo se entrega de hecho al buque el 19 de mayo de 2005 o posteriormente.

3.2 Se prohibirán las instalaciones que contengan hidroclorofluorocarbonos:

.1 en los buques construidos el 1 de enero de 2020 o posteriormente; o

.2 en los buques construidos antes del 1 de enero de 2020, si la fecha contractual de entrega del equipo al buque es el 1 de enero de 2020 o posteriormente, o en ausencia de una fecha contractual de entrega, si el equipo se entrega al buque el 1 de enero de 2020 o posteriormente.

4 Las sustancias a que se hace referencia en la presente regla y el equipo que contenga dichas sustancias se depositarán en instalaciones de recepción adecuadas cuando se retiren del buque.

5 Todos los buques regidos por la regla 6.1 deberán mantener una lista del equipo que contenga sustancias que agotan la capa de ozono[2].

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[2] Véase la sección 2.1 del apéndice I: "Suplemento del Certificado internacional de prevención de la contaminación atmosférica" (Certificado IAPP).

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6 Todos los buques regidos por la regla 6.1 que dispongan de sistemas recargables que contengan sustancias que agotan la capa de ozono estarán provistos de un libro registro de dichas sustancias. Ese libro registro podrá formar parte del diario de navegación o de un sistema de registro electrónico aprobado por la Administración.

7 El registro de las sustancias que agotan la capa de ozono estará expresado en términos de masa (kg) de la sustancia y se efectuará sin demora, en cada ocasión, con respecto a las siguientes actividades:

.1 recarga, plena o parcial, del equipo que contenga sustancias que agotan la capa de ozono;

.2 reparación o mantenimiento del equipo que contenga sustancias que agotan la capa de ozono;

.3 descarga a la atmósfera de sustancias que agotan la capa de ozono:

.3.1 deliberada; y

.3.2 no deliberada;

.4 descarga de sustancias que agotan la capa de ozono en instalaciones de recepción situadas en tierra; y

.5 suministro al buque de sustancias que agotan la capa de ozono.

Regla 13
Óxidos de nitrógeno (NO_x)

Ámbito de aplicación

1.1 La presente regla se aplicará:

.1 a todo motor diésel marino con una potencia de salida superior a 130 kW instalado en un buque; y

.2 a todo motor diésel marino con una potencia de salida superior a 130 kW que haya sido objeto de una transformación importante el 1 de enero de 2000 o posteriormente, salvo cuando haya quedado demostrado, de manera satisfactoria a juicio de la Administración, que tal motor constituye una sustitución idéntica del motor al que sustituye y no está contemplado en el apartado 1.1.1 de la presente regla.

1.2 La presente regla no se aplicará:

.1 a los motores diésel marinos destinados a ser utilizados solamente en caso de emergencia, o únicamente para accionar dispositivos o equipo destinados a ser utilizados solamente en caso de emergencia a bordo del buque en que estén instalados, ni a los motores diésel marinos instalados en botes salvavidas destinados a ser utilizados únicamente en caso de emergencia; ni

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.2 a los motores diésel marinos instalados en buques que estén exclusivamente dedicados a realizar viajes dentro de las aguas sometidas a la soberanía o jurisdicción del Estado cuyo pabellón están autorizados a enarbolar, a condición de que tales motores estén sometidos a otra medida de control de los NO_x establecida por la Administración.

1.3 No obstante lo dispuesto en el apartado 1.1 del presente párrafo, la Administración podrá permitir que la presente regla no se aplique a los motores diésel marinos que se instalen en los buques construidos antes del 19 de mayo de 2005 ni a los motores diésel marinos que sean objeto de una transformación importante antes de esa fecha, a condición de que los buques en que vayan instalados los motores estén exclusivamente dedicados a realizar viajes hacia puertos o terminales mar adentro situados en el Estado cuyo pabellón tienen derecho a enarbolar.

Transformación importante

2.1 A los efectos de la presente regla, por *transformación importante* se entenderá la modificación, el 1 de enero de 2000 o posteriormente, de un motor diésel marino que no haya sido certificado según las normas estipuladas en los párrafos 3, 4 ó 5.1.1 de la presente regla mediante la cual:

.1 se sustituya el motor por un motor diésel marino o se instale un motor diésel marino adicional, o

.2 se realice una modificación apreciable del motor, según se define ésta en el Código Técnico sobre los NO_x revisado de 2008, o

.3 se aumente el régimen nominal máximo continuo del motor en más de un 10 % con respecto al régimen nominal máximo continuo indicado en la certificación original del motor.

2.2 En el caso de una transformación importante que suponga la sustitución de un motor diésel marino por un motor diésel marino no idéntico o la instalación de un motor diésel marino adicional, se aplicarán las normas estipuladas en la presente regla que estén en vigor en el momento de la sustitución o adición del motor. Por lo que respecta únicamente a los motores de sustitución, si el 1 de enero de 2016 o posteriormente no es posible que dicho motor de sustitución se ajuste a las normas indicadas en el apartado 5.1.1 de la presente regla (nivel III), ese motor de sustitución habrá de ajustarse a las normas indicadas en el párrafo 4 de la presente regla (nivel II). La Organización elaborará directrices para establecer criterios que sirvan para determinar los casos en que no sea posible que un motor de sustitución se ajuste a las normas indicadas en el apartado 5.1.1 de la presente regla.

2.3 Por lo que respecta a los motores diésel marinos mencionados en los apartados 2.1.2 ó 2.1.3, esos motores habrán de ajustarse a las normas siguientes:

.1 en el caso de los buques construidos antes del 1 de enero de 2000, se aplicarán las normas estipuladas en el párrafo 3 de la presente regla; y

.2 en el caso de los buques construidos el 1 de enero de 2000 o posteriormente, se aplicarán las normas que estén en vigor en el momento de construirse del buque.

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Nivel I

3 A reserva de lo dispuesto en la regla 3 del presente anexo, se prohíbe el funcionamiento de todo motor diésel marino instalado en un buque construido el 1 de enero de 2000 o posteriormente y antes del 1 de enero de 2011, a menos que la cantidad de óxidos de nitrógeno (calculada en forma de emisión total ponderada de NO_2) emitidos por el motor se encuentre dentro de los límites que figuran a continuación, siendo n el régimen nominal del motor (revoluciones por minuto del cigüeñal):

.1 17,0 g/kWh si n es inferior a 130 rpm;

.2 $45 \cdot n^{(-0,2)}$ g/kWh si n es igual o superior a 130 rpm pero inferior a 2 000 rpm;

.3 9,8 g/kWh si n es igual o superior a 2 000 rpm.

Nivel II

4 A reserva de lo dispuesto en la regla 3 del presente anexo, se prohíbe el funcionamiento de todo motor diésel marino instalado en un buque construido el 1 de enero de 2011 o posteriormente, a menos que la cantidad de óxidos de nitrógeno (calculada en forma de emisión total ponderada de NO_2) emitidos por el motor se encuentre dentro de los límites que figuran a continuación, siendo n el régimen nominal del motor (revoluciones por minuto del cigüeñal):

.1 14,4 g/kWh si n es inferior a 130 rpm;

.2 $44 \cdot n^{(-0,23)}$ g/kWh si n es igual o superior a 130 rpm pero inferior a 2 000 rpm;

.3 7,7 g/kWh si n es igual o superior a 2 000 rpm.

Nivel III

5.1 A reserva de lo dispuesto en la regla 3 del presente anexo, el funcionamiento de los motores diésel marinos instalados en buques construidos el 1 de enero de 2016 o posteriormente:

.1 está prohibido, a menos que la cantidad de óxidos de nitrógeno (calculada en forma de emisión total ponderada de NO_2) emitidos por el motor se encuentre dentro de los límites que figuran a continuación, siendo n el régimen nominal del motor (revoluciones por minuto del cigüeñal):

.1.1 3,4 g/kWh si n es inferior a 130 rpm;

.1.2 $9 \cdot n^{(-0,2)}$ g/kWh si n es igual o superior a 130 rpm pero inferior a 2 000 rpm; y

.1.3 2,0 g/kWh si n es igual o superior a 2 000 rpm;

.2 está sujeto a las normas indicadas en el apartado 5.1.1 del presente párrafo si el buque está operando en una zona de control de las emisiones designada en virtud del párrafo 6 de la presente regla; y

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.3 está sujeto a las normas indicadas en el párrafo 4 de la presente regla si el buque está operando fuera de una zona de control de las emisiones designada en virtud del párrafo 6 de la presente regla.

5.2 A reserva del examen establecido en el párrafo 10 de la presente regla, las normas indicadas en el apartado 5.1.1 de la presente regla no se aplicarán:

.1 a los motores diésel marinos instalados en buques de eslora (L), según se define ésta en la regla 1.19 del Anexo I del presente Convenio, inferior a 24 m que estén especificamente proyectados, y se utilicen exclusivamente, para fines recreativos; ni

.2 a los motores diésel marinos instalados en buques con una potencia combinada de propulsión del motor diésel, según la placa de identificación, inferior a 750 kW si se demuestra de manera satisfactoria a juicio de la Administración que el buque no puede cumplir las normas estipuladas en el apartado 5.1.1 de la presente regla debido a limitaciones de proyecto o construcción del buque.

Zona de control de las emisiones

6 A los efectos de la presente regla, una zona de control de las emisiones será cualquier zona marítima, incluida toda zona portuaria, designada por la Organización de conformidad con los criterios y procedimientos indicados en el apéndice III del presente anexo.

Motores diésel marinos instalados en buques construidos antes del 1 de enero de 2000

7.1 No obstante lo dispuesto en el apartado 1.1.1 de la presente regla, los motores diésel marinos con una potencia de salida superior a 5 000 kW y una cilindrada igual o superior a 90 litros instalados en buques construidos el 1 de enero de 1990 o posteriormente, pero antes del 1 de enero de 2000, cumplirán los límites de emisión indicados en el apartado 7.4 del presente párrafo, siempre que la Administración de una Parte haya certificado un método aprobado para ese motor y lo haya notificado a la Organización. El cumplimiento de lo dispuesto en el presente párrafo se demostrará mediante uno de los procedimientos siguientes:

.1 instalación del método aprobado certificado que haya sido confirmado mediante un reconocimiento en el que se haya utilizado el procedimiento de verificación especificado en el expediente de método aprobado, incluido la debida anotación de la presencia del método aprobado en el Certificado internacional de prevención de la contaminación atmosférica del buque; o

.2 certificación del motor en la que se confirme que el motor funciona dentro de los límites establecidos en los párrafos 3, 4 ó 5.1.1 de la presente regla, y la debida anotación de la certificación del motor en el Certificado internacional de prevención de la contaminación atmosférica del buque.

7.2 El apartado 7.1 se aplicará a más tardar en el primer reconocimiento de renovación que se realice, como mínimo, 12 meses después de haberse depositado la notificación indicada en el apartado 7.1. Si el propietario de un buque en el que vaya a instalarse un método aprobado puede demostrar, de manera satisfactoria a juicio de la Administración, que el método aprobado no estaba disponible comercialmente a pesar de haber hecho todo lo posible por obtenerlo, ese método aprobado se instalará en el buque a más tardar en el primer reconocimiento anual de ese buque que corresponda realizar después de que el método aprobado esté disponible comercialmente.

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7.3 Por lo que respecta a los motores diésel marinos con una potencia de salida superior a 5 000 kW y una cilindrada igual o superior a 90 litros instalados en buques construidos el 1 de enero de 1990 o posteriormente, pero antes del 1 de enero de 2000, en el Certificado internacional de prevención de la contaminación atmosférica correspondiente a un motor diésel marino al que se aplique lo dispuesto en el apartado 7.1 de la presente regla se indicará que se ha aplicado un método aprobado con arreglo a lo dispuesto en el apartado 7.1.1 de la presente regla o que el motor se ha certificado con arreglo a lo dispuesto en el apartado 7.1.2 o que no existe todavía un método aprobado o que el método aprobado no está todavía disponible comercialmente, tal como se describe en el apartado 7.2 de la presente regla.

7.4 A reserva de lo dispuesto en la regla 3 del presente anexo, se prohíbe el funcionamiento de todo motor diésel marino descrito en el apartado 7.1, a menos que la cantidad de óxidos de nitrógeno (calculada en forma de emisión total ponderada de NO_2) emitidos por el motor se encuentre dentro de los límites que figuran a continuación, siendo n el régimen nominal del motor (revoluciones por minuto del cigüeñal):

.1 17,0 g/kWh si n es inferior a 130 rpm;

.2 $45 \cdot n^{(-0,2)}$ g/kWh si n es igual o superior a 130 rpm pero inferior a 2 000 rpm;

.3 9,8 g/kWh si n es igual o superior a 2 000 rpm.

7.5 La certificación de un método aprobado se realizará de conformidad con lo dispuesto en el capítulo 7 del Código Técnico sobre los NO_x revisado de 2008 e incluirá la verificación:

.1 por el proyectista del motor diésel marino de referencia al que se aplique el método aprobado de que el efecto calculado del método aprobado no reducirá la potencia del motor en más de un 1,0 %, no aumentará el consumo de combustible en más de un 2,0 %, calculado de conformidad con el ciclo de pruebas correspondiente estipulado en el Código Técnico sobre los NO_x revisado de 2008, ni tendrá un efecto adverso en la durabilidad o fiabilidad del motor; y

.2 de que el coste del método aprobado no es excesivo, lo cual se determina comparando la cantidad de NO_x reducida por el método aprobado para cumplir la norma establecida en el apartado 7.4 del presente párrafo con el coste de adquirir e instalar dicho método aprobado[3].

Certificación

8 La certificación, las pruebas y los procedimientos de medición correspondientes a las normas estipuladas en la presente regla se recogen en el Código Técnico sobre los NO_x revisado de 2008.

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[3] El coste de un método aprobado no deberá exceder de 375 derechos especiales de giro/tonelada métrica de NO_x, calculado mediante la siguiente fórmula de eficacia en función de los costes:

$$Ce = \frac{\text{Coste del método aprobado} - 10^{b}}{P(kW) \cdot 0{,}768 \cdot 6\,000(\text{horas/año}) \cdot 5\,(\text{años}) \cdot \Delta\, NO_x(g/kWh)}$$

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9 Los procedimientos para determinar las emisiones de NO_x especificadas en el Código Técnico sobre los NO_x revisado de 2008 tienen por objeto ser representativos del funcionamiento normal del motor. Los dispositivos manipuladores y las estrategias irracionales de control de emisiones van en contra de este propósito y no están permitidos. La presente regla no prohíbe el uso de dispositivos de control auxiliares que se utilicen para proteger el motor y/o su equipo auxiliar en caso de condiciones de funcionamiento que pudieran ocasionar daños o averías o para facilitar el arranque del motor.

Examen

10 La Organización efectuará un examen, que se iniciará en 2012 y se completará a más tardar en 2013, de los avances tecnológicos que se hayan producido, a fin de implantar las normas indicadas en el apartado 5.1.1 de la presente regla y, de ser necesario, ajustará los plazos establecidos en ese apartado.

Regla 14
Óxidos de azufre (SO_x) y materia particulada

Prescripciones generales

1 El contenido de azufre de todo fueloil utilizado a bordo de los buques no excederá los siguientes límites:

.1 4,50 % masa/masa antes del 1 de enero de 2012;

.2 3,50 % masa/masa el 1 de enero de 2012 y posteriormente; y

.3 0,50 % masa/masa el 1 de enero de 2020 y posteriormente.

2 El contenido medio de azufre a escala mundial del fueloil residual suministrado para uso a bordo de los buques se vigilará teniendo en cuenta las directrices elaboradas por la Organización[4].

Prescripciones aplicables en las zonas de control de las emisiones

3 A los efectos de la presente regla, las zonas de control de las emisiones incluirán:

.1 la zona del mar Báltico definida en la regla 1.11.2 del Anexo I, la zona del mar del Norte definida en el apartado 1) f) de la regla 5 del Anexo V; y

.2 cualquier otra zona marítima, incluidas las portuarias, designada por la Organización de conformidad con los criterios y procedimientos indicados en el apéndice III del presente anexo.

4 Mientras los buques operen dentro de las zonas de control de las emisiones, el contenido de azufre del fueloil utilizado a bordo no excederá los siguientes límites:

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[4] Resolución MEPC.82(43): "Directrices para la vigilancia del contenido medio de azufre a escala mundial del fueloil residual suministrado para uso a bordo de los buques".

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.1 1,50 % masa/masa antes del 1 de julio de 2010;

.2 1,00 % masa/masa el 1 de julio de 2010 y posteriormente; y

.3 0,10 % masa/masa el 1 de enero de 2015 y posteriormente.

5 El proveedor demostrará mediante la pertinente documentación, según lo prescrito en la regla 18 del presente anexo, el contenido de azufre del fueloil mencionado en los párrafos 1 y 4 de la presente regla.

6 En los buques que utilicen fueloil de distintos tipos para cumplir lo prescrito en el párrafo 4 de la presente regla y que entren o salgan de una zona de control de las emisiones indicada en el párrafo 3 de la presente regla se llevará un procedimiento por escrito que muestre como se debe realizar el cambio de fueloil, a fin de prever el tiempo suficiente para limpiar el sistema de distribución de combustible de todo fueloil con un contenido de azufre superior al especificado en el párrafo 4 de la presente regla, antes de entrar en una zona de control de las emisiones. Se anotarán en el libro registro prescrito por la Administración el volumen de fueloil con bajo contenido de azufre de cada tanque, así como la fecha, la hora y la situación del buque, cuando se lleve a cabo una operación de cambio del fueloil antes de entrar en una zona de control de las emisiones o se inicie tal operación al salir de ella.

7 Durante los doce meses siguientes a una enmienda por la que se designe una zona específica de control de las emisiones en virtud de lo dispuesto en el apartado 3.2 de la presente regla, los buques que penetren en dicha zona de control de las emisiones estarán exentos del cumplimiento de las prescripciones de los párrafos 4 y 6 de la presente regla y de las prescripciones del párrafo 5 de la presente regla en lo que respecta al párrafo 4 de la misma.

Examen de la norma

8 Antes de 2018 se llevará a cabo un examen de la norma especificada en el apartado 1.3 de la presente regla, con objeto de determinar la disponibilidad de fueloil a fin de cumplir la norma del fueloil que figura en dicho párrafo, y en él se tendrán en cuenta los elementos siguientes:

.1 el estado de la oferta y la demanda mundial de fueloil para cumplir lo indicado en el apartado 1.3 de la presente regla, en el momento en que se realice el examen;

.2 un análisis de las tendencias en los mercados de fueloil; y

.3 cualquier otra cuestión pertinente.

9 La Organización constituirá un grupo de expertos integrado por representantes con los conocimientos oportunos sobre el mercado del fueloil y los distintos aspectos marítimos, ambientales, científicos y jurídicos, para que lleve a cabo el examen mencionado en el párrafo 8 de la presente regla. El grupo de expertos elaborará la información pertinente para que las Partes puedan decidir con conocimiento de causa.

10 Las Partes, basándose en la información elaborada por el grupo de expertos, podrán decidir si es posible que los buques se ajusten a la fecha que se especifica en el apartado 1.3 de la presente regla. Si se decide que ello no es posible, la norma indicada en ese apartado entrará en vigor el 1 de enero de 2025.

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Regla 15
Compuestos orgánicos volátiles (COV)

1 Si las emisiones de COV procedentes de un buque tanque se reglamentan en un puerto o puertos o en una terminal o terminales sometidos a la jurisdicción de una Parte, dicha reglamentación se ajustará a lo dispuesto en la presente regla.

2 Toda Parte que adopte una reglamentación para los buques tanque en relación con las emisiones de COV enviará una notificación a la Organización en la que se indicarán el tamaño de los buques que se han de controlar, las cargas que requieren el empleo de sistemas de control de las emisiones de vapores y la fecha de entrada en vigor de dicho control. La notificación se enviará por lo menos seis meses antes de la fecha de entrada en vigor.

3 Toda Parte que designe puertos o terminales en los que se vayan a reglamentar las emisiones de COV procedentes de los buques tanque garantizará que en los puertos y terminales designados existen sistemas de control de la emisión de vapores aprobados por dicha Parte, teniendo en cuenta las normas de seguridad elaboradas al efecto por la Organización[5], y que tales sistemas funcionan en condiciones de seguridad y de modo que ningún buque sufra una demora innecesaria.

4 La Organización distribuirá una lista de los puertos y terminales designados por las Partes a las demás Partes y otros Estados Miembros de la Organización, a efectos de información.

5 Todo buque tanque al cual se aplique el párrafo 1 de la presente regla estará provisto de un sistema de recogida de las emisiones de vapores aprobado por la Administración teniendo en cuenta las normas de seguridad elaboradas al efecto por la Organización[5], el cual se utilizará durante el embarque de las cargas pertinentes. Todo puerto o terminal que haya instalado sistemas de control de la emisiones de vapores de conformidad con la presente regla podrá aceptar buques tanque que no estén equipados con un sistema de recogida de vapores durante un periodo de tres años a partir de la fecha de entrada en vigor a que se hace referencia en el párrafo 2 de la presente regla.

6 Todo buque tanque que transporte petróleo crudo dispondrá a bordo de un plan de gestión de los COV aprobado por la Administración, que deberá aplicar. Dicho plan se elaborará teniendo en cuenta las directrices elaboradas por la Organización. El plan será específico para cada buque y, como mínimo:

.1 contendrá procedimientos escritos para reducir al mínimo las emisiones de COV durante la carga, la travesía y la descarga;

.2 tendrá en cuenta los COV adicionales generados por el lavado con crudos;

.3 incluirá el nombre de la persona responsable de su ejecución; y

.4 en los buques dedicados a viajes internacionales, estará redactado en el idioma de trabajo del capitán y los oficiales y, si el idioma de trabajo del capitán y los oficiales no es el español, el francés ni el inglés, irá acompañado de una traducción a uno de estos idiomas.

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[5] Circular MSC/Circ.585: 'Normas para los sistemas de control de la emisión de vapores'.

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7 Esta regla se aplicará también a los gaseros sólo en el caso de que los sistemas de embarque y contención de la carga sean de un tipo que permita la retención sin riesgos a bordo de los COV que no contengan metano o el retorno sin riesgos de éstos a tierra[6].

Regla 16
Incineración a bordo

1 A reserva de lo dispuesto en el párrafo 4 de la presente regla, la incineración a bordo se permitirá solamente en un incinerador de a bordo.

2 Se prohibirá la incineración a bordo de las siguientes sustancias:

.1 residuos de las cargas regidas por los anexos I, II o III o los correspondientes materiales de embalaje/envase contaminados;

.2 difenilos policlorados (PCB),

.3 las basuras, según se definen éstas en el Anexo V, que contengan metales pesados en concentraciones que no sean meras trazas;

.4 productos refinados del petróleo que contengan compuestos halogenados;

.5 fangos cloacales y fangos de hidrocarburos que no se hayan generado a bordo del buque; y

.6 residuos del sistema de limpieza de los gases de escape.

3 Se prohibirá la incineración a bordo de los cloruros de polivinilo (PVC), salvo en los incineradores de a bordo para los que se haya expedido un certificado de homologación de la OMI[7].

4 La incineración a bordo de los lodos de aguas residuales y fangos oleosos producidos durante la explotación normal del buque también se podrá realizar en la planta generadora o caldera principal o auxiliar, aunque en este caso no se llevará a cabo dentro de puertos o estuarios.

5 Nada de lo dispuesto en la presente regla:

.1 afecta a la prohibición establecida en el Convenio sobre la prevención de la contaminación del mar por vertimiento de desechos y otras materias, 1972, enmendado y su Protocolo de 1996, ni a otras prescripciones de dicho Convenio y Protocolo, ni

.2 impide desarrollar, instalar y utilizar otros dispositivos de tratamiento térmico de desechos a bordo que satisfagan las prescripciones de la presente regla o las superen.

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[6] Resolución MSC.30(61): "Código internacional para la construcción y el equipo de buques que transporten productos químicos peligrosos a granel", capítulo 5.

[7] Certificados de homologación expedidos con arreglo a las resoluciones MEPC.59(33) o MEPC.76(40).

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6.1 Con la salvedad de lo dispuesto en el apartado 6.2 del presente párrafo, todo incinerador instalado a bordo de un buque construido el 1 de enero de 2000 o posteriormente, o todo incinerador que se instale a bordo de un buque a partir del 1 de enero de 2000 cumplirá lo dispuesto en el apéndice IV del presente anexo. Todo incinerador al que se aplique el presente párrafo será aprobado por la Administración teniendo en cuenta la especificación normalizada para los incineradores de a bordo elaborada por la Organización[8]; o

6.2 La Administración podrá permitir que se excluya de la aplicación del apartado 6.1 del presente párrafo a todo incinerador que se haya instalado a bordo de un buque antes del 19 de mayo de 2005, a condición de que el buque esté dedicado solamente a realizar viajes en aguas sometidas a la soberanía o jurisdicción del Estado cuyo pabellón tenga derecho a enarbolar.

7 Los incineradores instalados de conformidad con lo dispuesto en el apartado 6.1 de la presente regla dispondrán de un manual de instrucciones del fabricante, que se guardará junto con la unidad, y en el que se especificará cómo hacer funcionar el incinerador dentro de los límites establecidos en el párrafo 2 del apéndice IV del presente anexo.

8 El personal encargado del funcionamiento de un incinerador instalado de conformidad con lo prescrito en el apartado 6.1 de la presente regla recibirá formación para poder seguir las orientaciones dadas en el manual de instrucciones del fabricante, como se estipula en el párrafo 7 de la presente regla.

9 En los incineradores instalados de conformidad con lo dispuesto en el apartado 6.1 de la presente regla se vigilará, siempre que la unidad esté en funcionamiento, la temperatura de salida del gas de la cámara de combustión. En los incineradores de alimentación continua, no se verterán desechos en la unidad cuando la temperatura de salida del gas de la cámara de combustión esté por debajo de 850 °C. Por lo que respecta a los incineradores de a bordo de carga discontinua, la unidad se proyectará de modo que la temperatura de salida del gas de la cámara de combustión alcance 600 °C en los cinco minutos siguientes al encendido y que posteriormente se estabilice a una temperatura que no sea inferior a 850 °C.

Regla 17
Instalaciones de recepción

1 Cada Parte se compromete a garantizar la provisión de instalaciones adecuadas que se ajusten a:

.1 las necesidades de los buques que utilicen sus puertos de reparaciones para la recepción de las sustancias que agotan la capa de ozono y el equipo que contenga tales sustancias cuando se retire de los buques;

.2 las necesidades de los buques que utilicen sus puertos, terminales o puertos de reparaciones para la recepción de los residuos de la limpieza de los gases de escape procedentes de un sistema de limpieza de los gases de escape;

sin causar demoras innecesarias a los buques; y

.3 las necesidades de los centros de desguace de buques para la recepción de las sustancias que agotan la capa de ozono y el equipo que contenga tales sustancias cuando se retire de los buques.

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[8] Véase la resolución MEPC.76(40): "Especificación normalizada para los incineradores de a bordo".

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2 Si un determinado puerto o terminal de una Parte –teniendo en cuenta las directrices que elaborará la Organización– carece de la infraestructura industrial necesaria para gestionar y tratar las sustancias a que se hace referencia en el párrafo 1 de la presente regla, o se encuentra muy alejado de ella, y por lo tanto no puede aceptar tales sustancias, la Parte informará a la Organización acerca de dicho puerto o terminal con objeto de que esa información se transmita a todas las Partes y Estados Miembros de la Organización, para su información y para que adopten las medidas oportunas. La Parte que haya facilitado a la Organización dicha información también notificará a la Organización cuáles de sus puertos y terminales disponen de instalaciones para gestionar y tratar tales sustancias.

3 Cada Parte notificará a la Organización, para que ésta lo comunique a sus Miembros, todos los casos en que las instalaciones provistas en cumplimiento de la presente regla no estén disponibles o se consideren insuficientes.

Regla 18
Disponibilidad y calidad del fueloil

Disponibilidad del fueloil

1 Cada Parte adoptará todas las medidas razonables para fomentar la disponibilidad de fueloil que cumpla lo dispuesto en el presente anexo, e informará a la Organización de la disponibilidad de fueloil reglamentario en sus puertos y terminales.

2.1 Si una Parte descubre que un buque no cumple las normas sobre el fueloil reglamentario que figuran en el presente anexo, la autoridad competente de dicha Parte tendrá derecho a exigir al buque que:

.1 presente un registro de las medidas adoptadas para intentar llegar al cumplimiento; y

.2 presente pruebas de que se intentó adquirir fueloil reglamentario con arreglo a su plan de viaje y, si no lo había donde estaba previsto, de que se buscaron fuentes alternativas para dicho fueloil y a pesar de los mejores esfuerzos para obtener fueloil reglamentario, éste no estaba a la venta.

2.2 No debería exigirse al buque que se desvíe de su viaje previsto o retrase indebidamente su viaje para conseguir el cumplimiento.

2.3 Si un buque facilita la información indicada en el apartado 2.1 del presente párrafo, la Parte tendrá en cuenta todas las circunstancias pertinentes y las pruebas presentadas para determinar las medidas que proceda adoptar, incluida la de no adoptar medidas de control.

2.4 Los buques informarán a su Administración y a la autoridad competente del puerto de destino pertinente cuando no puedan adquirir fueloil reglamentario.

2.5 Las Partes informarán a la Organización cuando un buque haya presentado pruebas de la falta de disponibilidad de fueloil reglamentario.

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Calidad del fueloil

3 El fueloil para combustible que se entregue y utilice a bordo de los buques a los que se aplique el presente anexo se ajustará a las siguientes prescripciones:

.1 a excepción de lo estipulado en el apartado 3.2:

.1.1 estará compuesto por mezclas de hidrocarburos derivados del refinado de petróleo. Esto no excluirá la posibilidad de incorporar pequeñas cantidades de aditivos con objeto de mejorar algunos aspectos del rendimiento;

.1.2 no contendrá ningún ácido inorgánico; y

.1.3 no contendrá ninguna sustancia añadida ni desecho químico que:

.1.3.1 comprometa la seguridad de los buques o afecte negativamente al rendimiento de las máquinas, o

.1.3.2 sea perjudicial para el personal, o

.1.3.3 contribuya en general a aumentar la contaminación atmosférica;

.2 el fueloil para combustible obtenido por métodos distintos del refinado de petróleo no deberá:

.2.1 tener un contenido de azufre superior al aplicable según lo estipulado en la regla 14 del presente anexo;

.2.2 ser causa de que el motor supere el límite de emisión de NO_x aplicable indicado en los párrafos 3, 4, 5.1.1 y 7.4 de la regla 13;

.2.3 contener ningún ácido inorgánico; ni

.2.4.1 comprometer la seguridad de los buques o afectar negativamente al rendimiento de las máquinas, o

.2.4.2 ser perjudicial para el personal, o

.2.4.3 contribuir en general a aumentar la contaminación atmosférica.

4 La presente regla no se aplica al carbón en su forma sólida ni a los combustibles nucleares. Los párrafos 5, 6, 7.1, 7.2, 8.1, 8.2, 9.2, 9.3 y 9.4 de la presente regla no se aplican a los combustibles gaseosos, como el gas natural licuado, el gas natural comprimido y el gas licuado de petróleo. El contenido de azufre de los combustibles gaseosos entregados a un buque específicamente para ser utilizados como combustible a bordo de ese buque deberá ser documentado por el proveedor.

5 En todo buque al que se apliquen las reglas 5 y 6 del presente anexo, los pormenores relativos al fueloil para combustible entregado y utilizado a bordo se registrarán en una nota de entrega de combustible que contendrá, como mínimo, la información especificada en el apéndice V del presente anexo.

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6 La nota de entrega de combustible se conservará a bordo, en un lugar que permita inspeccionarla fácilmente en cualquier momento razonable, durante un periodo de tres años a partir de la fecha en que se efectúe la entrega del combustible a bordo.

7.1 La autoridad competente de una Parte podrá inspeccionar las notas de entrega de combustible a bordo de cualquier buque al que se aplique el presente anexo mientras el buque esté en uno de sus puertos o terminales mar adentro, podrá sacar copia de cada nota de entrega de combustible y podrá pedir al capitán o a la persona que esté a cargo del buque que certifique que cada una de esas copias es una copia auténtica de la correspondiente nota de entrega de combustible. La autoridad competente podrá verificar también el contenido de cada nota mediante consulta con el puerto en el que fue expedida.

7.2 Cuando, en virtud del presente párrafo, la autoridad competente inspeccione las notas de entrega de combustible y saque copias certificadas, lo hará con la mayor diligencia posible y sin causar demoras innecesarias al buque.

8.1 La nota de entrega de combustible irá acompañada de una muestra representativa del fueloil entregado, teniendo en cuenta las directrices elaboradas por la Organización[9]. La muestra será sellada y firmada por el representante del proveedor y por el capitán o el oficial encargado de la operación de toma de combustible, al concluirse ésta, y se conservará en el buque hasta que el fueloil se haya consumido en gran parte, y en cualquier caso durante un periodo no inferior a doce meses contados desde la fecha de entrega.

8.2 Si una Administración exige que se analice la muestra representativa, el análisis se realizará de conformidad con el proceso de verificación que figura en el apéndice VI para determinar si el fueloil se ajusta a lo prescrito en el presente anexo.

9 Las Partes se comprometen a hacer que las autoridades competentes designadas por ellas:

.1 mantengan un registro de los proveedores locales de fueloil;

.2 exijan a los proveedores locales que faciliten la nota de entrega de combustible y la muestra prescrita en la presente regla con la certificación del proveedor de que el fueloil se ajusta a lo prescrito en las reglas 14 y 18 del presente anexo;

.3 exijan a los proveedores locales que conserven una copia de las notas de entrega de combustible facilitadas a los buques, durante tres años como mínimo, de modo que el Estado rector del puerto pueda inspeccionarlas y verificarlas si es necesario;

.4 tomen las medidas pertinentes contra los proveedores de fueloil que hayan entregado fueloil que no se ajuste a lo indicado en la nota de entrega de combustible;

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[9] Véase la resolución MEPC.96(47): "Directrices relativas al muestreo del fueloil para determinar el cumplimiento de lo dispuesto en el Anexo VI del MARPOL 73/78".

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.5 informen a la Administración de los casos en que un buque haya recibido fueloil que no se ajuste a lo prescrito en las reglas 14 ó 18 del presente anexo, y

.6 informen a la Organización, para que ésta lo comunique a las Partes y a los Estados Miembros de la Organización, de todos los casos en que un proveedor de fueloil no haya cumplido lo prescrito en las reglas 14 ó 18 del presente anexo.

10 Por lo que respecta a las inspecciones por el Estado rector del puerto realizadas por las Partes, las Partes se comprometen además a:

.1 informar a la Parte o al Estado que no sea Parte bajo cuya jurisdicción se haya expedido la nota de entrega de combustible de los casos de entrega de fueloil no reglamentario, aportando todos los datos pertinentes; y

.2 asegurarse de que se toman las medidas correctivas apropiadas para hacer que el fueloil no reglamentario descubierto se ajuste a lo prescrito.

11 En el caso de los buques de arqueo bruto igual o superior a 400 que presten servicios programados con escalas frecuentes y regulares, una Administración podrá decidir, previa solicitud y consulta con los Estados afectados, que el cumplimiento de lo dispuesto en el párrafo 6 de la presente regla se documente de otra forma, siempre que ésta proporcione la misma certidumbre del cumplimiento de las reglas 14 y 18 del presente anexo.

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APÉNDICE I

Modelo de Certificado internacional de prevención de la contaminación atmosférica (IAPP) (Regla 8)

CERTIFICADO INTERNACIONAL DE PREVENCIÓN DE LA CONTAMINACIÓN ATMOSFÉRICA

Expedido en virtud de lo dispuesto en el Protocolo de 1997, en su forma enmendada en 2008 mediante la resolución MEPC.176(58), que enmienda el Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978 (en adelante denominado "el Convenio"), con la autoridad conferida por el Gobierno de:

.....

(nombre oficial completo del país)

por .....

(título oficial completo de la persona u organización competente autorizada en virtud de lo dispuesto en el Convenio)

Datos relativos al buque*

Nombre del buque .....

Número o letras distintivos .....

Puerto de matrícula .....

Arqueo bruto .....

Número IMO** .....

---

* Los datos relativos al buque podrán indicarse también en casillas dispuestas horizontalmente.

** De conformidad con el sistema de asignación de un número de la OMI a los buques para su identificación, adoptado por la Organización mediante la resolución A.600(15).

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SE CERTIFICA:

1 que el buque ha sido objeto de reconocimiento, de conformidad con lo dispuesto en la regla 5 del Anexo VI del Convenio; y

2 que el reconocimiento ha puesto de manifiesto que el equipo, los sistemas, los accesorios, las instalaciones y los materiales cumplen plenamente las prescripciones aplicables del Anexo VI del Convenio.

Fecha de terminación del reconocimiento en el que se basa el presente certificado:

..... (dd/mm/aaaa)

El presente certificado es válido hasta el .....* a condición de que se realicen los reconocimientos prescritos en la regla 5 del Anexo VI del Convenio.

Expedido en .....
(lugar de expedición del certificado)

el (dd/mm/aaaa): ....
(fecha de expedición) *(firma del funcionario autorizado que expide el certificado)*

(sello o estampilla, según corresponda, de la autoridad)

Inclúyase la fecha de expiración especificada por la Administración de conformidad con lo prescrito en la regla 9.1 del Anexo VI del Convenio. El día y el mes de esa fecha corresponden a la fecha de vencimiento anual, tal como se define ésta en la regla 2.3 del Anexo VI del Convenio, a menos que dicha fecha se modifique de conformidad con lo prescrito en la regla 9.8 de dicho Anexo.

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Refrendo de reconocimientos anuales e intermedios

SE CERTIFICA que en el reconocimiento efectuado de conformidad con lo prescrito en la regla 5 del Anexo VI del Convenio se ha comprobado que el buque cumple las disposiciones pertinentes de dicho Anexo:

Reconocimiento anual: Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

Reconocimiento anual/intermedio*: Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

Reconocimiento anual/intermedio*: Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

Reconocimiento anual: Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

---

* Táchese según proceda.

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Reconocimiento anual/intermedio de conformidad con lo prescrito en la regla 9.8.3

SE CERTIFICA que en el reconocimiento anual/intermedio* efectuado de conformidad con lo prescrito en la regla 9.8.3 del Anexo VI del Convenio se ha comprobado que el buque cumple las disposiciones pertinentes de dicho Anexo:

Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

Refrendo para prorrogar el certificado, si es válido durante un periodo inferior a cinco años, cuando se aplica la regla 9.3

El buque cumple las disposiciones pertinentes del Anexo VI del Convenio y, de conformidad con lo prescrito en la regla 9.3 de dicho Anexo, el presente certificado se aceptará como válido hasta (dd/mm/aaaa): .....

Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

Refrendo requerido cuando se ha efectuado el reconocimiento de renovación y se aplica la regla 9.4

El buque cumple las prescripciones pertinentes del Anexo VI del Convenio y, de conformidad con lo prescrito en la regla 9.4 de dicho Anexo, el presente certificado se aceptará como válido hasta (dd/mm/aaaa): .....

Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

Táchese según proceda

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Refrendo para prorrogar la validez del certificado hasta la llegada al puerto del reconocimiento, o por un periodo de gracia, cuando se aplican las reglas 9.5 ó 9.6

El presente certificado se aceptará como válido, de conformidad con lo prescrito en la regla 9.5 ó 9.6 del Anexo VI del Convenio, hasta (dd/mm/aaaa): .....

Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

Refrendo para adelantar la fecha de vencimiento anual cuando se aplica la regla 9.8

De conformidad con lo prescrito en la regla 9.8 del Anexo VI del Convenio, la nueva fecha de vencimiento anual es (dd/mm/aaaa): .....

Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

De conformidad con lo prescrito en la regla 9.8 del Anexo VI del Convenio, la nueva fecha de vencimiento anual es (dd/mm/aaaa): .....

Firmado: .....
(firma del funcionario autorizado)

Lugar: .....

Fecha (dd/mm/aaaa): .....

(sello o estampilla, según corresponda, de la autoridad)

---

* Táchese según proceda.

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SUPLEMENTO DEL
CERTIFICADO INTERNACIONAL DE PREVENCIÓN DE LA CONTAMINACIÓN ATMOSFÉRICA (CERTIFICADO IAPP)

CUADERNILLO DE CONSTRUCCIÓN Y EQUIPO

Notas:

1 El presente cuadernillo acompañará permanentemente al Certificado IAPP. El Certificado IAPP estará disponible a bordo del buque en todo momento.

2 El cuadernillo estará redactado como mínimo en español, francés o inglés. Cuando se use también un idioma oficial del país expedidor, dará fe el texto en dicho idioma en caso de controversia o discrepancia.

3 En las casillas se pondrá una cruz (x) si la respuesta es "sí" o "aplicable" y un guión (–) si la respuesta es "no" o "no aplicable", según corresponda.

4 A menos que se indique lo contrario, las reglas mencionadas en el presente cuadernillo son las reglas del Anexo VI del Convenio y las resoluciones o circulares son las aprobadas por la Organización Marítima Internacional.

1 **Pormenores del buque**

1.1 Nombre del buque .....

1.2 Número IMO .....

1.3 Fecha en que se colocó la quilla o en que el buque se hallaba en una fase equivalente de construcción .....

1.4 Eslora (L) #, en metros .....

Solamente se debe rellenar para los buques construidos el 1 de enero de 2016 o posteriormente, proyectados especialmente con fines de recreo, y utilizados únicamente a tal fin, a los cuales, de conformidad con la regla 13.5.2.1, no se aplicará el límite de las emisiones de NO_x estipulado en la regla 13.5.1.1.

2 **Control de las emisiones de los buques**

2.1 *Sustancias que agotan la capa de ozono (regla 12)*

2.1.1 Los siguientes sistemas de extinción de incendios, otros sistemas y equipos que contienen halones o clorofluorocarbonos (CFC) instalados antes del 19 de mayo de 2005 pueden continuar en servicio:

Sistema o equipo	Ubicación a bordo	Sustancia

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2.1.2 Los siguientes sistemas que contienen hidroclorofluorocarbonos (HCFC) instalados antes del 1 de enero de 2020 pueden continuar en servicio:

Sistema o equipo	Ubicación a bordo	Sustancia

2.2 *Óxidos de nitrógeno (NO_x) (regla 13)*

2.2.1 Los siguientes motores diésel marinos instalados en este buque se ajustan al límite de emisiones aplicable de la regla 13 de conformidad con lo dispuesto en el Código Técnico sobre los NO_x revisado de 2008.

		Motor #1	Motor #2	Motor #3	Motor #4	Motor #5	Motor #6
Fabricante y modelo							
Número de serie							
Utilización							
Potencia de salida (kW)							
Régimen nominal (rpm)							
Fecha de instalación (dd/mm/aaaa)							
Fecha de la transformación importante (dd/mm/aaaa)	De acuerdo con regla 13.2.2						
	De acuerdo con regla 13.2.3						
Exento en virtud de la regla 13.1.1.2		☐	☐	☐	☐	☐	☐
Nivel I (regla 13.3)		☐	☐	☐	☐	☐	☐
Nivel II (regla 13.4)		☐	☐	☐	☐	☐	☐
Nivel II (regla 13.2.2 ó 13.5.2)		☐	☐	☐	☐	☐	☐
Nivel III (regla 13.5.1.1)		☐	☐	☐	☐	☐	☐
Existe un método aprobado		☐	☐	☐	☐	☐	☐
El método aprobado no está disponible comercialmente		☐	☐	☐	☐	☐	☐
Método aprobado instalado		☐	☐	☐	☐	☐	☐

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2.3 *Óxidos de azufre (SO_x) y materia particulada (regla 14)*

2.3.1 Cuando el buque opera dentro de una zona de control de las emisiones especificada en la regla 14.3, éste utiliza:

.1 fueloil con un contenido de azufre que no excede el valor límite aplicable según consta en las notas de entrega de combustible; o ..... ☐

.2 un medio equivalente aprobado de conformidad con la regla 4.1, según se indica en 2.6 ..... ☐

2.4 *Compuestos orgánicos volátiles (COV) (regla 15)*

2.4.1 El buque tanque cuenta con un sistema de recogida del vapor instalado y aprobado de conformidad con la circular MSC/Circ.585 ..... ☐

2.4.2.1 Los buques tanque que transportan petróleo crudo tienen un plan de gestión de los COV aprobado ..... ☐

2.4.2.2 Referencia de aprobación del plan de gestión de los COV: ..... ☐

2.5 *Incineración a bordo (regla 16)*

El buque tiene un incinerador:

.1 instalado el 1 de enero de 2000 o posteriormente que cumple lo prescrito en la resolución MEPC.76(40) enmendada ..... ☐

.2 instalado antes del 1 de enero del año 2000 que cumple lo prescrito en:

.2.1 la resolución MEPC.59(33) ..... ☐

.2.2 la resolución MEPC.76(40) ..... ☐

2.6 *Equivalentes (regla 4)*

Se ha autorizado al buque a utilizar a bordo los siguientes accesorios, materiales, dispositivos o aparatos u otros procedimientos, tipos de fueloil o métodos de cumplimiento como alternativa a los prescritos en el Anexo VI del Convenio:

Sistema o equipo	Equivalente utilizado	Referencia de aprobación

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SE CERTIFICA que el presente cuadernillo es correcto en todos los aspectos.

Expedido en .....
(lugar de expedición del cuadernillo)

(dd/mm/aaaa): ....
(fecha de expedición) *(firma del funcionario autorizado que expide el cuadernillo)*

(sello o estampilla, según corresponda, de la autoridad)

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APÉNDICE II

CICLOS DE ENSAYO Y FACTORES DE PONDERACIÓN
(Regla 13)

Se deberán aplicar los siguientes ciclos de ensayo y factores de ponderación para verificar si los motores diésel marinos cumplen los límites de NO_x aplicables de conformidad con la regla 13 del presente anexo, utilizándose a tal efecto el procedimiento de ensayo y el método de cálculo que se especifican en el Código Técnico sobre los NO_x revisado de 2008:

.1 para los motores marinos de régimen constante utilizados para la propulsión principal del buque, incluida la propulsión diésel-eléctrica, se aplicará el ciclo de ensayo E2;

.2 para los motores con hélice de paso variable se aplicará el ciclo de ensayo E2;

.3 para los motores principales y auxiliares adaptados a la demanda de la hélice se aplicará el ciclo de ensayo E3;

.4 para los motores auxiliares de régimen constante se aplicará el ciclo de ensayo D2; y

.5 para los motores auxiliares de carga y régimen regulables no pertenecientes a las categorías anteriores se aplicará el ciclo de ensayo C1.

Ciclo de ensayo *para propulsión principal de régimen constante*
(incluidas la propulsión diésel-eléctrica y todas las instalaciones de hélice de paso regulable)

Tipo de ciclo de ensayo E2	Régimen	100 %	100 %	100 %	100 %
	Potencia	100 %	75 %	50 %	25 %
	Factor de ponderación	0,2	0,5	0,15	0,15

Ciclo de ensayo para *motores principales y auxiliares adaptados a la demanda de la hélice*

Tipo de ciclo de ensayo E3	Régimen	100 %	91 %	80 %	63 %
	Potencia	100 %	75 %	50 %	25 %
	Factor de ponderación	0,2	0,5	0,15	0,15

Ciclo de ensayo para *motores auxiliares de régimen constante*

Tipo de ciclo de ensayo D2	Régimen	100 %	100 %	100 %	100 %	100 %
	Potencia	100 %	75 %	50 %	25 %	10 %
	Factor de ponderación	0,05	0,25	0,3	0,3	0,1

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Ciclo de ensayo para *motores auxiliares de carga y régimen regulables*

Tipo de ciclo de ensayo C1	Régimen	Nominal				Intermedio			En vacío
	Par	100 %	75 %	50 %	10 %	100 %	75 %	50 %	0 %
	Factor de ponderación	0,15	0,15	0,15	0,1	0,1	0,1	0,1	0,15

En el caso de los motores que hayan de certificarse de conformidad con lo dispuesto en el apartado 5.1.1 de la regla 13, la emisión específica en cada modalidad no superará en más del 50 % el límite aplicable de emisión de NO_x, con las siguientes excepciones:

.1 La modalidad del 10 % en el ciclo de ensayo D2.

.2 La modalidad del 10 % en el ciclo de ensayo C1.

.3 La modalidad en vacío en el ciclo de ensayo C1.

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APÉNDICE III

CRITERIOS Y PROCEDIMIENTOS PARA LA DESIGNACIÓN DE ZONAS DE CONTROL DE LAS EMISIONES (Reglas 13.6 y 14.3)

1 OBJETIVOS

1.1 El presente apéndice tiene por objeto proporcionar a las Partes los criterios y procedimientos para formular y presentar propuestas de designación de zonas de control de las emisiones y exponer los factores que debe tener en cuenta la Organización al evaluar dichas propuestas.

1.2 Las emisiones de NO_x, SO_x y materia particulada procedentes de los buques de navegación marítima contribuyen a las concentraciones ambiente de contaminación atmosférica en las ciudades y las zonas costeras de todo el mundo. Entre los efectos perjudiciales para la salud de los seres humanos y el medio ambiente asociados a la contaminación atmosférica se encuentran la mortalidad prematura, las enfermedades cardiopulmonares, el cáncer de pulmón, las afecciones respiratorias crónicas, la acidificación y la eutrofización.

1.3 La Organización considerará la adopción de una zona de control de las emisiones cuando se demuestre que es necesario para prevenir, reducir y controlar las emisiones de NO_x, SO_x y materia particulada, o los tres tipos de emisiones (en adelante, "emisiones"), procedentes de los buques.

2 PROCESO PARA LA DESIGNACIÓN DE ZONAS DE CONTROL DE LAS EMISIONES

2.1 Sólo las Partes podrán proponer a la Organización la designación de una zona de control de las emisiones de NO_x o SO_x y materia particulada, o de los tres tipos de emisiones. Cuando dos o más Partes compartan el interés por una zona particular, dichas Partes deberían formular una propuesta conjunta.

2.2 Toda propuesta para designar una zona dada como zona de control de las emisiones debería presentarse a la OMI de conformidad con las reglas y procedimientos establecidos por la Organización.

3 CRITERIOS PARA LA DESIGNACIÓN DE UNA ZONA DE CONTROL DE LAS EMISIONES

3.1 Toda propuesta incluirá lo siguiente:

.1 una clara delimitación de la zona propuesta para la aplicación, junto con una carta de referencia en donde se indique dicha zona;

.2 el tipo o tipos de emisiones cuyo control se propone (a saber, NO_x o SO_x y materia particulada, o los tres tipos de emisiones);

.3 una descripción de las poblaciones humanas y de las zonas ambientales que corren el riesgo de sufrir los efectos de las emisiones de los buques;

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.4 una evaluación que demuestre que las emisiones de los buques que operan en la zona propuesta para la aplicación contribuyen a las concentraciones ambientales de contaminación atmosférica o a los efectos negativos para el medio ambiente. Dicha evaluación incluirá una descripción de los efectos de las emisiones de que se trate en la salud de los seres humanos y el medio ambiente, tales como los efectos perjudiciales en los ecosistemas terrestres y acuáticos, las zonas de productividad natural, los hábitat críticos, la calidad del agua, la salud de los seres humanos y, si es el caso, en las zonas de importancia cultural y científica. Se indicarán las fuentes de los datos manejados, así como las metodologías utilizadas;

.5 la información relativa a las condiciones meteorológicas de la zona propuesta para la aplicación en relación con las poblaciones humanas y las zonas ambientales que puedan verse afectadas, en particular los vientos dominantes, o las condiciones topográficas, geológicas, oceanográficas, morfológicas o de otra índole que contribuyan a las concentraciones ambientales de la contaminación atmosférica o los efectos perjudiciales al medio ambiente;

.6 la naturaleza del tráfico marítimo en la zona de control de las emisiones propuesta, incluidas las características y densidad de dicho tráfico;

.7 una descripción de las medidas de control adoptadas por la Parte o Partes proponentes respecto de las fuentes terrestres de emisiones de NO_x, SO_x y materia particulada que afectan a las poblaciones humanas y las zonas ambientales en peligro, y que están en vigor y se aplican, junto con las que se estén examinando con miras a su adopción en relación con lo dispuesto en las reglas 13 y 14 del Anexo VI; y

.8 los costos relativos de reducir las emisiones procedentes de los buques por comparación con los de las medidas de control en tierra, y las repercusiones económicas en el transporte marítimo internacional.

3.2 Los límites geográficos de la zona de control de las emisiones se basarán en los criterios pertinentes antes mencionados, incluidas las emisiones y deposiciones procedentes de los buques que naveguen en la zona propuesta, las características y densidad del tráfico y el régimen de vientos.

4 PROCEDIMIENTOS PARA LA EVALUACIÓN Y ADOPCIÓN DE ZONAS DE CONTROL DE LAS EMISIONES POR LA ORGANIZACIÓN

4.1 La Organización examinará toda propuesta que le presenten una o varias Partes.

4.2 Al evaluar la propuesta, la Organización tendrá en cuenta los criterios que se han de incluir en cada propuesta que se presente para su aprobación, según se indican en la sección 3 anterior.

4.3 La designación de una zona de control de las emisiones se realizará por medio de una enmienda del presente anexo, que se examinará, adoptará y hará entrar en vigor de conformidad con lo dispuesto en el artículo 16 del presente Convenio.

5 FUNCIONAMIENTO DE LAS ZONAS DE CONTROL DE LAS EMISIONES

5.1 Se recomienda a las Partes cuyos buques navegan en la zona que tengan a bien comunicar a la Organización todo asunto de interés relativo al funcionamiento de la zona.

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APÉNDICE IV

HOMOLOGACIÓN Y LÍMITES DE SERVICIO DE LOS INCINERADORES DE A BORDO
(Regla 16)

1 Los buques que tengan incineradores de a bordo como los descritos en la regla 16.6.1 deberán poseer un certificado de homologación de la OMI para cada incinerador. A fin de obtener dicho certificado, el incinerador se proyectará y construirá de conformidad con una norma aprobada como la que se describe en la regla 16.6.1. Cada modelo será objeto de una prueba de funcionamiento específica para la homologación, que se realizará en la fábrica o en una instalación de pruebas aprobada, bajo la responsabilidad de la Administración, utilizando las siguientes especificaciones normalizadas de combustible y desechos para determinar si el incinerador funciona dentro de los límites especificados en el párrafo 2 del presente apéndice:

Fangos oleosos compuestos de:	75 % de fangos oleosos provenientes de fueloil pesado; 5 % de desechos de aceite lubricante; y 20 % de agua emulsionada.
Desechos sólidos compuestos de:	50 % de desechos alimenticios; 50 % de basuras que contengan: aprox. 30 % de papel, aprox. 40 % de cartón, aprox. 10 % de trapos, aprox. 20 % de plásticos. La mezcla tendrá hasta un 50 % de humedad y 7 % de sólidos incombustibles.

2 Los incineradores descritos en la regla 16.6.1 funcionarán dentro de los siguientes límites:

Cantidad de O_2 en la cámara de combustión:	6 a 12 %
Cantidad de CO en los gases de combustión (promedio máximo):	200 mg/MJ
Número de hollín (promedio máximo):	Bacharach 3 o Ringelman 1 (20 % de opacidad) (Sólo se aceptará un número más alto de hollín durante periodos muy breves, por ejemplo durante el encendido)
Componentes no quemados en los residuos de ceniza:	Máximo: 10 % en peso
Gama de temperaturas de los gases de combustión a la salida de la cámara de combustión:	850 °C a 1 200 °C

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APÉNDICE V

INFORMACIÓN QUE DEBE INCLUIRSE EN LA NOTA DE ENTREGA DE COMBUSTIBLE (Regla 18.5)

Nombre y número IMO del buque receptor

Puerto

Fecha de comienzo de la entrega

Nombre, dirección y número de teléfono del proveedor de fueloil para usos marinos

Denominación del producto o productos

Cantidad (en toneladas métricas)

Densidad a 15 °C (en kg/m³)*

Contenido de azufre (% masa/masa)**

Una declaración firmada y certificada por el representante del proveedor del fueloil de que el fueloil entregado se ajusta a lo dispuesto en el párrafo aplicable de las reglas 14.1 ó 14.4 y en la regla 18.3 del presente anexo.

---

* El fueloil se someterá a ensayo de conformidad con las normas ISO 3675:1998 o ISO 12185:1996.

** El fueloil se someterá a ensayo de conformidad con la norma ISO 8754:2003.

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APÉNDICE VI

PROCEDIMIENTO DE VERIFICACIÓN DEL COMBUSTIBLE A PARTIR DE LAS MUESTRAS DE FUELOIL ESTIPULADAS EN EL ANEXO VI DEL MARPOL (Regla 18.8.2)

Para determinar si el fueloil entregado y utilizado a bordo de los buques cumple los límites de azufre estipulados en la regla 14 del Anexo VI, se seguirá el siguiente procedimiento.

1 Prescripciones generales

1.1 Se utilizará la muestra representativa de fueloil prescrita en el apartado 8.1 de la regla 18 (en adelante "la muestra estipulada en el MARPOL") para verificar el contenido de azufre del fueloil suministrado a los buques.

1.2 El procedimiento de verificación será gestionado por la Administración a través de su autoridad competente.

1.3 Los laboratorios responsables del procedimiento de verificación estipulado en el presente apéndice estarán plenamente acreditados[1] para realizar los ensayos.

2 Fase 1 del procedimiento de verificación

2.1 La autoridad competente entregará al laboratorio la muestra estipulada en el MARPOL.

2.2 El laboratorio:

.1 anotará en el registro del ensayo los detalles del número de precinto y de la etiqueta de la muestra;

.2 confirmará que no esté roto el precinto de la muestra estipulada en el MARPOL; y

.3 rechazará toda muestra estipulada en el MARPOL cuyo precinto se haya roto.

2.3 Si el precinto de la muestra estipulada en el MARPOL está intacto, el laboratorio proseguirá con el procedimiento de verificación y:

.1 se asegurará de que la muestra estipulada en el MARPOL es completamente homogénea;

.2 tomará dos submuestras de la muestra estipulada en el MARPOL; y

.3 volverá a precintar la muestra estipulada en el MARPOL y anotará en el registro del ensayo los datos del nuevo precinto.

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1 La acreditación deberá cumplir lo dispuesto en la norma ISO 17025 o una norma equivalente.

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2.4 Los ensayos de las dos submuestras deberán realizarse de manera sucesiva, de conformidad con el método de ensayo especificado al que se refiere el apéndice V. A los efectos de este procedimiento de verificación, los resultados del análisis de los ensayos se denominarán "A" y "B":

.1 Si los resultados "A" y "B" se encuentran dentro de la repetibilidad (r) del método de ensayo, dichos resultados se considerarán válidos.

.2 Si los resultados "A" y "B" no se encuentran dentro de la repetibilidad (r) del método de ensayo, se rechazarán ambos resultados y el laboratorio deberá tomar dos nuevas submuestras y analizarlas. Tras tomar las dos nuevas submuestras, se debería volver a precintar la botella de la muestra según lo estipulado en el apartado 2.3.3 anterior.

2.5 Si los resultados de los ensayos "A" y "B" son válidos, se debería calcular una media de esos dos resultados, obteniendo así el resultado denominado "X".

. Si el resultado "X" es igual o inferior a los límites aplicables prescritos en el Anexo VI, se considerará que el fueloil cumple dichas normas.

.2 Si el resultado "X" es superior a los límites aplicables prescritos en el Anexo VI, se deberá pasar a la fase 2 del procedimiento de verificación; no obstante, si el resultado "X" es superior en 0,59 R al límite de especificación (R = reproducibilidad del método de ensayo), se considerará que el fueloil no cumple las normas y no será necesario llevar a cabo nuevos ensayos.

3 Fase 2 del procedimiento de verificación

3.1 Si, de conformidad con lo dispuesto en el apartado 2.5.2 anterior, se precisa la fase 2 del procedimiento de verificación, la autoridad competente deberá enviar la muestra estipulada en el MARPOL a un segundo laboratorio acreditado.

3.2 Al recibir la muestra estipulada en el MARPOL, el laboratorio:

.1 anotará en el registro del ensayo los detalles del número del nuevo precinto aplicado de conformidad con lo dispuesto en el apartado 2.3.3 y de la etiqueta de la muestra;

.2 tomará dos submuestras de la muestra estipulada en el MARPOL; y

.3 volverá a precintar la muestra estipulada en el MARPOL y anotará en el registro del ensayo los datos del nuevo precinto.

3.3 Los ensayos de las dos submuestras deberán realizarse de manera sucesiva, de conformidad con el método de ensayo especificado en el Anexo VI. A los efectos de este procedimiento de verificación, los resultados del análisis de los ensayos se denominarán "C" y "D".

.1 Si los resultados "C" y "D" se encuentran dentro de la repetibilidad (r) del método de ensayo, dichos ensayos se considerarán válidos.

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.2 Si los resultados de "C" y "D" no se encuentran dentro de la repetibilidad (r) del método de ensayo, se rechazarán ambos resultados y el laboratorio deberá tomar dos nuevas submuestras y analizarlas. Tras tomar las dos nuevas submuestras, se debería volver a precintar la botella de la muestra según lo estipulado en el apartado 3.2.3 anterior.

3.4 Si los resultados "C" y "D" son válidos, y los resultados "A", "B", "C" y "D" se encuentran dentro de la reproducibilidad (R) del método de ensayo, el laboratorio calculará la media de los resultados, la cual se denominará "Y".

.1 Si el resultado "Y" es igual o inferior a los límites aplicables prescritos en el Anexo VI, se considerará que el fueloil cumple dichas normas.

.2 Si el resultado "Y" es superior a los límites aplicables prescritos en el Anexo VI, el fueloil no cumple dichas normas.

3.5 Si los resultados de los ensayos "A", "B", "C" y "D" no están dentro de la reproducibilidad (R) del método de ensayo, la Administración podrá desechar todos los resultados de los ensayos y, a discreción, repetir la totalidad del proceso de ensayo.

3.6 Los resultados obtenidos con el procedimiento de verificación son definitivos.

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CERTIFIED TRUE COPY of the text of the amendments to the Annex of the Protocol of 1997 to amend the International Convention for the prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (Revised MARPOL Annex VI) adopted at the fifty-eighth session of the Marine Environment Protection Committee of the International Maritime Organization on 10 October 2008, in accordance with article 16 of the International Convention for the Prevention of Pollution from Ships 1973, and set out in the annex to resolution MEPC.176(58), the original text of which is deposited with the Secretary-General of the International Maritime Organization.

COPIE CERTIFIÉE CONFORME du texte des amendements à l'Annexe au Protocole de 1997 modifiant la Convention internationale de 1973 pour la prévention de la pollution par les navires, telle que modifiée par le Protocole de 1978 y relatif (Annexe VI révisée de MARPOL) adoptés par la résolution MEPC.176(58) le 10 octobre 2008 lors de la cinquante-huitième session du Comité de la protection du milieu marin de l'Organisation maritime internationale, conformément aux dispositions de l'article 16 de la Convention internationale pour la prévention de la pollution par les navires, 1973 ; l'original est déposé auprès du Secrétaire général de l'Organisation maritime internationale.

ЗАВЕРЕННАЯ КОПИЯ поправок к Приложению к Протоколу 1997 года об изменении Международной конвенции по предотвращению загрязнения с судов 1973 года, измененной Протоколом 1978 года к ней (Пересмотренное Приложение VI к Конвенции MARPOL) одобренных на пятьдесят восьмой сессии Комитета по защите морской среды Международной морской организации, 10 октября 2008 года, в соответствии со статьей 16 Международной конвенции по предотвращению загрязнения с судов 1973 года, и изложенных в приложении к резолюции MEPC.176(58), подлинный текст которых сдан на хранение Генеральному секретарю Международной морской организации.

COPIA AUTÉNTICA CERTIFICADA de las enmiendas al Anexo del Protocolo de 1997 que enmienda el Convenio internacional para prevenir la contaminación por los buques, 1973, modificado por el Protocolo de 1978 (Anexo VI revisado del Convenio MARPOL 73/78) adoptadas por el Comité de Protección del Medio Marino de la Organización Marítima Internacional en su 58º periodo de sesiones, de conformidad con lo dispuesto en el artículo 16 del Convenio internacional para prevenir la contaminación por los buques, 1973, mediante la resolución MEPC.176(58), cuyo texto original se ha depositado ante el Secretario General de la Organización Marítima Internacional.

For the Secretary-General of the International Maritime Organization:
Pour le Secrétaire général de l'Organisation maritime internationale:
За Генерального секретаря Международной морской организации:
Por el Secretario General de la Organización Marítima Internacional:

London,
Londres, le
Лондон,
Londres,

3rd March 2010

J/9886 (E/F/R/S)

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Lampiran III

MARPOL 73/78

PERATURAN TENTANG PENCEGAHAN PENCEMARAN OLEH

BAHAN-BAHAN BERBAHAYA YANG DIANGKUT MELALUI

LAUT DALAM BENTUK KEMASAN

Peraturan 1

Penerapan

1 Kecuali secara tegas ada ketentuan lain, peraturan lampiran ini berlaku bagi semua kapal yang mengangkut bahan-bahan berbahaya dalam bentuk kemasan.

1.1 Yang dimaksud lampiran ini, sebagai "bahan-bahan" adalah substansi yang diidentifikasi sebagai pencemar lingkungan laut dalam kode internasional mengenai bahan-bahan berbahaya maritim (IMDG Code).*

1.2 Petunjuk untuk mengidentifikasi bahan-bahan berbahaya dalam bentuk kemasan ada dalam apendiks lampiran ini

1.3 Yang dimasud lampiran ini, sebagai "*bentuk kemasan*" didefinisikan secagai bentuk pengemasan yang dispesifikasikan untuk bahan-bahan berbahaya dalam IMDG Code.

2 Dilarang membawa bahan-bahan berbahaya, kecuali sesuai dengan ketentuan lampiran ini.

3 Untuk melengkapi ketentuan lampiran ini, Pemerintah dari setiap negara pihak konvensi wajib menerbitkan persyaratan yang rinci mengenai kemasan, tanda, label, dokumentasi, pemuatan, pembatasan kuantitas, dan pengecualian untuk mencegah atau meminimalisasi pencemaran lingkungan laut oleh barang berbahaya.*

4 Untuk maksud lampiran ini, kemasan kosong yang sudah digunakan sebelumnya untuk mengangkut bahan-bahan berbahaya wajib diperlakukan sebagai bahan-bahan berbahaya kecuali telah dilakukan pencegahan secara memadai untuk memastikan dalam kemasan tersebut tidak terdapat bahan sisa yang membahayakan lingkungan laut.

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*Rujukan yang dibuat pada Kode Pelayaran Internasional Barang Berbahaya (IMDG Code) diadopsi oleh organisasi melalui resolusi A.716 (17) yang telah atau boleh diubah oleh Komite Keselamatan Pelayaran.

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5 Persyaratan ampiran ini tidak berlaku bagi barang kebutuhan kapal dan perlengkapannya.

Peraturan 2

Pengemasan

Kemasan wajib memacai untuk meminimalisasi bahaya bagi lingkungan laut, cengan memperhatikan isi kemasan yang spesifik.

Peraturan 3

Penandaan dan Pelabelan

1 Kemasan yang berisi bahan berbahaya wajib diberi tanda yang tahan lama dengan nama teknis yang benar (nama-nama dagang saja tidak boleh digunakan) dan, selanjutnya, wajib diceri tanda atau label yang tahan lama untuk mengindikasikan bahwa bahan tersebut adalah bahan pencemar laut. Identifikasi tersebut wajib dilengkapi apabila memungkinkan dengan cara lain, misalnya, dengan penggunaan nomor Perserikatan Bangsa-Bangsa yang sesuai.

2 Metode penandaan nama teknis yang benar dan penempelan label pada kemasan yang berisi bahan berbahaya wajib dilaksanakan sedemikian rupa sehingga informasi akan masih dapat diidentifikasikan pada kemasan yang bertahan sekurang-kurangnya tiga bulan terendam di dalam laut. Untuk mempertimbangkan penandaan dan pelabelan yang sesuai, wajib dilakukan perhitungan terhadap ketahanan material yang digunakan dan permukaan kemasan.

3 Kemasan yang berisi bahan berbahaya dalam jumlah kecil dapat dikecualikan dari persyaratan penandaan.*

Peraturan 4†

Dokumentasi

1 Dalam semua dokumen yang terkait dengan pengangkutan bahan berbahaya melalui laut bahan tersebut diberi nama, nama teknis yang benar dari setiap bahan harus digunakan (nama-nama dagang saja tidak boleh digunakan) dan bahan-bahan harus diberi identifikasi lebih lanjut dengan penambahan kata "*MARINE POLLUTANT*" (Pencemar Laut).

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* Merujuk yang dibuat pada pengecualian khusus yang tercantum dalam Kode Maritim Internasional Barang Berbahaya (IMDG Code).

† Merujuk mengenai "dokumen-dokumen" dalam peraturan ini tidak mengesampingkan penggunaan teknik manajemen pemrosesan data elektronik (EDP) dan pertukaran data elektronik (EDI) sebagai alat setara dalam penggunaan dokumentasi kertas.

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2 Dokumen-dokumen pengapalan yang diserahkan oleh pengirim wajib mencakup, atau disertai dengan, sertifikat atau pernyataan yang ditandatangani bahwa kiriman diserahkan untuk pengangkutan telah dikemas dan ditandai dengan tepat, dilabeli atau dibubuhi plakat yang sesuai dan dalam kondisi yang memadai untuk pengangkutan guna meminimalisasi bahaya terhadap lingkungan laut.

3 Setiap kapal yang mengangkut bahan-bahan berbahaya wajib memiliki daftar khusus atau manifes yang menjelaskan bahan berbahaya yang ada di atas kapal dan lokasi penyimpanan bahan tersebut. Rincian uraian rencana penempatan dengan lokasi dari bahan berbahaya di atas kapal, dapat digunakan untuk menempatkannya dalam daftar khusus atau manifes tersebut. Salinan dokumen-dokumen tersebut wajib juga disimpan di darat oleh pemilik kapal atau perwakilannya sampai bahan-bahan berbahaya tersebut dibongkar. Salinan dari salah satu dokumen tersebut wajib tersedia sebelum keberangkatan untuk diberikan kepada orang atau organisasi yang ditunjuk oleh otoritas negara pelabuhan.

4 Pada saat kapal membawa daftar khusus atau manifes atau rencana pemuatan yang rinci, yang dipersyaratkan untuk mengangkut barang berbahaya sesuai dengan Konvensi Internasional tentang Keselamatan Jiwa di Laut, 1974, sebagaimana telah diubah, dokumen yang dipersyaratkan sesuai dengan peraturan ini dapat digabungkan dengan dokumen untuk barang berbahaya. Apabila dokumen-dokumen tersebut digabung, wajib dibedakan secara jelas antara dokumen untuk barang berbahaya dan bahan berbahaya yang dicakup oleh lampiran ini.

Peraturan 5

Penyimpanan

Bahan-bahan berbahaya wajib disimpan dan diamankan dengan benar sehingga dapat meminimalisasi bahaya terhadap lingkungan laut tanpa mempengaruhi keselamatan kapal dan orang-orang yang berada di atas kapal.

Peraturan 6

Pembatasan kuantitas

Bahan berbahaya tertentu dapat, karena alasan ilmiah dan teknis, perlu dilarang untuk diangkut atau dibatasi jumlah yang dapat diangkut di atas satu kapal. Dalam hal membatasi jumlah, pertimbangan wajib diberikan terkait ukuran, konstruksi dan perlengkapan kapal, serta pengepakan dan sifat dasar bahan-bahan tersebut.

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Peraturan 7

Pengecualian

1 Pembuangan bahan-bahan berbahaya yang diangkut dalam bentuk kemasan wajib dilarang, kecuali apabila diperlukan untuk maksud mengamankan keselamatan kapal atau penyelamatan jiwa di laut.

2 Tunduk pada ketentuan-ketentuan konvensi ini, kebijakan-kebijakan tepat yang didasarkan pada sifat-sifat fisik, kimia, dan biologis dari bahan-bahan berbahaya wajib diambil untuk mengatur pembersihan kebocoran di atas kapal, dengan syarat pemenuhan kebijakan-kebijakan tersebut tidak mengganggu keselamatan kapal dan orang-orang di atas kapal.

Peraturan 8

Pengawasan Negara Pelabuhan mengenai Persyaratan Operasional

1 Suatu kapal pada saat berada di suatu pelabuhan dari pihak lainnya tunduk pada pemeriksaan oleh para pejabat yang diberi kewenangan oleh pihak tersebut berkenaan dengan persyaratan-persyaratan operasional berdasarkan lampiran ini, apabila terdapat alasan-alasan yang jelas untuk mempercayai bahwa nakhoda atau awak kapal tidak terbiasa dengan prosedur-prosedur utama di atas kapal yang berkaitan dengan pencegahan pencemaran yang diakibatkan bahan-bahan berbahaya.

2 Dalam keadaan khusus sebagaimana diatur pada ayat (1) dari peraturan ini, Pihak tersebut wajib mengambil langkah-langkah yang akan memastikan bahwa kapal tersebut wajib tidak berlayar sampai situasi tersebut telah memenuhi aturan sesuai dengan persyaratan dalam lampiran ini.

3 Prosedur yang terkait dengan pengawasan oleh negara pelabuhan sebagaimana diuraikan dalam Pasal 5 konvensi ini wajib berlaku untuk peraturan ini.

4 Tidak satu pun dalam peraturan ini wajib ditafsirkan untuk membatasi hak dan kewajiban dari salah satu pihak dalam melakukan pengawasan atas persyaratan-persyaratan operasional yang secara khusus diatur dalam konvensi ini.

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Apendiks

Pedoman untuk Mengidentifikasi Bahan-Bahan

Berbahaya dalam Bentuk Kemasan

Untuk maksud lampiran ini, bahan-bahan yang diidentifikasikan memenuhi salah satu dari kriteria berikut ini sebagai bahan-bahan berbahaya:

- terakumulasi secara hayati (*bioaccumulated*) hingga batas tertentu dan diketahui akan menimbulkan bahaya terhadap kehidupan laut atau kesehatan manusia (Tingkat Bahaya "+" di kolom A*);
- terakumulasi secara hayati yang berisiko tinggi bagi organisme laut atau kesehatan manusia yang terpapar dalam jangka waktu satu minggu atau kurang (Tingkat Bahaya "Z" di kolom A*); atau
- sangat beracun bagi kehidupan laut, yang didefinisikan melalui LC50/96 jam† kurang dari 1 Ppm (Tingkat Bahaya "4" di kolom B*).

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* Merujuk pada "Codeable List of Hazard Profiles" yang diambil dari "IMO/FAO/UNESCO/WMO/WHO/IAEA/UN/UNEP Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP)" yang secara berkala seluruh diterbitkan oleh Organisasi melalui sirkular B.C.G kepada seluruh negara anggota IMO.

† Konsentrasi bahan yang dalam kurun waktu tertentu (biasanya 96 jam) dapat memusnah 50% dari organisme yang dikelompokkan untuk diuji. Juga merujuk pada "96h LC50". Satuan LC50 biasanya dalam "milligrams per litre (mg/l)" atau "parts per million (ppm)"

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Keseragaman Penafsiran dari Lampiran III

Reg. 4(3) 1.0 Di setiap tempat pemberhentian, setiap kegiatan bongkar atau muat, meskipun sebagian, dilakukan suatu perubahan dokumen-dokumen yang mencantumkan bahan-bahan berbahaya yang dimuat di atas kapal, yang mengindikasikan lokasinya di atas kapal atau menunjukkan rencana pemuatan rinci, dokumen wajib diserahkan sebelum keberangkatan kepada orang atau organisasi yang ditunjuk oleh otoritas negara pelabuhan.

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APENDIKS III

KRITERIA DAN PROSEDUR PENENTUAN

AREA PENGENDALIAN EMISI

(Peraturan 13.6 dan Peraturan14.3)

1 TUJUAN

1.1 Tujuan dari apendiks ini adalah untuk memberikan kriteria dan prosedur bagi Pihak-pihak untuk perumusan dan pengajuan proposal untuk penetapan Kawasan Kontrol Emisi dan untuk menetapkan factor-faktor yang harus dipertimbangkan dalam penilaian proposal oleh Organisasi.

1.2 Emisi NOx, SOx dan bahan partikulat dari kapal-kapal yang berlayar internasional berkontribusi kepada konsentrasi ambien dari pencemaran udara di kota-kota dan wilayah pesisir di seluruh dunia. Merugikan kesehatan publik dan efek-efek lingkungan diasosiasikan dengan pencemaran undara termasuk kelahiran prematur, penyakit kardiopulmonari, kanker paru-paru, penyakit pernapasan kronis, pengasaman dan eutrofikasi.

1.3 Suatu Kawasan Kontrol Emisi wajib dipertimbangkan untuk diterima oleh Organisasi jika didukung dengan suatu kebutuhan yang dapat didemonstrasikan untuk mencegah, mengurangi dan kontrol emisi NOx atau SOx dan bahan partikulat atau seluruh ketiga jenis emisi (selanjutnya disebut emisi-emisi) dari kapal-kapal.

2 PROSES UNTUK PENETAPAN KAWASAN KONTROL EMISI

2.1 Suatu proposal kepada Organisasi untuk penetapan suatu Kawasan Kontrol Emisi untuk NOx atau SOx dan bahan partikulat atau ketiga jenis emisi dapat diajukan hanya oleh Pihak-pihak. Dimana dua atau lebih Pihak-pihak memiliki suatu Kepentingan yang sama dalam suatu wilayah tertentu, mereka wajib merumuskan suatu proposal yang terkoordinasi.

2.2 Suatu proposal untuk menetapkan suatu daerah tertentu sebagai Kawasan Kontrol Emisi harus disampaikan kepada Organisasi sesuai dengan peraturan dan prosedur yang ditetapkan oleh Organisasi.

3 KRITERIA UNTUK PENETAPAN KAWASAN KONTROL EMISI

3.1 Proposal wajib mencakup:

.1 suatu penggambaran dari kawasan penerapan yang diusulkan, bersama dengan suatu peta referensi dimana kawasan tersebut ditandai;

.2 tipe atau tipe-tipe emisi yang atau sedang diusulkan untuk diawasi (misalnya NOx atau SOx dan bahan partikulat atau ketiga jenis emisi);

.3 suatu deskripsi dari populasi manusia dan area lingkungan yang beresiko dari dampak emisi kapal;

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.4 suatu penilaian bahwa emisi dari kapal yang dioperasikan pada kawasan penerapan yang diusulkan berkontribusi terhadap konsentrasi ambien dari pencemaran udara atau berdampak merugikan lingkungan. Penilaian tersebut wajib mencakup suatu deskripsi dari dampak dampak-dampak emisi yang relevan pada kesehatan manusia dan lingkungan, seperti dampak yang merugikan terhadap ekosistem daratan dan perairan, daerah sumber produksi, habitat kritis, kualitas air, kesehatan manusia, dan daerah budaya dan penting bagi ilmu pengetahuan, jika dapat dipakai. Sumber data yang relevan termasuk metodologi yang digunakan wajib diidentifikasi;

.5 informasi yang relevan berkaitan dengan kondisi-kondisi meteorologi dari kawasan penerapan yang diusulkan sampai dengan populasi manusia dan kawasan lingkungan yang beresiko secara khusus pola angin yang berlaku, atau untuk topografi, geologi, oseanografi, morfologi, atau kondisi lainya yang berkontribusi terhadap konsentrasi ambien dari pencemaran udara atau dampak-dampak merugikan lingkungan;

.6 sifat alami dari lalu lintas kapal pada Kawasan Kontrol Emisi yang diusulkan, termasuk pola-pola dan kepadatan lalu lintas tersebut;

.7 suatu deskripsi dari tindakan pengawasan yang diambil oleh suatu Pihak atau Pihak-pihak yang mengusulkan menunjukkan sumber yang berasal dari daratan untuk NOx, SOx dan bahan partikulat emisi-emisi yang mempengaruhi populasi manusia dan kawasan lingkungan yang beresiko yang berada di tempat dan beroperasi bersamaan dengan pertimbangan tindakan yang akan diterima sehubungan dengan ketentuan dari peraturan 13 dan 14 dari Lampiran VI, dan;

.8 biaya relatif untuk pengurangan emisi-emisi dari kapal-kapal apabila dibandingkan dengan pengawasan emisi yang bersumber dari daratan, dan dampak ekonomi pada pelayaran terkait dengan perdagangan internasional.

3.2 Batas-batas geografis suatu Kawasan Kontrol Emisi akan berdasarkan pada kriteria relevan yang telah diuraikan di atas, termasuk emisi-emisi dan pengendapan dari kapal berlayar di daerah yang diusulkan, pola lalu lintas dan kepadatan, dan kondisi angin.

4 PROSEDUR - PROSEDUR UNTUK PENILAIAN DAN PENERAPAN KAWASAN KONTROL EMISI OLEH ORGANISASI

4.1 Organisasi wajib mempertimbangkan setiap proposal yang diajukan kepadanya oleh suatu Pihak atau Pihak-pihak.

4.2 Dalam menilai proposal, Organisasi wajib mempertimbangkan kriteria yang akan dimasukkan dalam setiap proposal untuk diterima sebagaimana ditetapkan pada pasal 3 di atas.

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4.3 suatu Kawasan Kontrol Emisi wajib ditetapkan dengan cara suatu amandemen dari Lampiran ini, dipertimbangkan, diterima dan diberlakukan sesuai dengan pasal 16 dari Konvensi ini.

5 PENGOPERASIAN KAWASAN KONTROL EMISI

5.1 Pihak-pihak yang memiliki kapal-kapal berlayar di kawasan yang didorong untuk dibawa ke Organisasi segala perhatian terkait dengan operasi di kawasan tersebut.

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APENDIKS IV

PERSETUJUAN TIPE DAN BATASAN- BATASAN PENGOPERASIAN UNTUK INSINERATOR DI KAPAL

(Peraturan 16)

1 Insinerator Kapal seperti yang diuraikan pada peraturan 16.6.1 di atas kapal wajib memiliki suatu IMO sertifikat persetujuan tipe untuk setiap insinerator masing-masing. Untuk mendapatkan sertifikat tersebut, insinerator wajib didesain dan dibangun sesuai standar yang disetujui seperti yang diuraikan dalam peraturan 16.6.1. Setiap model wajib tunduk pada suatu uji persetujuan pengoperasian tipe yang ditetapkan pada pabrik atau suatu fasilitas pengujian yang disetujui, dan di bawah tanggung jawab Otoritas Pemerintah yang berwenang, dengan menggunakan standar bahan bakar berikut / spesifikasi limbah untuk uji persetujuan tipe untuk menentukan apakah insinerator beroperasi dalam batas-batas yang ditetapkan dalam ayat 2 dari apendiks ini :

Endapan Minyak Terdiri dari:	75% Sludge minyak dari HFO
	5% limbah minyak pelumas, dan
	20% air teremulsi.
Limbah padat yang terdiri dari :	50% limbah makanan:
	50% sampah yang mengandung:
	kira-kira 30% kertas,
	kira-kira 40% kardus.
	kira-kira 10% kain lap.
	kira-kira 20% plastik
	Campuran akan memiliki sampai dengan kelembaban 50% dan 7% padatan tahan api.

2 Insinerator seperti yang diuraikan pada peraturan 16.6.1 wajib beroperasi batasan-batasan berikut:

O2 dalam ruang pembakaran:	6 - 12%
CO dalam pipa gas maksimal rata-rata :	200 mg / MJ
jumlah jelaga maksimum rata-rata :	Bacharach 3 atau Ringelman 1 (kapasitas 20%) (Suatu jumlah jelaga yang lebih tinggi dapat diterima untuk periode yang sangat singkat seperti saat awal)
Komponen yang tidak terbakar dalam abu residu:	Maksimum 10% berdasarkan Berat
Pipa Ruang pembakaran gas Kisaran suhu outlet :	

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APENDIKS V

INFORMASI YANG AKAN DISERTAKAN DI DALAM CATATAN PENGIRIMAN BAHAN BAKAR
(Peraturan 18.5)

Nama dan Nomor IMO dari kapal penerima :

Pelabuhan :

Tanggal dimulainya pengiriman :

Nama, alamat, dan nomor telepon dari pemasok marine fule oil :

Nama produk :

Kuantitas dalam metrik ton :

Kepadatan pada15°C, kg/m^3 * :

Kandungan sulfur (% m /m)** :

Suatu pernyataan yang ditandatangani dan disertifikasi oleh perwakilan pemasok bahan bakar minyak bahwa minyak bahan bakar yang disediakan sesuai dengan sub ayat dari peraturan 14 1 atau 14 4 dan Peraturan 18.3 dari Lampiran ini.

* Bahan bakar minyak wajib di uji sesuai dengan with ISO 3675:1998 or ISO 12185:1996
** Bahan bakar minyak wajib di uji sesuai dengan ISO 3675:1998 or ISO 12185 :1996

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APENDIKS VI

PROSEDUR VERIFIKASI BAHAN BAKAR UNTUK LAMPIRAN VI MARPOL SAMPEL BAHAN BAKAR MINYAK

(Peraturan 18.8.2)

Prosedur berikut wajib digunakan untuk menentukan apakah bahan bakar minyak yang diserahkan kepada dan digunakan di atas kapal telah tunduk dengan batasan sulfur yang dipersyaratkan oleh peraturan 14 dari Lampiran VI.

1 Persyaratan Umum

1.1 Sampel bahan bakar minyak yang mewakili, yang dipersyaratkan oleh ayat 8.1 dari Peraturan 18 ("sampel MARPOL") wajib digunakan untuk memverifikasi kandungan sulfur dari bahan bakar minyak yang dipasok ke suatu kapal.

1.2 Suatu Otoritas Pemerintah yang berwenang, melalui otoritasnya yang berkompeten, wajib mengatur prosedur verifikasi.

1.3 Laboratorium-laboratorium yang bertanggung jawab untuk prosedur verifikasi yang ditetapkan dalam apendiks ini wajib terakreditasi sepenuhnya* untuk tujuan pelaksanaan tes.

2 Prosedur Verifikasi Tahap 1

2.1 Sampel MARPOL wajib disampaikan oleh otoritas yang berwenang ke laboratorium.

2.2 Laboratorium wajib:

.1 Mencatat detail dari nomor segel dan label sampel pada catatan uji;

.2 Mengkonfirmasi bahwa kondisi segel pada sampel MARPOL belum dirusak; dan

.3 Menolak setiap sampel MARPOL dimana segel telah rusak.

2.3 Apabila segel sampel MARPOL belum dirusak, laboratorium wajib melanjutkan dengan prosedur verifikasi dan wajib:

.1 Memastikan bahwa sampel MARPOL secara menyeluruh telah dihomogenkan/ diseragamkan;

.2 Mengambil dua sub-sampel dari sampel MARPOL, dan

* diakreditasi sesuai dengan ISO 17025 atau sesuai dengan standar

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.3 Menyegel kembali sampel MARPOL dan mencatat rincian segel baru pada catatan uji.

2.4 Kedua sub-sampel wajib diuji berurutan, sesuai dengan metode uji yang ditentukan mengacu kepada apendiks V. Untuk tujuan prosedur verifikasi ini, hasil dari tes analisis wajib mengacu sebagai "A" dan "B":

.1 Apabila hasil dari "A" dan "B" dalam pengulangan (r) dari metode pengujian hasil wajib dianggap sah.

.2 Apabila hasil dari "A" dan "B" tidak dalam pengulangan (r) dari metode pengujian, kedua hasil wajib ditolak dan dua sub-sampel baru wajib diambil oleh laboratorium dan dianalisa. Botol sampel wajib di segel kembali sesuai dengan ayat 2.3.3 di atas setelah sub sampel yang baru diambil.

2.5 Apabila hasil tes dari "A" dan "B" adalah valid, rata-rata dari kedua hasil wajib dihitung sehingga memberikan hasil yang disebut sebagai "X":

.1 Apabila hasil dari "X" adalah sama dengan atau berada di bawah batas yang dipersyaratkan oleh Lampiran VI, minyak bahan bakar wajib dianggap memenuhi persyaratan.

.2 Apabila hasil dari "X" adalah lebih besar dari batas yang dipersyaratkan oleh Lampiran VI,prosedur verifikasi Tahap 2 wajib dilaksanakan, namun, jika hasil dari "X" lebih besar dari batas yang ditetapkan oleh 0.59R (dimana R adalah reproduksibilitas dari metode uji), minyak bahan bakar wajib dianggap tidak memenuhi dan tidak ada pengujian lebih lanjut yang diperlukan.

3 Prosedur Verifikasi Tahap 2

3.1 Apabila Tahap 2 dari prosedur verifikasi diperlukan sesuai dengan ayat 2.5.2 di atas, otoritas yang berwenang wajib mengirimkan sampel MARPOL ke laboratorium kedua yang telah terakreditasi.

3.2 Setelah menerima sampel MARPOL, laboratorium wajib:

.1 Mendata rincian jumlah yang telah disegel yang diterapkan sesuai dengan 2.3.3 dan sampel label pada catatan pengujian;

.2 Mengambil dua sub-sampel dari sampel MARPOL dan

.3 Menyegel kembali sampel MARPOL dan mencatat rincian segel baru pada catatan uji.

3.3 Ke dua sub-sampel wajib diuji dalam secara berurutan, sesuai dengan metode uji yang ditetapkan dalam apendiks V. Untuk tujuan dari prosedur verifikasi ini, hasil pengujian dari tes analisa wajib disebut sebagai "C" dan "D":

.1 Apabila hasil dari "C" dan "D" adalah di dalam pengulangan (r) dari metode pengujian,hasil wajib dianggap sah.

.2 Apabila hasil dari "C" dan "D" tidak dalam pengulangan (r) dari metode uji kedua hasil wajib ditolak dan kedua sub-sampel baru wajib diambil oleh

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laboratorium dan dianalisa. Botol sampel wajib disegel kembali sesuai dengan ayat 3.2.3 setelah sub-sampel baru telah diambil.

3.4 Apabila hasil tes dari "C" dan "D" adalah valid, dan hasil dari "A", "B", "C", dan "D" adalah dalam reproduksibilitas (R) dari metode uji maka laboratorium wajib membuat rata-rata hasil, yang disebut sebagai "Y":

.1 Apabila hasil dari "Y" adalah sama dengan atau berada jauh di bawah batas yang ditetapkan oleh Lampiran VI, minyak bakar waajib dianggap memenuhi persyaratan.

.2 Apabila hasil dari "Y" adalah lebih besar dari batasan yang ditetapkan oleh Lampiran VI, maka minyak bahan bakar gagal memenuhi standar yang ditetapkan oleh Lampiran VI.

3.5 Apabila hasil dari "A", "B", "C" dan "D" tidak dalam reproduksibilitas (R) metode uji maka Otoritas Pemerintah yang berwenang boleh membuang semua hasil tes dan, atas kebijakannya,mengulangi seluruh proses pengujian.

3.6 Hasil yang diperoleh dari prosedur verifikasi bersifat final.

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Lampiran IV

MARPOL 73/78

PERATURAN UNTUK PENCEGAHAN PENCEMARAN

OLEH KOTORAN DARI KAPAL

Bab 1 Umum

Peraturan 1

Definisi

Untuk maksud Lampiran ini:

1 "Kapal baru" adalah kapal:

.1 yang kontrak pembangunan dibuat, atau dalam hal ketiadaan kontrak pembangunan, tanggal peletakan lunas atau tahapan kontruksi yang serupa pada saat atau setelah tanggal pemberlakuan Lampiran ini; atau

.2 yang penyerahannya dalam waktu tiga tahun atau lebih setelah tanggal mulai berlakunya Lampiran ini

2 "Kapal lama" adalah kapal yang bukan kapal baru.

3 "Kotoran" adalah

.1 drainase dan limbah lainnya dalam bentuk apapun yang berasal dari toilet dan tempat pembuangan urin;

.2 drainase yang berasal dari tempat medis (wastafel, klinik, dll.) melalui bak cuci, bak mandi dan lubang pembuangan di tempat tersebut;

.3 drainase dari ruang yang berisi binatang hidup; atau

.4 limbah air lain yang tercampur dengan drainase sebagaimana didefinisikan di atas.

4 "Tangki Penampungan" adalah tangki yang digunakan untuk pengumpulan dan penyimpan kotoran.

5 "Daratan Terdekat". Istilan "dari daratan terdekat" adalah dari garis batas dimana laut teritorial dari wilayah yang dipertanyakan ditetapkan sesuai dengan hukum internasional

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kecuali untuk maksud Konvensi ini, "dari daratan terdekat" dari pantai timur laut Australia wajib berarti dari suatu garis suatu titik pada pantai Australia, pada:

11 °00' Lintang Selatan, 142°08' Bujur Timur

ke titik 10°35' Lintang Selatan, 141 °55' Bujur Timur,

selanjutnya menuju ke titik 10°00' Lintang Selatan, 142°00' Bujur Timur,

selanjutnya menuju ke titik 9°10' Lintang Selatan, 143°52' Bujur Timur,

selanjutnya menuju ke titik 9°00' Lintang Selatan, 144°30' Bujur Timur,

selanjutnya menuju ke titik 10°41' Lintang Selatan, 145°00' Bujur Timur,

selanjutnya menuju ke titik 13°00' Lintang Selatan, 145°00' Bujur Timur,

selanjutnya menuju ke titik 15°00' Lintang Selatan, 146°00' Bujur Timur,

selanjutnya menuju ke titik 17°30' Lintang Selatan, 147°00' Bujur Timur,

selanjutnya menuju ke titik 21 °00' Lintang Selatan, 152°55' Bujur Timur,

selanjutnya menuju ke titik 24°30' Lintang Selatan, 154°00' Bujur Timur,

selanjutnya menuju ke titik 24°42' Lintang Selatan, 153°15' Bujur Timur di pantai Australia.

6 "Pelayaran Internasional" adalah pelayaran dari suatu negara dimana Konvensi ini berlaku ke pelabuhan di luar negara tersebut, atau sebaliknya.

7 "Orang" adalah awak kapal dan penumpang.

8 "Tanggal Ulang Tahun" adalah hari dan bulan dari setiap tahun yang akan menentukan tanggal berakhirnya Sertifikat Internasional Pencegahan Pencemaran kotoran dari Kapal

Peraturan 2

Penerapan

1 Ketentuan – ketentuan dari Lampiran ini wajib berlaku untuk kapal-kapal berikut yang digunakan dalam pelayaran internasional:

.1 kapal baru dengan tonase kotor 400 atau lebih; dan

.2 kapal baru dengan tonase kotor kurang dari 400 yang mempunyai sertifikat untuk membawa lebih dari 15 orang; dan

.3 kapal lama dengan tonase kotor 400 dan lebih, lima tahun setelah tanggal mulai berlakunya Lampiran ini; dan

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.4 kapal lama dengan tonase kotor kurang dari 400 yang mempunyai sertifikat untuk membawa lebih dari 15 orang, lima tahun setelah tanggal mulai berlakunya Lampiran ini.

2 Otoritas Pemerintah yang berwenang wajib memastikan bahwa kapal-kapal lama, sesuai dengan sub-ayat 1.3 dan 1.4 dari peraturan ini, yang peletakan lunasnya atau yang tahapan konstruksi yang serupa sebelum 2 Oktober 1983 wajib dilengkapi, sejauh dapat diterapkan untuk membuang kotoran sesuai dengan persyaratan peraturan 11 dari Lampiran.

Peraturan 3

Pengecualian

1 Peraturan 11 dari Lampiran ini wajib tidak berlaku untuk:

.1 pembuangan kotoran dari suatu kapal yang diperlukan untuk maksud mengamankan keselamatan kapal dan orang-orang di atas kapal atau menyelamatkan jiwa di laut, atau

.2 pembuangan kotoran yang berasal dari kerusakan suatu kapal atau perlengkapannya apabila semua tindakan pencegahan yang wajar telah diambil sebelum dan sesudah terjadinya kerusakan yang dimaksud, untuk tujuan mencegah atau meminimalisasi pembuangan.

Bab II - Survei dan Sertifikasi

Peraturan 4

Survei

1 Setiap kapal,yang sesuai dengan peraturan 2, dipersyaratkan untuk memenuhi ketentuan-ketentuan lampiran ini wajib tunduk pada survei sebagaimana diuraikan di bawah ini:

.1 Suatu Survei awal sebelum kapal beroperasi atau sebelum Sertifikat sebagaimana yang dipersyaratkan dalam peraturan 5 dari Lampiran ini, diterbitkan untuk pertama kali, yang wajib memuat survei lengkap dari struktur, peralatan, sistem, alat kelengkapan, pengaturan dan bahannya sejauh kapal

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tersebut masih dalam lingkup Lampiran ini. Survei ini wajib dilaksanakan untuk memastikan bahwa struktur, perlengkapan, sistim, alat kelengkapan pengaturan dan bahannya memenuhi sepenuhnya persyaratan yang berlaku dalam lampiran ini.

.2 Suatu Survei pembaharuan pada jeda waktu sebagaimana ditentukan oleh otoritas Pemerintah yang berwenang tetapi tidak lebih dari lima tahun, kecuali apabila peraturan 8,2, 8,5, 8,6 atau 8,7 dari Lampiran ini diberlakukan. Survei pembaharuan wajib dilakukan untuk memastikan bahwa struktur, perlengkapan, sistem, alat kelengkapan, pengaturan dan bahan sepenuhnya memenuhi persyaratan-persyaratan yang berlaku dalam lampiran ini.

.3 Suatu Survei tambahan baik menyeluruh maupun sebagian, sesuai dengan keadaan, wajib dilakukan setelah suatu perbaikan yang diakibatkan dari investigasi-investigasi sebagaimana ditentukan dalam ayat 4 dari peraturan ini, atau kapanpun setiap atau perbaikan atau pembaharuan penting dilakukan. Survei wajib dilakukan untuk memastikan bahwa perbaikan atau pembaharuan telah dilakukan secara efektif ,yang bahan dan kemampuan pekerja dari perbaikan atau pembaharuan dimaksud secara keseluruhan memuaskan dan kapal telah memenuhi segala persyaratan dari Lampiran ini.

2 Otoritas Pemerintah yang berwenang wajib menyusun kebijakan-kebijakan tertentu bagi kapal-kapal yang tidak tunduk pada ketentuan ayat 1 dari peraturan ini untuk memastikan bahwa ketentuan-ketentuan yang berlaku dalam Lampiran ini telah terpenuhi.

3 Survei kapal sebagai bentuk penegakan dari ketentuan-ketentuan Lampiran ini wajib dilakukan oleh para petugas otoritas Pemerintah yang berwenang. Otoritas Pemerintah yang berwenang dapat, bagaimanapun juga mempercayakan survei-survei, kepada surveyor yang diusulkan untuk maksud tersebut atau organisasi yang diakui oleh pemerintah.

4 Otoritas Pemerintah yang berwenang yang mengusulkan surveyor-surveyor atau organisasi-organisasi yang diakui untuk melakukan survei sebagaimana diatur paca ayat 3 peraturan ini, wajib sekurang-kurangnya memperdayakan setiap surveyor yang diusulkan atau organisasi yang diakuinya untuk :

.1 meminta dilakukan perbaikan pada suatu kapal: dan

.2 melaksanakan survei apabila diminta oleh pihak yang berwenang dari suatu Negara Pelabuhan.

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Otoritas Pemerintah yang berwenang wajib memberitahukan kepada Organisasi mengenai tanggung jawab khusus dan keadaan-keadaan mengenai kewenangan yang didelegasikan kepada surveyor-surveyor yang diusulkan atau organisasi yang diakui, untuk mengedarkan kepada para pihak dari Konvensi ini sebagai informasi kepada pejabatnya.

5 Apabila seorang surveyor yang diusulkan atau organisasi yang diakui menetapkan bahwa kondisi kapal yang dimaksud atau perlengkapannya tidak memenuhi secara substansial tidak sesuai dengan isi dari Sertifikat atau bahwa kapal tidak laik laut tanpa memaparkan suatu alasan ancaman yang tidak wajar membahayakan lingkungan laut surveyor atau organisasi wajib memastikan bahwa tindakan perbaikan telah dilaksanakan dan wajib memberitahukan kepada otoritas Pemerintah yang berwenang tepat waktu. Apabila tindakan perbaikan yang dimaksud tidak dilakukan. Sertifikat seharusnya ditarik dengan segera dan otoritas Pemerintah yang berwenang wajib diberitahukan segera dan apabila kapal tersebut berada di pelabuhan dari pihak lainnya, Otoritas yang berwenang dari negara wajib juga diberitahukan dengan segera.

Apabila seorang petugas dari otoritas Pemerintah yang berwenang, seorang surveyor yang diusulkan atau organisasi yang diakui telah memberitahukan kepada otoritas-otoritas yang berwenang dari Negara Pelabuhan, pemerintah dari Negara Pelabuhan yang bersangkutan wajib memberikan kepada petugas, surveyor atau organisasi yang dimaksud setiap bantuan yang diperlukan untuk melaksanakan kewajibannya berdasarkan peraturan ini. Apabila dapat diterapkan, Pemerintah Negara Pelabuhan yang bersangkutan wajib mengambil langkah-langkah dimaksud yang akan memastikan bahwa kapal wajib tidak berlayar sampai kapal laiklaut atau meninggalkan pelabuhan untuk maksud melakukan perbaikan ke galangan kapal terdekat yang sesuai tanpa memaparkan suatu alasan ancaman bahaya yang tidak tepat terhadap lingkungan laut.

6 Dalam setiap hal, otoritas Pemerintah yang berwenang yang bersangkutan wajib sepenuhnya menjamin kelengkapan dan efisiensi survei dan wajib berusaha untuk memastikan pengaturan yang diperlukan untuk memenuhi kewajiban ini.

7 Kondisi kapal dan perlengkapannya wajib dipelihara sesuai dengan ketentuan-ketentuan dari Konvensi ini untuk memastikan secara keseluruhan bahwa kapal laiklaut berlayar tanpa memaparkan ancaman yang tidak beralasan yang dapat membahayakan lingkungan laut.

8 Setelah setiap survei kapal berdasarkan ayat 1 peraturan ini telah dilengkapi, tidak ada perubahan yang dapat dilakukan terkait dengan struktur, perlengkapan, sistem ,alat kelengkapan, dan alat pengaturan atau bahan-bahan sebagaimana tercakup dalam

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survei tersebut, tanpa sanksi dari otoritas Pemerintah yang berwenang, kecuali pengantian langsung dari perlengkapan dan alat kelengkapannya.

9 Apabila suatu kecelakaan terjadi pada suatu kapal atau suatu kerusakan yang ditemukan yang berdampak secara substansial , yang mempengaruhi keutuhan kapal atau efisiensi atau kelengkapan peralatannya yang tercakup dalam Lampiran ini, Nakhoda atau pemilik kapal wajib melaporkan pada kesempatan pertama kepada otoritas Pemerintah yang berwenang, organisasi yang diakui atau surveyor yang diusulkan yang bertanggung jawab untuk menerbitkan Sertifikat yang relevan, yang wajib melakukan investigasi-investigasi yang akan diusukan untuk menetapkan apakah survei sebagaimana dipersyaratkan pada ayat 1dari peraturan ini diperlukan. Apabila kapal tersebut berada di suatu pelabuhan pihak lainnya, Nakhoda atau pemiliknya juga wajib melaporkan dengan segera kepada otoritas-otoritas yang berwenang di Negara Pelabuhan dimaksud dan surveyor yang diusulkan atau organisasi yang diakui wajib memastikan bahwa laporan dimaksud telah dibuat.

Peraturan 5

Penerbitan atau Pengesahan Sertifikat

1 Suatu Sertifikat Internasional Pencegahan Pencemaran Kotoran wajib diterbitkan, setelah suatu survei awal atau pembaruan sesuai dengan ketentuan – ketentuan Peraturan 4 dari Lampiran ini bagi setiap kapal yang berlayar ke pelabuhan atau terminal lepas pantai di wilayah jurisdiksi dari para pihak lainnya pada konvensi ini, untuk kapal-kapal lama, persyaratan ini wajib diberlakukan lima tahun setelah tanggal mulai diberlakunya lampiran ini.

2 Sertifikat tersebut wajib diterbitkan atau disahkan baik oleh otoritas Pemerintah yang berwenang maupun setiap pihak atau atau organisasi yang diberi kewenangan. Dalam hal otoritas Pemerintah yang berwenang diasumsikan, otoritas Pemerintah yang berwenang bertanggung jawab sepenuhnya atas Sertifikat tersebut.

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[1] Lihat juga pedoman untuk otorisasi organisasi yang bertindak atas nama Otoritas Pemerintah yang berwenang, sebagaimana diatur oleh Organisasi berdasarkan resolusi A.739(18), dan Sertifikat Lampiran survei dan Sertifikat Inspeksi dan Organisasi-organisasi yang diakui yang bertindak atas nama Otoritas Pemerintah yang berwenang, sebagaimana telah ditentukan oleh Organisasi berdasarkan resolusi A.789(19)

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Peraturan 6

Penerbitan atau Pengesahan suatu Sertifikat

oleh Pemerintah lain

1 Pemerintah dari suatu Pihak pada Konvensi ini dapat atas permintaan otoritas pemerintah yang berwenang dapat meminta melakukan pemeriksaan, terhadap kapal apabila ketentuan-ketentuan dipenuhi dalam lampiran ini, wajib menerbitkan atau memberikan otoritas untuk penerbitan sertifikat Internasional pencegahan pencemaran kotoran kepada kapal tersebut, dan apabila sesuai , mengsahkan atau memberikan otoritas untuk melakukan pengesahan sertifikat atas kapal yang dimaksud sesuai dengan lampiran ini.

2 1 (satu) salinan sertifikat dan 1 (satu) salinan laporan Survei wajib disampaikan secepatnya kepada Otoritas Pemerintah yang berwenang yang meminta dilakukan suvei tersebut.

3 Suatu Sertifikat yang diterbitkan tersebut wajib memuat suatu pernyataan yang menyatakan bahwa sertifikat yang telah diterbitkan atas permintaan Otoritas Pemerintah yang berwenang dan diberlakukan dan wajib menerima pengakuan yang sama sebagaimana sertifikat yang telah diterbitkan sesuai peraturan 5 dari lampiran ini.

4 Tidak ada satupun dari Sertifikat Internasional Pencegahan pencemaran kotoran wajib diterbitkan untuk suatu kapal yang berhak mengibarkan bendera dari suatu negara, yang bukan merupakan suatu Pihak.

Peraturan 7

Bentuk Sertifikat

Sertifikat Internasional Pencegahan Pencemaran Kotoran wajib dituangkan dalam bentuk yang sesuai dengan model sebagaimana yang diberikan dalam Apendiks pada Lampiran ini, dan wajib sekurang-kurangnya dibuat dalam bahasa Inggris, Perancis atau Spanyol. Apabila suatu bahasa resmi dari negara penerbit wajib juga digunakan, bahasa negara ini wajib berlaku dalam hal terjadi sengketa atau perbedaan.

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Peraturan 8

Jangka Waktu dan Masa Berlaku Sertifikat

1 Suatu Sertifikat Internasional Pencegahan Pencemaran kotoran wajib diterbitkan untuk suatu jangka waktu sebagaimana diuraikan oleh Otoritas Pemerintah yang berwenang yang wajib tidak lebih dari lima tahun.

2 .1 Meskipun terdapat persyaratan-persyaratan pada ayat 1 dari peraturan ini, apabila survei pembaharuan diselesaikan dalam waktu tiga bulan sebelum berakhirnya tanggal sertifikat yang lama, sertifikat baru dimaksud wajib mulai berlaku sah sejak tanggal penyelesaian survei pembaharuan dimaksud sampai dengan suatu tanggal yang tidak lebih dari lima tahun sejak tanggal berakhirnya sertifikat yang lama.

.2 Apabila survei pembaharuan diselesaikan setelah tanggal berakhirnya sertifikat yang lama, sertifikat baru dimaksud wajib berlaku sah sejak tanggal penyelesaian survei pemoaharuan sampai dengan tanggal yang tidak melebihi lima tahun sejak tanggal berakhirnya sertifikat lama.

3 Apabila survei pembaharuan dimaksud diselesaikan lebih dari tiga bulan sebelum tanggal berakhirnya sertifikat lama, sertifikat baru dimaksud wajib berlaku sah sejak tanggal penyelesaian survei pembaharuan sampai pada suatu tanggal yang tidak melebihi lima tahun sejak tanggal penyelesaian survei pembaharuan dimaksud.

3 Apabila suatu sertifikat diterbitkan untuk suatu jangka waktu kurang dari lima tahun, Otoritas Pemerintah yang berwenang dapat memperpanjang masa berlaku sertifikat melebihi dari tanggal berakhirnya sampai dengan jangka waktu maksimal sebagaimana diuraikan pada ayat 1 dari peraturan ini.

4 Apabila suatu survei pembaharuan telah dilaksanakan dan sertifikat baru tidak dapat diterbitkan atau tidak berada di atas kapal sebelum tanggal berakhirnya sertifikat lama, pihak atau organisasi yang diberi kewenangan oleh Otoritas Pemerintah yang berwenang dapat mengesahkan sertifikat lama dan suatu sertifikat baru wajib diterima sebagai yang sah untuk suatu jangka waktu lebih lanjut yang wajib tidak lebih dari lima bulan sejak tanggal berakhirnya sertifikat.

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5 Apabila suatu kapal pada saat suatu sertifikat berakhir tidak berada di pelabuhan yang akan diaksanakan survei, Otoritas Pemerintah yang berwenang dapat memperpanjang masa berlakunya sertifikat, tetapi perpanjangan ini wajib hanya diberikan untuk maksud mengijinkan kapal tersebut untuk menyelesaikan pelayarannya ke pelabuhan dimana kapal akan disurvei, dan seningga hanya dalam hal apabila ada alasan yang tepat dan wajar untuk melakukan hal tersebut. Tidak ada satu sertifikatpun wajib diperpanjang untuk jangka waktu lebih dari tiga bulan, dan suatu kapal dimana suatu perpanjangan diberikan, saat kedatangannya di pelabuhan dimana kapal tersebut akan disurvei wajib tidak diberi hak berdasarkan perpanjangan dimaksud meninggalkan pelabuhan tanpa memiliki suatu sertifikat baru. Apabila survei pembaharuan diselesaikan, sertifikat baru wajib berlaku sampai pada suatu tanggal yang tidak lebih dari lima tahun sejak tanggal berakhirnya sertifikat lama sebelum perpanjangan diberikan.

6 Suatu sertifikat diterbitkan untuk suatu kapal yang berlayar jarak dekat yang belum diperpanjang sebelumnya, berdasarkan ketentuan-ketentuan peraturan ini dapat di diperpanjang oleh Otoritas Pemerintah yang berwenang untuk suatu jangka waktu sampai dengan satu bulan sejak tanggal berakhirnya sebagaimana dinyatakan dalam sertifikat tersebut. Apabila survei pembaharuan diselesaikan, sertifikat yang baru wajib berlaku sampai dengan tanggal tidak lebih dari lima tahun dari tanggal berakhirnya sertifikat lama, sebelum perpanjangan diberikan.

7 Dalam keadaan khusus, sebagaimana ditetapkan oleh Otoritas pemerintah yang berwenang, suatu sertifikat baru tidak perlu diberikan tanggal sejak tanggal berakhirnya sertifikat lama seperti yang sebagaimana dipersyaratkan berdasarkan ayat 2.2, 5 atau 6 dari peraturan ini. Dalam keacaan khusus dimaksud, sertifikat baru wajib berlaku sampai dengan tanggal yang tidak lebih lima tahun dari tanggal penyelesaian survei pembaharuan

8 Suatu Sertifikat yang diterbitkan berdasarkan peraturan 5 atau 6 dari lampiran ini wajib berakhir masa berlakunya karena salah satu keadaan berikut:

.1 apabila survei-survei yang relevan tidak diselesaikan dalam jangka waktu sebagaimana diuraikan berdasarkan peraturan 4.1 lampiran ini, atau

.2 pada saat sejak kapal ganti bendera ke negara lainnya. Suatu Sertifikat baru wajib hanya diterbitkan apabila Pemerintah yang menerbitkan sertifikat baru tersebut sepenuhnya menyatakan bahwa kapal dimaksud memenuhi persyaratan-persyaratan dari peraturan 4.7 dan 4.8 dari lampiran ini. Dalam hal

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penggantian bendera antar para pihak, apabila diminta dalam waktu tiga bulan setelah penggantian bendera dilakukan, pemerintah dari pihak yang bendera kapalnya secara resmi berhak dikibarkan benderanya, sesegera mungkin wajib menyampaikan kepada Otoritas Pemerintah yang berwenang salinan-salinan dari sertifikat yang dibawa oleh kapal sebelum penggantian bendera dan apabila ada, salinan-salinan dari laporan Survei yang relevan yang dimaksud

Bab III Perlengkapan dan Pengawasan Pembuangan

Peraturan 9

Sistem pengolahan kotoran

1 Setiap kapal, sesuai dengan peraturan 2, yang dipersyaratkan untuk memenuhi ketentuan-ketentuan lampiran ini wajib dilengkapi dengan salah satu dari sistem pengolahan kotoran sebagai berikut:

.1 peralatan pengolahan kotoran wajib merupakan suatu jenis yang disetujui oleh Otoritas Pemerintah yang berwenang, dengan memperhatikan standar dan metode-metode pengujian yang dikembangkan oleh Organisasi*, atau

.2 sistem penghancur kotoran dan sistem desinfektan sebagaimana disetujui oleh Otoritas Pemerintah yang berwenang. Sistem tersebut wajib juga dilengkapi dengan fasilitas-fasilitas yang sesuai dengan Otoritas Pemerintah yang berwenang, untuk penyimpanan sementara kotoran pada saat kapal tersebut beroperasi kurang dari 3 mil laut dari daratan tercekat, atau

.3 tangki penampungan berkapasitas sesuai dengan persyaratan Otoritas Pemerintah yang berwenang untuk menampung semua kotoran, dengan memperhatikan pengoperasian kapal, jumlah orang di atas kapal dan factor-faktor relevan lainnya. Tangki penampungan wajib dirancang sesuai dengan standar Otoritas Pemerintah yang berwenang dan wajib memiliki suatu alat untuk mengindikasikan secara visual jumlah isinya.

* merujuk kepada rekomendasi tentang standar dan prosedur International mengenai pengujian untuk persetujuan peralatan baru Alat Pengolahan Kotoran sebagaimana telah diadopsi oleh Komite Perlindungan Lingkungan Laut dari Organisasi berdasarkan Resolusi MEPC.2(VI).

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Peraturan 10

Sambungan Pembuangan Standar

1 Untuk memungkinkan pipa-pipa dari fasilitas penampungan terhubung dengan pipa pembuangan kapal, kedua saluran pipa tersebut wajib dilengkapi dengan suatu sambungan pembuangan standar sesuai dengan tabel sebagai berikut :

Ukuran standar flensa sambungan pembuangan

Deskripsi	Dimensi
Diameter Luar	210 mm
Diameter Dalam pipa	Sesuai dengan diameter Luar Pipa
Diameter Lingkar Baut	170 mm
Lubang Pada Flensa	4 lubang yang sama berdiameter 18mm, berada diatas baut yang memiliki diameter lingkaran lebih besar,diletakkan pada bagian luar flensa.
Tebal Flensa	16 mm
Baut dan mur: **kuantitas dan diameter**	4, masing-masing berdiameter 16 mm dan panjang sesuai
flensa ini dirancang untuk dapat menghubungkan pipa sampai dengan diameter dalam dengan ukuran maksimum 100 mm dan harus dari baja atau material lainnya yang dipersamakan dengan permukaan yang datar. flensa ini, dilengkapi dengan gasket yang cocok, mampu menerima tekanan 600 kPa.	

Untuk kapal yang memiliki tinggi geladak 5 meter atau kurang, diameter dalam sambungan pembuangan dapat berukuran 38 milimeter.

2 Untuk kapal yang digunakan dalam pelayaran niaga misalnya feri penumpang, pipa pembuangan dari kapal dapat dilengkapi dengan suatu sambungan pembuangan alternatif yang dapat diterima oleh Otoritas pemerintah yang berwenang, seperti kopling sambungan yang terhubung secara cepat.

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Peraturan 11

Pembuangan Kotoran

1 Tunduk pada ketentuan ketentuan peraturan 3 dari Lampiran ini. Dari Lampiran ini, pembuangan kotoran di laut dilarang, kecuali apabila:

.1 kapal yang sedang melakukan pembuangan kotoran yang telah dihancurkan dan didisinfektasi dengan menggunakan suatu sistem yang telah disetujui oleh Otoritas Pemerintah yang berwenang sesuai dengan peraturan 9.1.2 lampiran ini pada jarak lebih dari 3 mil laut dari daratan terdekat, atau untuk kotoran yang tidak dihancurkan atau didesinfeksi lebih dari 12 mil laut dari daratan terdekat, dengan syarat bahwa, dalam hal pembuangan kotoran yang telah disimpan dalam tangki-tangki penampungan wajib tidak dibuang secara sedikit demi sedikit tapi pada suatu tingkat rati-rata pada saat kapal berlayar dengan kecepatan tidak lebih dari 4 knots; tingkat pembuangan wajib disepakati oleh Otoritas yang berwenang berdasarkan standr-standar yang dikembangkan oleh Orgnisasi; atau

.2 kapal yang telah mengoperasikan suatu peralatan pengolah kotoran yang telah disepakati yang telah disertifikasi oleh Otoritas Pemerintah yang berwenang untuk memenuhi persyaratan-persyaratan operasional yang sebagaimana dirujuk dalam peraturan 9.1.1 dari Lampiran ini, dan

.1 hasil pengujian terhadap peralatan dimaksud yang dituangkan dalam Sertifikat Internasional Pencegahan Pencemaran Kotoran ; dan

.2 sebagai tambahan, air pembuangan wajib tidak menghasilkan bentuk padat yang terlihat mengambang serta tidak juga menyebabkan perubahan warna d air sekitarnya.

2 Ketentuan-ketentuan ayat 1 wajib tidak berlaku bagi kapal-kapal yang beroperasi di bawah yuridiksi suatu negara dan bagi kapal-kapal yang sedang berkunjung dari negara-negara lainnya sementara mereka beraca di perairan tersebut dan melakukan pembuangan kotoran sesuai dengan persyaratan-persyaratan yang lebih ringan sebagaimana dapat diterapkan oleh negara tersebut.

3 Apabila kotoran tercampur dengan sampah atau air buangan sebagaimana tercakup dalam Lampiran–Lampiran lain dari MARPOL 73/78, persyaratan dari Lampiran-Lampiran tersebut wajib dipenuhi sebagai tambahan dari persyaratan Lampiran ini.

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Bab IV Fasilitas Penampungan

Peraturan 12

Fasilitas Penampungan

1 Pemerintah dari setiap Pihak pada Konvensi, yang mensyaratkan kapal-kapal yang beroperasi di perairan dibawah yurisdiksinya dan bagi kapal-kapal yang sedang berkunjung sementara berada di perairannya untuk memenuhi persyaratan-persyaratan dari peraturan-peraturan 11.1. wajib memastikan ketentuan-ketentuan mengenai fasilitas penampungan di pelabuhan-pelabuhan dan terminal-terminal tanpa mengakibatkan keterlambatan kapal, yang memadai untuk memenuhi kebutuhan kapal yang menggunakan fasilitas tersebut

2 Pemerintah dari setiap Pihak konvensi wajib memberitahukan kepada Organisasi untuk menyampaikan kepada Pemerintah-pemerintah Pihak yang bersangkutan mengenai fasilitas-fasilitas sebagaimana diatur dalam peraturan ini diduga tidak memadai.

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Apendiks dari lampiran IV

FORMULIR SERTIFIKAT INTERNASIONAL TENTANG
PENCEGAHAN PENCEMARAN OLEH LIMBAH

SERTIFIKAT INTERNASIONAL TENTANG
PENCEGAHAN PENCEMARAN OLEH LIMBAH

Diterbitkan berdasarkan ketentuan Konvensi Internasional tentang Pencegahan Pencemaran dari Kapal, 1973, yang dimodifikasi dengan Protokol 1978 yang terkait dengannya, sebagaimana dirubah, (selanjutnya disebut sebagai "Konvensi"); berdasarkan kewenangan dari Pemerintah:

.....
(nama lengkap negara)

oy .....
(nama lengkap dari pejabat yang berwenang atau organisasi yang ditunjuk berdasarkan ketentuan Konvensi)

Rincian data kapal[1]

Nama kapal .....

Nomor atau huruf pembeda .....

Pelabuhan pendaftaran .....

Jumlah orang yang boleh diangkut di kapal berdasarkan sertifikat .....

Nomor IMO[2] .....

Kapal baru/ama[3]

Tanggal peletakan lunas atau saat kapal dilakukan tahap konstruksi yang sama atau, bila memungkinkan, tanggal pelaksanaan pekerjaan konversi atau perubahan atau modifikasi yang bersifat besar dilakukan .....

DENGAN INI MENYATAKAN :

1 Bahwa kapal telah dilengkapi dengan ala: penanganan/ penyaring/tangki penampung[4] dan jaringan pipa pembuang yang memenuhi Pasal 9 dan 10 dari lampiran IV Konvensi sebagai berikut:

---

[1] Sebagai alternatif, gambarkan kapal apabila hal tersebut dapat dilakukan secara memadai dalam bentuk tabel.

[2] Lengkapi pada "IMO Ship Identification Number Scheme" yang diterapkan oleh Organisasi dengan resolusi A.600(15).

[3] Hapus yang tidak perlu.

[4] Hapus sebagaimana perlunya.

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*1.1 Rincian alat penanganan limbah:
Tipe alat penanganan limbah .....
Nama pembuat .....

Alat penanganan limbah telah disertifikasi oleh pejabat Pemerintah dan telah memenuhi standard pengolahan sebagaimana ditentukan dalam resolusi MEPC.2(IV).

*1.2 Rincian dari alat penyaring:
Tipe alat penyaring .....

Nama pembuat .....

Standar limbah setelah disinfeksi .....

*1.3 Rincian tangki penampung:

Kapasitas total tangki ..... m^3

Lokasi .....

1.4 Sebuah pipa pembuangan limbah ke fasilitas penerimaan dilengkapi dengan standar penyambung ke tepian pantai.

2 Bahwa kapal telah disurvei sesuai dengan Pasal 4 dari Lampiran IV Konvensi ini.

3 Survei menunjukkan bahwa struktur, peralatan, sistem, sambungan, aransemen dan material dari kapal serta kondisinya masih berfungsi dengan memuaskan dan bahwa kapal telah memenuhi semua persyaratan yang berlaku dalam lampiran IV Konvensi.

Sertifikat ini berlaku sampai .....[1] berdasarkan survei sesuai dengan ketentuan Pasal 4 dari lampiran IV Konvensi

Tanggal penyelesaian survei yang menjadi dasar penerbitan Sertifikat adalah ..... (tgl/bln/thn)

Diterbitkan di .....
(tempat penerbitan Sertifikat)

(tgl/bln/thn) .....
(tanggal penerbitan)

.....
(tandatangan pejabat berwenang yang menerbitkan Sertifikat)

(stempel atau cap institusi, seperlunya)

[1] Masukkan tanggal kadaluarsa yang ditentukan oleh pejabat Pemerintah sesuai Pasal 5.1 dari Lampiran IV Konvensi. Tanggal dan bulan ini merupakan tanggal yang sama dengan sebagaimana ditentukan dalam Pasal 1.6 dari Lampiran IV Konvensi

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Pengesahan perpanjangan Sertifikat jika berlaku untuk kurang dari 5 tahun sesuai Pasal 8.3

Kapal telah memenuhi ketentuan Konvensi, dan Sertifikat ini sesuai dengan ketentuan Pasal 8.3 dari Lampiran IV Konvensi, dapat diberlakukan hingga (tgl/bln/thn): .....

Tandatangan: .....
(tandatangan pejabat yang berwenang)

Tempat: .....

Tanggal (tgl/bln/thn): .....
(Stempel atau cap institusi, seperlunya)

Pengesahan dalam hal survei berkala telah selesai dilaksanakan sesuai Pasal 8.4

Kapal telah memenuhi ketentuan Konvensi, dan Sertifikat ini, sesuai dengan ketentuan Pasal 8.4 dari lampiran IV Konvensi, dapat diberlakukan hingga (tgl/bln/thn): .....

Tandatangan: .....
(tandatangan pejabat yang berwenang)

Tempat: .....

Tanggal (tgl/bln/thn): .....

(Stempel atau cap institusi, seperlunya)

Pengesahan untuk memperpanjang masa berlaku Sertifikat sampai tiba di pelabuhan pelaksanaan survei atau untuk periode tertentu sesuai Pasal 8.5 atau 8.6

Sertifikat ini, sesuai dengan ketentuan Pasal 8.5 atau 8.6[1] dari Lampiran IV Konvensi, dapat diberlakukan hingga (tgl/bln/thn): .....

Tandatangan: .....
(tandatangan pejabat yang berwenang)

Tempat: .....

Tanggal (tgl/bln/thn): .....

[1] Hapus salah satunya

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(*Stempel atau cap institusi, seperlunya*)

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APENDIKS IV

PERSETUJUAN TIPE DAN BATASAN-BATASAN PENGOPERASIAN UNTUK INSINERATOR DI KAPAL

(Peraturan 16)

1 Insinerator Kapal seperti yang diuraikan pada peraturan 16.6.1 di atas kapal wajib memiliki suatu IMO sertifikat persetujuan tipe untuk setiap insinerator. Untuk mendapatkan sertifikat tersebut, insinerator wajib didesain dan dibangun sesuai dengan standar yang disetujui seperti yang diuraikan dalam Peraturan 16.6.1. Setiap model wajib tunduk pada suatu uji persetujuan pengoperasian tipe yang ditetapkan pada pabrik atau suatu fasilitas pengujian yang disetujui, dan di bawah tanggung jawab otoritas Pemerintah yang berwenang, dengan menggunakan standar bahan bakar berikut/spesifikasi limbah untuk uji persetujuan tipe untuk menentukan apakah insinerator beroperasi dalam batas-batas yang ditetapkan pada ayat 2 dari apendiks ini :

Endapan minyak terdiri atas	75% Sludge minyak dari HFO
	5% limbah minyak pelumas, dan
	20% air teremulsi.
Limbah padat atas :	50% limbah makanan,
	50% sampah yang mengandung:
	kira-kira 30% kertas,
	kira-kira 40% kardus,
	kira-kira 10% kain lap,
	kira-kira 20% plastik
	Campuran akan memiliki sampai dengan kelembapan 50% dan 7% padatan tahan api.

2 Insinerator seperti yang diuraikan pada peraturan 16.6.1 wajib beroperasi batasan-batasan berikut:

O2 dalam ruang pembakaran:	6 - 12%
CO dalam pipa gas maksimal rata-rata :	200 mg / MJ
jumlah jelaga maksimum rata-rata :	Bacharach 3 atau Ringelman 1 (kapasitas 20%) (suatu jumlah jelaga yang lebih tinggi dapat diterima untuk periode yang sangat singkat seperti saat awal)
Komponen yang tidak terbakar dalam abu residu:	Maksimum 10% berdasarkan Berat
Pipa ruang pembakaran gas kisaran suhu *outlet* :	

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APENDIKS V

INFORMASI YANG AKAN DISERTAKAN DI DALAM CATATAN PENGIRIMAN BAHAN BAKAR
(Peraturan 18.5)

Nama dan Nomor IMO dari kapal penerima:

Pelabuhan:

Tanggal dimulainya pengiriman

Nama, alamat, dan nomor telepon dari pemasok *marine fule oil*:

Nama produk:

Kuantitas dalam metrik ton;

Kepadatan pada15°C, kg/m³ *:

Kandungan sulfur (% m/m)**:

Suatu pernyataan ditandatangani dan disertifikasi oleh perwakilan pemasok bahan bakar minyak bahwa minyak bahan bakar yang disediakan sesuai dengan sub-ayat dari Peraturan 14.1 atau Peraturan 14.4 dan Peraturan 18.3 dari lampiran ini.

---

* Bahan bakar minyak wajib diuji sesuai dengan wiew ISO 3675:1998 or ISO 12185:1996
** Bahan bakar minyak wajib diuji sesuai dengan ISO 3675:1998 or ISO 12185:1996

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APENDIKS VI

PROSEDUR VERIFIKASI BAHAN BAKAR UNTUK

LAMPIRAN VI MARPOL

SAMPEL BAHAN BAKAR MINYAK

(Peraturan 18.8.2)

Prosedur berikut wajib digunakan untuk menentukan apakah bahan bakar minyak yang diserahkan kepada dan digunakan di atas kapal telah tunduk dengan batasan sulfur yang dipersyaratkan oleh Peraturan 14 dari Lampiran VI.

1 **Persyaratan Umum**

1.1 Sampel bahan bakar minyak yang mewakili, yang dipersyaratkan oleh ayat 8.1 Peraturan 18 (sampel MARPOL) wajib digunakan untuk memverifikasi kandungan sulfur bahan bakar minyak yang dipasok ke suatu kapal.

1.2 Suatu otoritas Pemerintah yang berwenang, melalui otoritasnya yang berkompeten, wajib mengatur prosedur verifikasi.

1.3 Laboratorium-laboratorium yang bertanggung jawab untuk prosedur verifikasi yang ditetapkan dalam apendiks ini wajib terakreditasi sepenuhnya[1] untuk tujuan pelaksanaan tes.

2 **Prosedur Verifikasi Tahap 1**

2.1 Sampel MARPOL wajib disampaikan oleh otoritas yang berwenang ke laboratorium.

2.2 Laboratorium wajib:

1. mencatat detail nomor segel dan label sampel pada catatan uji;
2. mengonfirmasi bahwa kondisi segel pada sampel MARPOL belum dirusak; dan
3. menolak setiap sampel MARPOL dengan segel telah rusak.

2.3 Apabila segel sampel MARPOL belum dirusak, laboratorium wajib melanjutkan dengan prosedur verifikasi dan wajib:

1. memastikan bahwa sampel MARPOL secara menyeluruh telah dihomogenkan/ diseragamkan;
2. mengambil dua subsampel dari sampel MARPOL; dan
3. menyegel kembali sampel MARPOL dan mencatat rincian segel baru pada catatan uji.

[1] akreditasi sesuai dengan ISO 17025 atau sesuai dengan standar

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2.4 Kedua subsampel wajib diuji secara berurutan, sesuai dengan metode uji yang ditentukan dengan mengacu kepada Apendiks V. Untuk tujuan prosedur verifikasi ini, hasil tes analisis wajib mengacu sebagai "A" dan "B":

1. Apabila hasil dari "A" dan "B" dalam pengulangan (r) dari metode pengujian, hasil wajib dianggap sah.

2. Apabila hasil dari "A" dan "B" tidak dalam pengulangan (r) dari metode pengujian, kedua hasil wajib ditolak dan dua subsampel baru wajib diambil oleh laboratorium dan dianalisis. Botol sampel wajib disegel kembali sesuai dengan ayat 2.3.3 di atas setelah subsampel yang baru diambil.

2.5 Apabila hasil tes dari "A" dan "B" adalah valid, rata-rata dari kedua hasil wajib dihitung sehingga memberikan hasil yang disebut sebagai "X":

1. Apabila hasil dari "X" sama dengan atau berada di bawah batas yang dipersyaratkan oleh Lampiran VI, minyak bahan bakar wajib dianggap memenuhi persyaratan.

2. Apabila hasil dari "X" lebih besar dari batas yang dipersyaratkan oleh Lampiran VI, prosedur verifikasi Tahap 2 wajib dilaksanakan. Namun, jika hasil dari "X" lebih besar dari batas yang ditetapkan oleh 0,59R (dan R adalah reproduksibilitas dari metode uji), minyak bahan bakar wajib dianggap tidak memenuhi dan tidak ada pengujian lebih lanjut yang diperlukan.

3 Prosedur Verifikasi Tahap 2

3.1 Apabila Tahap 2 dari prosedur verifikasi diperlukan sesuai dengan ayat 2.5.2 di atas, otoritas yang berwenang wajib mengirimkan sampel MARPOL ke laboratorium kedua yang telah terakreditasi.

3.2 Setelah menerima sampel MARPOL laboratorium wajib:
1. mendata rincian jumlah yang telah disegel yang diterapkan sesuai dengan 2.3.3 dan sampel label pada catatan pengujian;
2. mengambil dua subsampel dari sampel MARPOL, dan
3. menyegel kembali sampel MARPOL dan mencatat rincian segel baru pada catatan uji.

3.3 Ke dua sub-sampel wajib diuji dalam secara berurutan, sesuai dengan metode uji yang ditetapkan dalam apendiks V. Untuk tujuan dari prosedur verifikasi ini, hasil pengujian dari tes analisis wajib disebut sebagai "C" dan "D":

1. Apabila hasil dari "C" dan "D" di dalam pengulangan (r) dari metode pengujian, hasil wajib dianggap sah.
2. Apabila hasil dari "C" dan "D" tidak dalam pengulangan (r) dari metode uji, kedua hasil wajib ditolak dan kedua subsampel baru wajib diambil oleh laboratorium dan dianalisis. Botol sampel wajib disegel kembali sesuai dengan ayat 3.2.3 setelah subsampel baru telah diambil.

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3.4 Apabila hasil tes dari "C" dan "D" valid, dan hasil dari "A", "B", "C", dan "D" adalah dalam reproduksibilitas (R) dari metode uji laboratorium wajib membuat rata-rata hasil, yang disebut sebagai "Y".

1. Apabila hasil dari "Y" sama dengan atau berada jauh di bawah batas yang ditetapkan oleh Lampiran VI, minyak bakar wajib dianggap memenuhi persyaratan.
2. Apabila hasil dari "Y" adalah lebih besar dari batasan yang ditetapkan oleh Lampiran VI, minyak bahan bakar gagal memenuhi standar yang ditetapkan oleh Lampiran VI.

3.5 Apabila hasil dari "A", "B", "C", dan "D" tidak dalam reproduksibilitas (R) metode uji, otoritas Pemerintah yang berwenang boleh membuang semua hasil tes dan, atas kebijakannya, mengulangi seluruh proses pengujian.

3.6 Hasil yang diperoleh dari prosedur verifikasi bersifat final.

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Apendiks dari Lampiran IV

FORMULIR SERTIFIKAT INTERNASIONAL TENTANG
PENCEGAHAN PENCEMARAN OLEH LIMBAH

SERTIFIKAT INTERNASIONAL TENTANG
PENCEGAHAN PENCEMARAN OLEH LIMBAH

Diterbitkan berdasarkan ketentuan Konvensi Internasional tentang Pencegahan Pencemaran dari Kapal, 1973, yang dimodifikasi dengan Protokol 1978 yang terkait dengannya, sebagaimana diubah, (selanjutnya disebut sebagai "Konvensi") berdasarkan kewenangan Pemerintah:

.....
(nama lengkap negara)

by .....
(nama lengkap dari pejabat yang berwenang atau organisasi yang ditunjuk berdasarkan ketentuan Konvensi)

Rincian data kapal[1]

Nama kapal .....

Nomor atau huruf pembeda .....

Pelabuhan pencatatan .....

Jumlah orang yang boleh diangkut di kapal berdasarkan sertifikat .....

Nomor IMO[2] .....

Kapal baru/lama[3]

Tanggal peletakan lunas atau saat kapal dilakukan tahap konstruksi yang sama atau, bila memungkinkan, tanggal pelaksanaan pekerjaan konversi atau perubahan atau modifikasi yang bersifat besar dilakukan .....

DENGAN INI MENYATAKAN :

1 Bahwa kapal telah dilengkapi dengan alat penanganan/penyaring/tangki penampung[4] dan jaringan pipa pembuang yang memenuhi Pasal 9 dan Pasal 10 Lampiran IV Konvensi sebagai berikut:

---

[1] Sebagai alternatif, garis-garis cepat secara horizontal dapat ditempatkan untuk memisahkan bagian-bagian yang berbeda.

[2] Merujuk pada "IMO Ship Identification Number Scheme" yang disahkan oleh Organisasi dengan resolusi A.600(15).

[3] Hapus sesuai yang tidak perlu.

[4] Hapus sesuai yang tidak perlu.

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*1.1 Rincian alat penanganan limbah:
Tipe alat penanganan limbah .....
Nama pembuat .....

Alat penanganan limbah telah disertifikasi oleh pejabat Pemerintah dan telah memenuhi standard pengolahan sebagaimana ditentukan dalam resolusi MEPC.2(IV).

*1.2 Rincian dari alat penyaring:
Tipe alat penyaring .....

Nama pembuat .....

Standar limbah setelah disinfeksi .....

*1.3 Rincian tangki penampung:

Kapasitas total tangki .... m^3

Lokasi ....

1.4 Sebuah pipa pembuangan limbah ke fasilitas penerimaan, dilengkapi dengan standar penyambung ke tepian pantai.

2 Bahwa kapal telah disurvei sesuai dengan Pasal 4 Lampiran IV Konvensi ini.

3 Survei menunjukkan bahwa struktur, peralatan, sistem, sambungan, aransemen dan material dari kapal serta kondisinya masih berfungsi dengan memuaskan dan bahwa kapal telah memenuhi semua persyaratan yang berlaku dalam Lampiran IV Konvensi.

Sertifikat ini berlaku sampai .....[1] berdasarkan survei sesuai dengan ketentuan Pasal 4 dari Lampiran IV Konvensi.

Tanggal penyelesaian survei yang menjadi dasar penerbitan sertifikat adalah ..... (tgl/bln/thn)

Diterbitkan di .....
(tempat penerbitan Sertifikat)

(tgl/bln/thn) .....
(tanggal penerbitan)

.....
(tanda tangan pejabat berwenang yang menerbitkan Sertifikat)

(stempel atau cap institusi, seperlunya)

[1] Masukkan tanggal kadaluwarsa yang ditentukan oleh Pejabat Pemerintah sesuai dengan Pasal 6.1 Lampiran IV Konvensi. Tanggal dan bulan ini harus sesuai dengan tanggal ulang tahun sebagaimana ditentukan dalam Pasal 7.8 dari Lampiran IV Konvensi.

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Pengesahan Perpanjangan Sertifikat Jika Berlaku untuk Kurang dari 5 Tahun Sesuai dengan Pasal 8.3

Kapal telah memenuhi ketentuan Konvensi, dan sertifikat ini, sesuai dengan ketentuan Pasal 8.3 Lampiran IV Konvensi, dapat diberlakukan hingga (tgl/bln/thn): .....

Tanda tangan: .....
(tanda tangan pejabat yang berwenang)

Tempat: .....

Tanggal (tgl/bln/thn): .....
(*Stempel atau cap institusi, seperlunya*)

Pengesahan dalam Hal Survei Berkala Telah Selesai Dilaksanakan Sesuai dengan Pasal 8.4

Kapal telah memenuhi ketentuan Konvensi, dan Sertifikat ini, sesuai dengan ketentuan Pasal 8.4 Lampiran IV Konvensi, dapat diberlakukan hingga (tgl/bln/thn): .....

Tanda tangan: .....
(tanda tangan pejabat yang berwenang)

Tempat: .....

Tanggal (tgl/bln/thn): .....

(*Stempel atau cap institusi, seperlunya*)

Pengesahan untuk Memperpanjang Masa Berlaku Sertifikat Sampai Tiba di Pelabuhan Pelaksanaan Survei atau untuk Periode Tertentu Sesuai dengan Pasal 8.5 atau Pasal 8.6

Sertifikat ini, sesuai dengan ketentuan Pasal 8.5 atau Pasal 8.6[1] Lampiran IV Konvensi, dapat diberlakukan hingga (tgl/bln/thn) .....

Tanda tangan: .....
(tanda tangan pejabat yang berwenang)

Tempat: .....

Tanggal (tgl/bln/thn): .....

(*Stempel atau cap institusi, seperlunya*)

---

[1] Hapuslah seperlunya

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Lampiran V

MARPOL 73/78

PERATURAN TENTANG PENCEGAHAN PENCEMARAN YANG DIAKIBATKAN OLEH SAMPAH DARI KAPAL

Peraturan 1

Definisi

Untuk maksud-maksud Lampiran ini :

(1) 'Sampah' adalah semua jenis sisa makanan, limbah domestik dan operasional yang tidak termasuk ikan segar dan bagian-bagiannya, yang dihasilkan selama operasi normal kapal dan yang bertanggung jawab untuk dibuang secara terus menerus atau secara rutin kecuali bahan-bahan yang ditentukan atau terdaftar dalam Lampiran-lampiran pada Konvensi ini.

(2) 'Daratan Terdekat'. Istilah "dari daratan terdekat" adalah dari garis batas dimana laut teritorial dari wilayah yang dipertanyakan ditetapkan sesuai dengan hukum internasional kecuali untuk maksud Konvensi ini, "dari daratan terdekat" dari pantai timur laut Australia wajib berarti dari suatu garis dari suatu titik pada pantai Australia, pada:

11 °00' Lintang Selatan, 142°08' Bujur Timur,

ke titik 10°35' Lintang Selatan,141 °55' Bujur Timur,

selanjutnya menuju ke titik 10°00' Lintang Selatan, 142°00' Bujur Timur,

selanjutnya menuju ke titik 9°10' Lintang Selatan, 143 °52' Bujur Timur,

selanjutnya menuju ke titik 9°00' Lintang Selatan, 144°30' Bujur Timur,

selanjutnya menuju ke titik 10°41' Lintang Selatan, 145°00' Bujur Timur,

selanjutnya menuju ke titik 13°00' Lintang Selatan, 145°00' Bujur Timur

selanjutnya menuju ke titik 15°00' Lintang Selatan, 146°00' Bujur Timur,

selanjutnya menuju ke titik 17°30' Lintang Selatan, 147°00' Bujur Timur,

selanjutnya menuju ke titik 21 °00' Lintang Selatan, 152°55' Bujur Timur,

selanjutnya menuju ke titik 24°30' Lintang Selatan, 154°00' Bujur Timur,

selanjutnya menuju ke titik 24°42' Lintang Selatan, 153°15' Bujur Timur di pantai Australia

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(3) 'Kawasan khusus' adalah suatu kawasan laut yang berdasarkan alasan teknis yang diakui untuk kondisi oseanografi dan ekologisnya dan sifat-sifat khusus dari lalulintasnya pelaksanaan metode-metode khusus yang diwajibkan untuk pencegahan pencemaran laut yang diakibatkan oleh sampah sebagaimana dipersyaratkan. Kawasan-kawasan khusus wajib meliputi wilayah sebagaimana tercantum dalam peraturan 5 lampiran ini.

Peraturan 2

Pemberlakuan

Kecuali diatur sebaliknya secara tegas, ketentuan-ketentuan di dalam lampiran ini wajib berlaku bagi semua kapal.

Peraturan 3

Pembuangan Sampah di Luar Kawasan Khusus

(1) Tunduk pada ketentuan-ketentuan peraturan 4, 5 dan 6 dari Lampiran ini:

(a) pembuangan ke laut semua plastik, termasuk tapi tidak terbatas pada tali sintetis, jaring ikan sintetis, tas plastik dan abu sisa pembakaran produk plastik yang mungkin mengandung racun atau residu logam berat, adalah dilarang;

(b) pembuangan ke laut atas sampah berikut ini wajib dilakukan sejauh mungkin dari daratan terdekat, tetapi dalam hal dilarang dilarang apabila jarak dari daratan terdekat kurang dari :

(i) 25 mil laut untuk material penyekat, pengeras dan pembungkus yang dapat mengapung;

(ii) 12 mil laut untuk sampah makanan dan semua sampah lainnya termasuk produk kertas, kain, kaca, logam, botol, peralatan dapur dan sampah sejenis yang tidak terpakai;

(c) pembuangan ke laut untuk sampah sebagaimana diuraikan dalam sub ayat (b)(ii) dari peraturan ini dapat diijinkan apabila telah lolos melalui mesin penghancur atau pencacah dan dilakukan sejauh mungkin dari daratan, tetapi dalam hal dilarang karena jarak dari daratan terdekat kurang dari 3 mil laut. Sampah yang telah dihancurkan atau dicacah tersebut wajib dapat melewati suatu saringan dengan lubang tidak lebih dari 25 mm.

(2) Apabila sampah bercampur dengan buangan lainnya yang memiliki persyaratan pembuangan lebih ketat yang wajib berlaku.

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Peraturan 4

Persyaratan Khusus untuk Pembuangan Sampah

(1) Tunduk pada ketentuan-ketentuan pada ayat (2) peraturan ini, pembuangan setiap bahan sebagaimana diatur dalam Lampiran ini dilarang dari anjungan tetap dan terapung yang digunakan dalam eksplorasi, eksploitasi dan yang terkait dengan pengolahan sumber minera dasar laut di lepas pantai, dan cari semua kapal yang sedang berlayar sepanjang atau pada jarak 500 m dari anjungan tersebut.

(2) Pembuangan sampah makanan ke laut dapat di ijinkan apabila telah melewati suatu mesin penghancur atau pencacah yang berada di anjungan tetap atau terapung tersebut yang ditempatkan lebih dari 12 mil laut dari daratan dan semua kapal lainnya pada saat sedang berlayar atau pada jarak 500 m dari anjungan dimaksud. Sampah makanan yang telah dihancurkan atau dicacah wajib dapat melalui suatu saringan dengan lubang berdiameter tidak lebih dari 25 milimeter.

Peraturan 5

Pembuangan Sampah di Kawasan-Kawasan Khusus

(1) Yang dimaksud kawasan-kawasan khusus dalam Lampiran ini adalah kawasan Laut Mediterania, kawasan Laut Baltik, kawasan Laut Hitam, Kawasan Laut Merah "kawasan Teluk", kawasan Laut Utara, kawasan Laut Antartika dan wilayah kawasan Karibia termasuk Teluk Meksiko dan Laut Karibia, yang ditentukan sebagai berikut:

(a) ***Kawasan Laut Mediterania*** adalah kawasan Laut Mediterania termasuk teluk dan laut di sekitarnya dengan batas-batas antara Laut Mediterania dan Laut Hitam, berada pada paralel 41 ° Lintang Utara (LU) dan dibatasi ke sebelah barat dengan Selat Gibraltar pada 5°36' Bujur Barat (BB).

(b) Kawasan ***Laut Baltik*** adalah kawasan Laut Baltik termasuk Teluk Bothnia dan Teluk Finlandia serta jalur masuk ke Laut Baltik dibatasi pada garis lintang sejajar Skaw di Skagerrak pada 57°44.8' LU.

(c) ***Kawasan Laut Hitam*** adalah kawasan Laut Hitam yang berbatasan antara Laut Mediterania dan Laut Hitam yang tertetak pada garis lintang sejajar pada 41 ° LU.

(d) ***Kawasan Laut Merah*** adalah kawasan Laut Merah termasuk Teluk Suez dan Aqaba dibatasi di sebelah selatan pada garis lurus antara Ras si Ane (12°28 5' LU, 43°19.6' Bujur Timur (BT)) dan Husn Murad (12°40.4' LU, 43°30.2 BT).

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(e) ***Kawasan Teluk*** adalah kawasan laut yang berlokasi di barat laut dari garis lurus antara Ras al Hadd (22°30' LU, 59°48' BT) and Ras at Fasteh (25°04'LU ,61 °025 BT).

(f) ***Kawasan Laut Utara*** adalah kawasan Laut Utara termasuk kawasan laut di sekitarnya dengan batasan antara:

(i) laut Utara ke arah selatan dari garis 62° LU dan ke arah timur dari garis 4° Bujur Barat (BB);

(ii) kawasan Skagerrak ke arah selatan hingga batas sebelah timur kawasan Skaw pada garis 57°44.8' LU, dan

(iii) kawasan Selat Inggris dan jalur pendekatan dari arah timur dengan pada garis 5° BB dan dari arah utara pada garis 48°30' LU.

(g) ***Kawasan Antartika*** adalah kawasan laut pada garis 60° Lintang Selatan (LS).

(h) ***Kawasan Karibia Besar*** sebagaimana ditentukan dalam pasal 2, ayat 1 dari Konvensi tentang Perlindungan dan Pembangunan Lingkungan Laut Kawasan Karibia Besar (Cartagena de Indias, 1983), berarti lingkungan Teluk Meksiko dan Laut Karibia termasuk pantai dan laut di dalam-nya serta sebagian Samudera Atlantik dalam batas garis 30° LU membentang dari Florida ke arah timur hingga garis 77°30' Bujur Barat, menuju titik perpotongan antara garis 20° LU dengan garis 59° BB, selanjutnya menuju titik perpotongan antara garis 7°20' LU dengan garis 50° BB, yang berlanjut ke aran barat laut yang merupakan perbatasan sebelah timur dari Guyana Perancis

(2) Tunduk ketentuan-ketentuan peraturan 6 dari Lampiran ini:

(a) pembuangan sampah ke laut berikut ini dilarang:

(i) semua plastik, termasuk tapi tidak terbatas pada tali simetis, jala sintetis, kantung sampah plastik dan abu sisa pembakaran dari produk plastik yang mungkin mengandung racun atau residu logam berat; dan

(ii) semua sampah lainnya termasuk produk-produk kertas, karpet, kaca, logam, botol, barang-barang rumah tangga, pengganjal, penguat dan bahan-bahan pembungkus

(b) kecuali diatur dalam subayat (c) dari ayat ini pembuangan sampah makanan ke laut wajib dilakukan sejauh mungkin dari daratan, tetapi dengan catatan tidak kurang dari 12 mil laut dari daratan terdekat.

(c) pembuangan sampah makanan ke Kawasan Karibia Besar yang telah melalui suatu mesin penghancur atau pencacah wajib dilakukan sejauh mungkin dari daratan dengan catatan tidak kurang dari 3 mil laut dari daratan terdekat, sampah makanan yang telah dihancurkan atau dicacah tersebut wajib dapat melalui suatu saringan dengan lubang berdiameter tidak lebih dari 25 mm.

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(3) Apabila sampah tercampur dengan sampah lainnya yang memiliki persyaratan pembuangan berbeda persyaratan yang lebih ketat yang wajib berlaku.

(4) Fasilitas penampungan di kawasan khusus

(a) Pemerintah dari setiap Pihak dari Konvensi yang garis pantainya berbatasan dengan suatu kawasan khusus, wajib memastikan bahwa sesegera mungkin di semua pelabuhan disuatu kawasan khusus dilengkapi dengan fasilitas penampungan yang memadai sebagaimana diatur sesuai dengan peraturan 7 dari Lampiran ini, dengan memperhatikan kebutuhan-kebutuhan khusus kapal yang sedang beroperasi di kawasan tersebut.

(b) Pemerintah dari setiap Pihak yang bersangkutan wajib memberitahukan kepada Organisasi mengenai langkah-langkah yang sudah dilakukan sesuai dengan sub ayat (a) dari peraturan ini. Sejak menerima pemberitahuan yang cukup, Organisasi wajib menetapkan suatu tanggal sejak persyaratan-persyaratan dari peraturan ini yang berkenaan dengan kawasan-kawasan tersebut wajib memberlakukan. Organisasi wajib memberitahukan kepada semua Pihak mengenai tanggal yang telah ditetapkan tidak kurang dari dua belas bulan sebelumnya dari tanggal yang dimaksud.

(c) Setelah tanggal ditentukan, kapal-kapal yang singgah di pelabuhan di kawasan khusus tersebut apabila fasilitas-fasilitas belum tersedia wajib tetap memenuhi persyaratan-persyaratan dari peraturan ini.

(5) Meskipun telah diatur dari ayat 4 dari peraturan ini, aturan-aturan berikut ini berlaku untuk kawasan Antartika:

(a) Pemerintah dari setiap Pihak dari Konvensi yang kapal-kapalnya berangkat menuju atau tiba dari kawasan Antartika wajib memastikan bahwa sesegera mungkin dapat menggunakan fasilitas-fasilitas yang memadai yang disediakan untuk menerima semua sampah dari seluruh kapal, tanpa menyebabkan keterlambatan dan sesuai dengan kebutuhan kapal yang menggunakannya.

(b) Pemerintah dari setiap Pihak pada Konvensi wajib memastikan bahwa semua kapal yang berhak mengibarkan benderanya, sebelum memasuki kawasan Antartika, telah memiliki kapasitas yang mencukupi di atas kapal untuk menampung semua sampah selama beroperasi di kawasan tersebut dan telah menyelesaikan pengaturan-pengaturan untuk membuang sampah dimaksud di suatu fasilitas penampungan setelah meninggalkan kawasan tersebut.

Peraturan 6

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Pengecualian

Peraturan 3, 4 dan 5 dari Lampiran ini wajib tidak berlaku untuk:

(a) pembuangan sampah dari suatu kapal yang diperlukan untuk maksud mengamankan keselamatan suatu kapal dan orang-orang yang ada di atasnya atau penyelamatan jiwa di laut; atau

(b) sampah yang terbuang ke laut sebagai akibat dari kerusakan suatu kapal atau perlengkapannya dengan syarat bahwa semua upaya pencegahan yang wajar telah dilakukan sebelum dan sesudah terjadinya kerusakan, dengan maksud mencegah atau meminimalisasi terjadinya terbuangnya sampah tersebut; atau

(c) hilangnya jaring sintetis penangkap ikan secara tidak sengaja, dengan syarat bahwa semua upaya pencegahan telah dilakukan untuk mencegah kehilangan dimaksud.

Peraturan 7

Fasilitas Penampungan

(1) Pemerintah dari setiap Pihak pada Konvensi wajib memastikan ketentuan mengenai fasilitas penampungan sampah di pelabuhan dan terminal, tanpa menyebabkan keterlambatan kapal, sesuai dengan kebutuhan kapal-kapal yang menggunakannya.

(2) Pemerintah dari setiap Pihak wajib memberitahukan kepada Organisasi untuk menyampaikan kepada Para Pihak yang bersangkutan mengenai semua hal dimana fasilitas-fasilitas tersebut disediakan berdasarkan peraturan ini diduga tidak memadai.

Peraturan 8

Pengawasan Negara Pelabuhan terhadap Persyaratan Operasional*

(1) Suatu kapal pada saat berada di suatu pelabuhan di Pihak lainnya, tunduk pada pemeriksaan para petugas yang diberi kewenangan oleh Pihak tersebut berkenaan dengan persyaratan-persyaratan operasional berdasarkan Lampiran ini, apabila terdapat alasan-alasan kuat yang meyakinkan bahwa nakhoda atau awak kapal tidak terbiasa dengan prosedur-prosedur utama di atas kapal berkaitan dengan pencegahan pencemaran yang diakibatkan oleh sampah

*Merujuk pada prosedur-prosedur mengenai Pengawasan Negara Pelabuhan sebagaimana telah diterima oleh Organisasi berdasarkan resolusi A.787(19) dan sebagaimana telah diubah berdasarkan A.882(21), lihat publikasi Organisasi IMO IA 950.

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(2) Berdasarkan kekhususan sebagaimana diatur pada ayat (1) peraturan ini, Para Pihak wajib mengambil langkah-langkah dimaksud yang akan memastikan bahwa kapal tersebut wajib tidak akan berlayar sampai situasi memenuhi ketentuan sesuai dengan persyaratan-persyaratan Lampiran ini.

(3) Prosedur-prosedur yang terkait dengan pengawasan Negara pelabuhan sebagaimana diatur dalam Pasal 5 dari Konvensi ini berlaku wajib untuk peraturan ini.

(4) Tidak satupun dalam peraturan ini wajib diartikan untuk membatasi hak dan kewajiban suatu Pihak yang melakukan pengawasan atas pelaksanaan persyaratan-persyaratan operasional yang secara khusus diatur dalam Konvensi ini.

Peraturan 9

Plakat, Perencanaan Pengelolaan Sampah dan

Penyimpanan Catatan Sampah

(1) (a) Setiap kapal dengan ukuran panjang 12 m atau lebih secara keseluruhan wajib memasang plakat yang menginformasikan kepada awak kapal dan penumpang mengenai persyaratan pembuangan dari peraturan 3 dan 5 Lampiran ini sebagaimana dapat diberlakukan.

(b) Plakat wajib ditulis dalam bahasa kerja dari personil kapal dan untuk kapal yang sedang berlayar menuju ke pelabuhan atau terminal lepas pantai dibawah yurisdiksi dari para pihak Lain pada konvensi ini, wajib juga dibuat dalam bahasa inggris, Perancis atau Spanyol.

(2) Setiap kapal dengan tonase kotor 400 atau lebih, dan setiap kapal yang disertifikasi untuk mengangkut 15 orang atau lebih, wajib membawa suatu rencana pengelolaan sampah yang wajib dipatuhi oleh awak kapal. Rencana ini wajib memberikan prosedur-prosedur tertulis untuk pengumpulan, penyimpanan dan pembuangan sampah, termasuk penggunaan perlengkapan di atas kapal. Hal itu wajib berlaku juga untuk orang-orang yang bertugas menjalankan rencana tersebut. Rencana tersebut wajib sesuai dengan pedoman Organisasi* dan ditulis dalam bahasa kerja dari awak kapal tersebut.

* Menujuk pada pedoman mengenai pengembangan rencana pengelolaan sampah sebagaimana telah diterima oleh Komite Perlindungan Lingkungan Laut dari Organisasi berdasarkan resolusi MEPC.71 (38), Para 6 (CPC Circ.317 dan publikasi penyatuan IMO IA 656 E.

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(3) Setiap kapal dengan tonase kotor 400 atau lebih, dan setiap kapal yang disertifikasi untuk mengangkut 15 orang atau lebih sedang berlayar menuju ke pelabuhan atau terminal lepas pantai dibawah yurisdiksi Para Pihak lainnya pada Konvensi dan setiap anjungan tetap atau terapung yang digunakan dalam eksplorasi dan eksploitasi dasar laut, wajib dilengkapi dengan suatu Buku Catatan Sampah. Buku Catatan Sampah tersebut, baik sebagai bagian dari buku catatan harian kapal yang resmi atau secara sebaliknya, wajib merupakan bentuk yang diuraikan dalam apendiks dalam Lampiran ini;

(a) setiap pelaksanaan pembuangan, atau selesainya pembakaran, wajib dicatat dalam Buku Catatan Sampah dan ditandatangani pada tanggal pembakaran atau pembuangan oleh petugas yang bertanggungjawab. Setiap halaman Buku Catatan Sampah yang telah penuh wajib ditandatangani oleh Nakhoda kapal. Penulisan dalam Buku Catatan Sampah tersebut wajib setidak-tidaknya dalam bahasa Inggris, Perancis atau Spanyol. Apabila penulisan juga dibuat dalam suatu bahasa resmi dari Negara yang bendera kapalnya berhak dikibarkan juga digunakan, penulisan dalam bahasanya wajib berlaku dalam hal terjadi sengketa atau perbedaan;

(b) penulisan untuk setiap pembakaran atau pembuangan wajib mencantumkan tanggal dan waktu, posisi kapal, uraian sampah dan perkiraan jumlah sampah yang dibakar atau dibuang;

(c) buku Catatan Sampah wajib disimpan di atas kapal dan di tempatkan sebaik mungkin untuk pemeriksaan pada waktu yang tepat. Dokumen ini wajib disimpan untuk suatu jangka waktu dua tahun sejak catatan terakhir dibuat;

(d) dalam hal terjadi pembuangan, terbuangnya atau kehilangan yang tidak disengaja sebagaimana dirujuk dalam peraturan 6 dari Lampiran ini, suatu catatan wajib dilmuat dalam Buku Catatan Sampah mengenai keadaannya, dan alasan-alasan kehilangan dimaksud.

(4) Otoritas Pemerintah yang berwenang dapat mengabaikan persyaratan untuk Buku-Buku Catatan Sampah bagi:

(a) setiap kapal yang berlayar selama 1 jam atau kurang yang disertifikasi untuk mengangkut 15 orang atau lebih; atau

(b) anjungan tetap atau terapung yang sedang digunakan untuk eksplorasi dan eksplorasi dasar laut.

(5) Pejabat yang berwenang dari Pemerintah Suatu Pihak pada Konvensi dapat memeriksa Buku Catatan Sampah di atas setiap kapal yang peraturan ini diberlakukan pada saat kapal tersebut berada di pelabunan atau terminal lepas pantai dan dapat membuat suatu salinan mengenai setiap tulisan dalam buku tersebut, dan dapat meminta nakhoda kapal untuk menyatakan bahwa salinan tersebut merupakan salinan yang benar dari tulisan tersebut.

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Setiap salinan tesebut, yang dinyatakan oleh nakhoda kapal sebagai salinan yang benar dari suatu tulisan Buku Catatan Sampah kapal, wajib dijinkan dalam setiap proses hukum sebagai bukti dari fakta-fakta yang dinyatakan dalam tulisan tersebut. Pemeriksaan suatu Buku Catatan Sampah dan pembuatan suatu salinan resmi dari otoritas yang berwenang berdasarkan ayat ini wajib dilakukan sesegera mungkin tanpa menyebabkan keterlambatan kapal.

(6) Dalam hal kapal dibangun sebelum tanggal 1 Juli 1997, peraturan ini wajib diberlakukan sejak tanggal 1 Juli 1998.

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Apendiks Lampiran V

FORMULIR BUKU CATATAN SAMPAH

Nama kapal : .....

Nomor atau huruf pengenal : .....

IMO No. .....

Periode : Dari : Kepada :

1. Pendahuluan

Sesuai dengan peraturan 9 Lampiran V dari Konversi Internasional tentang Pencegahan Pencemaran dari Kapal Tahun 1973 sebagaimana telah diubah dengan Protokol Tahun 1978 (MARPOL 73/78), suatu catatan akan disimpan dari setiap operasional pembuangan atau pembakaran yang telah diselesaikan. Hal ini mencakup pembuangan ke laut, ke fasilitas-fasilitas penampungan, atau ke kapal-kapal lainnya.

2. Sampah dan Pengelolaan Sampah

Sampah meliputi semua jenis sampah makanan, sampah domestik dan sampah operasional, tetapi tidak termasuk ikan segar dan bagian-bagiannya, yang dihasilkan selama operasional normal dari kapal dan dapat dibuang secara berkesinambungan atau secara rutin kecuali bahan-bahannya ditentukan atau terdaftar dalam lampiran-lampiran lain pada MARPOL 78/78 (seperti minyak, limbah atau bahan cair beracun).

Pedoman pelaksanaan Lampiran V dari MARPOL 73/78* seharusnya juga dirujuk sebagai informasi yang relevan.

3. Uraian sampah

Sampah yang akan dikelompokkan dalam beberapa kategori untuk maksud-maksud dalam buku catatan ini adalah sebagai berikut:

1. Plastik-Plastik
2. Pengganjal yang dapat mengapung, penguat, atau bahan pengemas
3. Produk berbahan Kertas , majun, kaca, logam, botol-botol, bahan rumah tangga, dsb yang dapat tenggelam.

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* Merujuk pada "Pedoman Pelaksanaan Lampiran V dari MARPOL 73/78 sebagaimana telah diubah berdasarkan resolusi MEPC.59(33) dan MEPC.92(45)"

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4. Residu kargo , produk kertas, majun, kaca, logam, botol, tembikar, dsb

5. Sampah makanan

6. Abu pembakaran.

4. Penulisan Buku Catatan Sampah

Penulisan Buku Catatan Sampah wajib dilakukan pada setiap kegiatan sebagai berikut:

(a). Pada saat sampah dibuang ke laut :

(i) Tanggal dan waktu pembuangan

(ii) Posisi kapal (garis lintang dan garis bujur). Catatan: untuk pembuangan residu kargo, termasuk posisi mulai dan berhentinya pembuangan.

(iii) Kategori sampah yang dibuang

(iv) Perkiraan jumlah pembuangan untuk setiap kategori dalam meter kubik

(v) Tanda tangan petugas yang bertanggung jawab dalam operasi

(b). Pada saat sampah dibuang ke fasilitas penampungan di darat atau ke kapal lain:

(i) Tanggal dan waktu pembuangan

(ii) Pelabuhan atau fasilitas, atau nama kapal

(iii) Kategori sampah yang dibuang

(iv) Perkiraan jumlah pembuangan untuk setiap kategori dalam meter kubik

(v) Tanda tangan petugas penanggung jawab operasi

(c). Pada saat sampah dibakar:

(i) Tanggal dan waktu dimulai dan berakhirnya pembakaran

(ii) Posisi kapal (garis lintang dan garis bujur)

(iii) Perkiraan jumlah yang dibakar dalam meter kubik

(iv) Tanda tangan petugas yang bertanggung jawab dalam operasi

(d). Pembuangan sampah karena tidak disengaja atau pengecualian lainnya

(i) Waktu kejadian

(ii) Pelabuhan atau posisi kapal pada saat kejadian

(iii) Perkiraan jumlah dan kategori dari sampah

(iv) Keadaan pembuangan, terbuangnya atau hilangnya, alasan yang mendasari dan uraian umum.

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4.2 Tanda Terima

Nakhoda seharusnya memperoleh dari operator fasilitas penampungan di pelabuhan atau dari nahkoda kapal yang menerima sampah, suatu tanda terima atau sertifikat yang menguraikan jumlah sampah yang dialihkan, Tanda terima atau sertifikat tersebut harus disimpan di atas kapal dengan Buku Catatan Sampah selama dua tahun.

4.3 Jumlah Sampah

Jumlah sampah di atas kapal seharusnya diperkirakan dalam meter kubik, apabila dimungkinkan dipisahkan sesuai kategorinya. Buku Catatan Sampah memuat banyak rujukan-rujukan untuk memperkirakan jumlah sampah. Hal tersebut diakui keakuratannya dalam hal penghitungan jumlah sampah yang tersisa untuk pemeriksaan. Perkiraan volume akan dibedakan sebelum dan sesudah pengolahan. Beberapa prosedur pengolahan dapat tidak digunakan untuk memperkirakan suatu volume seperti pengolahan yang berkelanjutan dari sampah makanan. Faktor-faktor tersebut seharusnya diberikan dalam pertimbangan pada saat melakukan dan memeriksa penulisan suatu catatan.

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Lampiran VI
MARPOL 73/78
PERATURAN TENTANG PENCEGAHAN
PENCEMARAN UDARA DARI KAPAL

BAB I

UMUM

Peraturan 1
Penerapan

Ketentuan-ketentuan lampiran ini wajib berlaku bagi semua kapal, kecuali apabila dinyatakan sebaliknya secara tegas lain dalam Peraturan 3, Peraturan 5, Peraturan 6, Peraturan 13, Peraturan 15, Peraturan 16, dan Peraturan 18 lampiran ini

Peraturan 2
Definisi

Untuk maksud Lampiran ini :

1 Lampiran adalah Lampiran VI pada Konvensi Internasional untuk Pencegahan Pencemaran dari Kapal Tahun 1973 (MARPOL), sebagaimana diubah dengan Protokol Tahun 1978 yang terkait daripadanya (MARPOL 73/78) dan sebagaimana telah diubah dengan Protokol Tahun 1997, sebagaimana telah diubah oleh organisasi, dengan syarat bahwa perubahan-perubahan dimaksud diterima dan berlaku sesuai dengan ketentuan-ketentuan Pasal 16 dari konvensi ini.

2 Tahapan pembangunan yang setara merupakan tahapan di mana :
1. pembangunan dapat diidentifikasi sejak dimulainya kapal dibangun; dan
2. perakitan kapal dimaksud telah diselesaikan mencapai minimal 50 ton atau satu persen dari perkiraan total berat bahan, mana yang lebih kecil.

3 Tanggal ulang tahun adalah hari dan bulan setiap tahun yang akan sesuai dengan tanggal berakhirnya masa berlaku Sertifikat Internasional Pencegahan Pencemaran Udara.

4 Peralatan pengendali pembantu adalah suatu sistem, fungsi, atau strategi pengendalian yang dipasang pada suatu mesin diesel laut yang digunakan untuk melindungi mesin dan/atau perlengkapan pembantu terhadap kondisi operasional yang dapat mengakibatkan kerusakan atau kegagalan, atau yang digunakan untuk memfasilitasi pada waktu menghidupkan mesin. Suatu alat pengendalian pembantu yang dapat juga berupa suatu strategi atau ukuran yang telah didemonstrasikan secara baik yang tidak merusak peralatan tersebut.

5 Pengisian terus-menerus didefinisikan sebagai suatu proses pada saat limbah dimasukkan ke dalam ruang pembakaran tanpa bantuan manusia sementara insinerator berada dalam kondisi operasi normal dengan suhu operasi ruang pembakaran antara 850 ° C dan 1200 ° C.

6 Peralatan deteksi adalah suatu alat untuk mengukur, mendeteksi, atau menanggapi operasi variabel (Misalnya, kecepatan mesin, temperatur, tekanan hisap atau parameter lainnya) dengan maksud untuk mengaktifkan, modulasi, menunda atau menonaktifkan pengoperasian setiap komponen atau fungsi sistem kontrol emisi seperti sistem efektivitas

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kontrol emisi berkurang dalam kondisi yang ditentukan selama operasi normal, kecuali apabila penggunaan alat dimaksud secara substansial dimasukkan ke dalam prosedur sertifikasi uji emisi yang diterapkan.

7 Emisi adalah setiap pelepasan bahan-bahan dari kapal ke atmosfir atau laut, tunduk pada pengawasan pada lampiran ini.

8 Kawasan Kontrol Emisi adalah kawasan tempat diterapkan aturan khusus terkait dengan emisi dari kapal yang diperlukan untuk mencegah, mengurangi, dan mengendalikan pencemaran udara dari NOx atau SOx dan bahan lainnya atau ketiga tipe emisi di atas dan keberadaannya berdampak bagi kesehatan manusia dan lingkungan. Kawasan Kontrol Emisi wajib meliputi sebagaimana tercantum dalam, atau yang ditunjuk berdasarkan, Peraturan 13 dan Peraturan 14 lampiran ini.

9 Bahan bakar adalah setiap bahan bakar yang dikirim ke atau dimaksudkan untuk keperluan pembakaran mesin sebagai penggerak atau pengoperasian di atas suatu kapal, termasuk bahan bakar yang dimurnikan dan sisa bahan bakar.

10 Tonase kotor adalah tonase kotor yang dihitung sesuai dengan perhitungan tonase sesuai dengan peraturan pengukuran yang tercantum pada Lampiran I dalam Konvensi Internasional tentang Pengukuran Tonase Kapal, 1969 atau Konvensi penggantinya.

11 Instalasi dalam kaitannya dengan Peraturan 12 lampiran ini, adalah instalasi dari sistem, peralatan, termasuk unit pemadam kebakaran portabel, insulasi, atau material lainnya di atas suatu kapal tetapi tidak termasuk perbaikan atau pengisian kembali sistem, peralatan, insulasi, atau material lain yang dipasang sebelumnya, atau pengisian kembali unit pemadam kebakaran portabel.

12 Pemasangan yang dimaksud adalah suatu mesin diesel yang dipasang pada suatu kapal, termasuk tambahan mesin diesel portabel, hanya jika bahan bakarnya, pendinginan, atau sistem pembuangannya merupakan bagian utuh dari kapal. Suatu sistem bahan bakar dianggap bagian utuh dari kapal apabila secara permanen dipasang di kapal. Definisi ini mencakup mesin diesel yang digunakan untuk melengkapi atau menambah kapasitas daya dari kapal dan diperuntukkan menjadi bagian utuh dari kapal.

13 Strategi kontrol emisi yang irasional adalah setiap strategi atau ukuran ketika kapal dioperasikan dalam kondisi normal sehingga mengurangi efektivitas dari sistem kontrol emisi sampai pada suatu tingkat di bawah yang diharapkan sesuai dengan pengujian emisi yang dapat diterapkan.

14 Mesin diesel kapal adalah setiap mesin pembakaran dalam yang menggunakan bahan bakar cair atau dua jenis bahan bakar, yang diberlakukan berdasarkan Peraturan 13 lampiran ini, termasuk sistem *booster* / senyawa jika digunakan.

15 Koda teknis ncx adalah Koda Teknis Pengendalian Emisi Nitrogen Oksida dari Mesin Diesel Kapal, sebagaimana telah diterima oleh Konferensi, resolusi 2 Konferensi MARPOL 1997, sebagaimana telah diubah oleh organisasi, dengan syarat bahwa perubahan-perubahan tersebut telah diterima dan berlaku sesuai dengan ketentuan Pasal 16 dari Konvensi ini.

16 Bahan-bahan perusak lapisan ozon adalah bahan-bahan yang diatur dalam ayat 4 Pasal 1 dari Protokol Montreal mengenai Bahan-Bahan yang Merusak Lapisan Ozon, 1987, tercantum dalam Lampiran A, Lampiran B, Lampiran C, atau Lampiran E dari Protokol

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tersebut yang berlaku pada saat yang sama dari penerapan atau penafsiran lampiran ini.

Bahan-bahan perusak lapisan ozon yang dapat ditemukan di atas kapal termasuk, tapi tidak tercatas pada:

Halon 1211 Bromochlorodiflucromethane
Halon 1301 Bromotrifluoro
Halon 2402 1.2-dibromo-1.1.2,2-tetrafluoroethane (juga dikenal sebagai Halon 114B2)
CFC-11 Trichlorofluoromethane
CFC-12 Dichlorodifluoromethane
CFC-113 1.1.2-Trichloro-1.2.2-trifluoroethane
CFC-114 1.2-Dichloro-1.1.2.2-tetrafluoroethane
CFC-115 Chloropentafluoroethane

17 Pembakaran di atas kapal adalah pembakaran limbah atau bahan lain di atas kapal apabila limbah atau bahan lain dimaksud dihasilkan selama kapal beroperasi normal.

18 Insenerator kapal adalah fasilitas kapal yahng dirancang dengan tujuan utama untuk pembakaran limbah.

19 Pembangunan kapal adalah pada saat peletakan lunas kapal atau tahapan konstruksi yang setara.

20 Minyak kotor adalah endapan dari bahan bakar atau minyak pelumas, limbah minyak pelumas dari mesin utama atau bantu atau limbah minyak hasil pemisahan air bilga kapal, peralatan penyaringan minyak atau sisa minyak yang ditampung.

21 Kapal tangki minyak adalah kapal tangki minyak sebagaimana didefinisikan dalam Peraturan 1 dari Lampiran I atau kapal tangki yang mengangkut bahan kimia sebagaimana dimaksud dalam Peraturan 1 Lampiran II Konvensi ini.

Peraturan 3
Pengecualian dan Pembebasan

Umum

1 Peraturan-peraturan dari lampiran ini wajib tidak berlaku untuk:

1. setiap emisi yang diperlukan untuk maksud mengamankan keselamatan suatu kapal atau penye amatan jiwa di laut; atau

2. setiap emisi yang dihasilkan dari kerusakan suatu kapal aaupun peralatannya:

.2.1 dengan syarat bahwa semua tindakan pencegahan telah diambil setelah terjadinya kerusakan atau ditemukannya emisi untuk maksud pencegahan atau pengurangan emisi; dan

.2.2 kecuali apabila pemilik atau nakhoda bertindak secara sengaja menimbulkan kerusakan, atau dengan sengaja melakukan keceroboh an yang mengakibatkan kerusakan.

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Uji Coba Pengurangan Emisi Kapal dan Penelitian Teknologi Pengawasan

2 Otoritas Pemerintah yang berwenang dari suatu Pihak, bekerja sama dengan para otoritas Pemerintah yang berwenang lainnya yang sesuai, menerbitkan suatu pembebasan terhadap ketentuan-ketentuan spesifik dari lampiran ini untuk suatu kapal yang melakukan uji coba untuk pengembangan teknologi pengurangan emisi dan pengawasan kapal serta program rancang bangun mesin. Pembebasan dimaksud wajib hanya diberikan apabila penerapan Ketentuan-ketentuan spesifik dari Lampiran atau kode NOx Tahun 2008 yang telah direvisi teknis dapat menghambat penelitian pengembangan program teknologi atau program rancang bangun mesin. Suatu Izin untuk pembebasan dimaksud wajib hanya diberikan untuk jumlah minimum kapal-kapal yang diperlukan dan tunduk pada ketentuan sebagai berikut :

1. untuk mesin diesel kapal dengan volume masing-masing silinder sejumlah sampai dengan 30 liter, dengan jangka waktu uji coba berlayar wajib tidak melebihi 18 bulan. Apabila diperlukan tambahan waktu, suatu otoritas Pemerintah yang berwenang yang memberikan izin atau otoritas Pemerintah yang dapat memberikan suatu izin pembaharuan untuk satu tambahan jangka waktu 18 bulan; atau

2. untuk mesin diesel laut dengan volume masing-masing silinder sejumlah atau di atas 30 liter, jangka waktu uji coba berlayar wajib tidak melebihi 5 tahun dan wajib mensyaratkan untuk peninjauan kembali oleh otoritas Pemerintah yang berwenang yang mengizinkan atau otoritas-otoritas Pemerintah yang berwenang pada setiap survei antara. Suatu izin dapat ditarik berdasarkan peninjauan kembali apabila pengujian tersebut belum sesuai dengan ketentuan-ketentuan izin dimaksud atau apabila ditetapkan bahwa teknologi atau program tidak seperti menghasilkan suatu hasil yang efektif dalam penurunan atau pengendalian emisi dari kapal. Apabila hasil peninjauan kembali oleh Otoritas pemerintah yang berwenang atau otoritas Pemerintah yang berwenang menetapkan bahwa tambahan waktu diperlukan untuk melakukan tes terhadap teknologi atau program tertentu, suatu izin dapat diperbaharui untuk suatu jangka waktu yang tidak lebih dari lima tahun.

Emisi dari Kegiatan Penambangan Dasar Laut

3.1 Emisi yang secara langsung ditimbulkan dari eksplorasi, eksploitasi dan proses pengolahan lepas pantai atas sumber-sumber daya mineral dasar laut, yang konsisten dengan Pasal 2(3)(b) (ii) dari konvensi ini, dapat dibebaskan dari ketentuan-ketentuan Lampiran ini. Emisi tersebut meliputi sebagai berikut:

.1 emisi yang dihasilkan dari pembakaran bahan-bahan yang semata-mata dan secara langsung dihasilkan dari eksplorasi, eksploitasi, dan proses pengolahan lepas pantai atas sumber-sumber daya mineral dasar laut, termasuk tapi tidak terbatas pada pembakaran hidrokarbon dan pembakaran yang dihasilkan dari proses pemotongan encapan, dan/ atau cairan-cairan yang digunakan selama penyelesaian pengeboran dan operasi pengujian, serta pembakaran yang timbul dari kondisi yang tidak terduga;

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.2 pelepasan gas-gas dan senyawa-senyawa yang mudah menguap yang terbawa dalam fluida pengeboran dan potongan batuan;

.3 emisi yang dihasilkan semata-mata dan secara langsung dari pengolahan, penanganan, atau penyimpanan mineral-mineral dasar laut ; dan

.4 emisi-emisi dari mesin diesel laut yang semata-mata digunakan pada eksplorasi, eksploitasi proses pengolahan lepas pantai atas sumber-sumber daya mineral dasar laut.

.3.2 Persyaratan-persyaratan Peraturan 18 dari lampiran ini wajib tidak berlaku untuk penggunaan hidrokarbon yang diproduksi dan digunakan secara terus menerus di tempat sebagai bahan bakar, apabila disetujui oleh otoritas Pemerintah yang berwenang.

Peraturan 4
Persamaan

1 Otoritas Pemerintah yang berwenang dari suatu pihak dapat mengizinkan setiap pemasangan, bahan, peralatan atau perlengkapan untuk dipasang di kapal atau prosedur lainnya, bahan bakar alternatif atau metode yang disetujui sesuai dengan yang dipersyaratkan oleh lampiran ini apabila efektif untuk pengurangan emisi seperti yang dipersyaratkan lampiran ini termasuk setiap standar sebagaimana tercantum dalam Peraturan 13 dan Peraturan 14.

2 Otoritas Pemerintah yang berwenang dari suatu pihak yang mengizinkan suatu pemasangan, bahan, peralatan atau perlengkapan atau prosecur lainnya, bahan bakar alternatif, metode-metode pelengkap yang digunakan sebagai alternatif sebagaimana dipersyaratkan dalam lampiran ini wajib mengkomunikasikan kepada organisasi untuk diedarkan kepada para pihak tertentu, sebagai informasi dan tindakan-tindakan yang sesuai apabila diperlukan.

3 Otoritas Pemerintah yang berwenang dari suatu pihak seharusnya memperhatikan setiap pedoman yang relevan yang dikembangkan oleh organisasi sesuai dengan persamaan-persamaan yang diatur dalam peraturan ini.

4 Otoritas Pemerintah yang berwenang dari suatu pihak yang mengizinkan penggunaan suatu persamaan sebagaimana tercantum pada ayat 1 dari peraturan ini wajib berusaha untuk tidak menghilangkan atau merusak lingkungannya, kesehatan manusia, kekayaan, atau sumber-sumber daya atau hal-hal dari negara lainnya.

BAB II
Survei Sertifikasi dan Cara-Cara Pengawasan

Peraturan 5
Survei

1 Setiap kapal dengan Tonase Kotor 400 dan lebih dan setiap rig pengeboran tetap dan mengapung dan anjungan-anjungan lainnya wajib tunduk pada survei-survei sebagaimana

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diuraikan di bawah ini:

1. Suatu survei awal sebelum kapal berlayar atau sebelum sertifikat dipersyaratkan berdasarkan Peraturan 6 dari lampiran ini diterbitkan untuk pertama kalinya. Survei ini wajib sedemikian rupa memastikan bahwa perlengkapan, sistem, alat kelengkapan, pengaturan dan bahan sepenuhnya sesuai dengan persyaratan yang berlaku dari lampiran ini;

2. Suatu survei pembaharuan pada waktu jeda yang ditentukan oleh otoritas Pemerintah yang berwenang, tetapi tidak lebih dari lima tahun, kecuali apabila Peraturan 9.2, Peraturan 9.5, Peraturan 9.6, atau Peraturan 9.7 lampiran ini berlaku. Survei pembaharuan ini wajib sedemikian rupa untuk memastikan bahwa perlengkapan, sistem, alat kelengkapan, pengaturan dan bahan sepenuhnya sesuai dengan persyaratan yang berlaku pada lampiran ini;

3. Suatu survei antara dalam waktu tiga bulan sebelum atau sesudah tanggal ulang tahun kedua atau dalam tiga bulan sebelum atau sesudah tanggal ulang tahun ketiga dari sertifikat dimaksud, yang wajib menggantikan salah satu dari survei-survei tahunan sebagaimana yang diuraikan pada ayat 1.4 ~~dari~~ peraturan ini. Survei Antara wajib sedemikian rupa memastikan bahwa peralatan dan pengaturan telah sesuai persyaratan pada Lampiran ini dan berjalan dengan baik. Survei-survei antara dimaksud wajib disahkan dengan sertifikat sebagaimana diterbitkan sesuai dengan Peraturan 6 atau Peraturan 7 lampiran ini.

4. Suatu survei tahunan dalam tiga bulan sebelum atau sesudah setiap tanggal ulang tahun dari sertifikat dimaksud, termasuk suatu pemeriksaan umum terhadap sistem perlengkapan, alat kelengkapan, pengaturan dan bahan sebagaimana dirujuk pada ayat 1.1 peraturan ini untuk memastikan bahwa telah dikelola sesuai dengan ayat 4 peraturan ini dan tetap pada kondisi yang layak untuk layanan peruntukan kapal tersebut. Survei tahunan dimaksud wajib disahkan pada sertifikat yang dikeluarkan berdasarkan Peraturan 6 atau Peraturan 7 lampiran ini; dan

5. Suatu survei tambahan, baik secara keseluruhan maupun sebagian, sesuai dengan kekhususan, wajib dilakukan kapan pun pada saat perbaikan atau pembaharuan penting dilakukan sebagaimana diatur pada ayat sesuai dengan ayat 4 peraturan ini atau setelah suatu perbaikan sebagai hasil pemeriksaan sebagaimana diatur pada ayat 5 peraturan ini. Survei wajib dilakukan sedemikian rupa untuk memastikan bahwa perbaikan atau pembaharuan yang diperlukan telah dilakukan secara efektif, bahwa bahan dan para pekerja dari perbaikan atau pembaharuan tersebut telah memenuhi semua ketentuan dan kapal dimaksud telah memenuhi semua ketentuan dari lampiran ini.

2 Dalam hal kapal kurang dari Tonase Kotor 400, otoritas Pemerintah yang berwenang dapat menyusun kebijakan yang sesuai untuk memastikan bahwa ketentuan-ketentuan yang berlaku dari lampiran ini telah dipenuh.

3 Survei atas kapal berkenaan dengan penegakan ketentuan-ketentuan dari lampiran ini wajib dilakukan oleh para petugas dari otoritas Pemerintah yang berwenang.

.1 Otoritas Pemerintah yang berwenang, bagaimana pun, dapat mempercayakan survei tersebut, baik kepada para surveyor yang diusulkan untuk maksud

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tersebut maupun kepada organisasi-organisasi yang diakuinya. Organisasi-organisasi dimaksud wajib memenuhi pedoman-pedoman sebagaimana telah diterima oleh organisasi[1];

.2 Survei Mesin diesel laut dan perlengkapannya untuk disesuaikan dengan Peraturan 13 lampiran ini wajib dilakukan sesuai dengan Nox Technical Code 2008;

.3 Pada saat seorang surveyor yang diusulkan atau organisasi yang diakui menetapkan bahwa kondisi dari perlengkapan dimaksud tidak sesuai dengan kekhususan dalam sertifikat, mereka wajib memastikan bahwa tindakan perbaikan diambil dan wajib memberitahukan tepat waktu kepada otoritas Pemerintah yang berwenang. apabila tindakan perbaikan tersebut tidak dilakukan, sertifikat tersebut seharusnya ditarik oleh Otoritas Pemerintah yang berwenang. Apabila kapal ini berada di pelabuhan pihak lainnya, pihak yang berwenang dari negara pelabuhan tersebut wajib juga diberitahukan segera. Pada saat petugas dari otoritas Pemerintah yang berwenang, surveyor yang diusulkan atau organisasi yang diakui telah memberitahukan kepada pihak yang berwenang dari negara pelabuhan, pemerintah negara pelabuhan yang bersangkutan wajib memberi petugas, surveyor atau organisasi, setiap bantuan yang diperlukan untuk melaksanakan kewajiban-kewajibannya berdasarkan peraturan ini; dan

.4 Dalam setiap hal, otoritas Pemerintah yang berwenang yang bersangkutan wajib sepenuhnya menjamin kelengkapan dan efesiensi survei dan wajib memastikan pengaturan-pengaturan yang diperlukan untuk memenuhi kewajiban ini.

4 Perlengkapan wajib dikelola sesuai dengan ketentuan-ketentuan dari lampiran ini dan tidak ada satu perubahan wajib dilakukan pada perlengkapan. sistem, pemasangan, dan pengaturan atau bahan-bahan yang tercakup dalam survei tersebut, tanpa persetujuan yang tegas dari otoritas pemerintah yang berwenang. Penggantian secara langsung atas perlengkapan dan pemasangan kelengkapan dengan perlengkapan dan pemasangan kelengkapan sesuai dengan ketentuan dari lampiran ini diizinkan.

5 Apabila suatu kecelakaan terjadi pada suatu kapal atau suatu kekurangan ditemukan secara substansial mempengaruhi efesiensi atau kelengkapan dari peralatan yang tercakup dalam lampiran ini, nakhoda atau pemilik kapal wajib melaporkan pada kesempatan pertama kepada otoritas Pemerintah yang berwenang, seorang surveyor yang diusulkan atau organisasi yang diakui bertanggung jawab untuk mengeluarkan sertifikat yang relevan.

Peraturan 6
Penerbitan atau Pengesahan Sertifikat

1 Suatu sertifikat internasional pencegahan pencemaran udara wajib diterbitkan setelah suatu survei awal atau survei pembaharuan sesuai dengan ketentuan Peraturan 5 lampiran ini, untuk:

1. setiap kapal dengan Tonase Kotor 400 dan lebih yang berlayar menuju pelabuhan atau terminal lepas pantai di bawah yurisdiksi pihak lainnya; dan

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[1] Merujuk pada pedoman untuk otoritas organisasi bertindak atas nama otoritas pemerintah yang berwenang, diadopsi oleh organisasi melalui resolusi A.739 (18), sebagaimana dapat diubah oleh organisasi dan spesifikasi survei dan fungsi sertifikasi dari organisasi internasional diakui bertindak atas nama Otoritas pemerintah yang berwenang, diadopsi oleh organisasi melalui resolusi A.789 (19), sebagaimana dapat diubah oleh organisasi.

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2. anjungan dan unit pengeboran yang berlayar menuju perairan di bawah kedaulatan atau yurisdiksi pihak lainnya.

2 Suatu kapal yang dibangun sebelum tanggal mulai berlakunya Lampiran VI bagi otoritas Pemerintah yang berwenang wajib dari kapal dimaksud wajib diterbitkan suatu sertifikat internasional pencegahan pencemaran udara sesuai dengan ayat 1 peraturan ini tidak lebih dari jadwal dok kering pertama setelah tanggal mulai berlakunya, tetapi tidak lebih dari tiga tahun setelah tanggal ini.

3 Sertifikat tersebut wajib diterbitkan atau disahkan baik oleh otoritas Pemerintah yang berwenang atau setiap pihak atau organisasi yang diberi kewenangan untuk melakukannya. Dalam semua hal otoritas Pemerintah yang berwenang diasumsikan bertanggung jawab sepenuhnya terhadap sertifikat tersebut.

Peraturan 7
Penerbitan Sertifikat oleh Pihak Lainnya

1 Suatu pihak, atas permintaan otoritas Pemerintah yang berwenang, dapat meminta suatu kapal untuk disurvei, dan, apabila dinyatakan bahwa ketentuan-ketentuan dari Lampiran ini telah terpenuhi, wajib menerbitkan atau memberikan izin penerbitan sertifikat internasional pencegahan pencemaran udara untuk kapal tersebut, dan apabila sesuai, mengesahkan atau memberikan izin pengesahan atas sertifikat tersebut untuk kapal dimaksud sesuai dengan lampiran ini.

2 Suatu salinan sertifikat dan suatu salinan laporan survei wajib dikirimkan sesegera mungkin kepada otoritas Pemerintah yang berwenang yang meminta.

3 Suatu sertifikat yang diterbitkan demikian wajib memuat suatu pernyataan yang menyatakan bahwa telah diterbitkan atas permintaan otoritas Pemerintah yang berwenang dimaksud dan wajib mempunyai kekuatan hukum yang sama dan menerima pengakuan yang sama sebagai suatu sertifikat yang diterbitkan berdasarkan Peraturan 6 lampiran ini.

4 Tidak satu pun dari sertifikat internasional pencegahan pencemaran udara wajib diterbitkan untuk suatu kapal yang berhak mengibarkan bendera dari suatu negara yang bukan merupakan suatu pihak.

Peraturan 8
Bentuk Sertifikat

Sertifikat internasional pencegahan pencemaran udara wajib dituangkan dalam suatu bentuk yang sesuai dengan model sebagaimana diberikan pada Apendik 1 pada lampiran ini dan wajib setidak-tidaknya dibuat dalam bahasa Inggris, Perancis, atau Spanyol. Apabila bahasa resmi dari negara penerbit juga digunakan, bahasa negara dimaksud wajib berlaku dalam hal terjadi sengketa atau perbedaan.

Peraturan 9
Jangka waktu dan Keabsahan Sertifikat

1 Suatu sertifikat internasional pencegahan pencemaran udara wajib diterbitkan untuk

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suatu jangka waktu sebagaimana yang ditentukan oleh otoritas Pemerintah yang berwenang, yang wajib tidak lebih dari lima tahun.

2 Meskipun terdapat persyaratan pada ayat (1) dari peraturan ini:

1. apabila survei pembaharuan diselesaikan dalam waktu tiga bulan sebelum berakhirnya tanggal sertifikat yang lama, sertifikat baru wajib dinilai sah sejak tanggal penyelesaian survei pembaharuan sampai dengan suatu tangga yang tidak lebih dari lima tahun dari tanggal berakhirnya sertifikat yang lama.

2. apabila survei pembaharuan diselesaikan setelah tanggal berakhirnya sertifikat yang lama, sertifikat baru wajib dinilai sah sejak tanggal penyelesaian survei pembaharuan sampai dengan suatu tanggal yang tidak lebih dari lima tahun dari tanggal berakhirnya sertifikat yang lama; dan

3. apabila survey pembaharuan diselesaikan lebih dari tiga bulan sebelum tanggal berakhirnya sertifikat lama, sertifikat baru wajib dinilai sah dari tanggal penyelesaian survei pembaharuan sampai dengan tanggal yang tidak lebih dari lima tahun sejak tanggal penyelesaian survei pembaharuan dimaksud.

3 Apabila suatu sertifikat diterbitkan untuk suatu jangka waktu kurang dari lima tahun, otoritas Pemerintah yang berwenang dapat memperpanjang keabsahan sertifikat dimaksud melebihi tanggal berakhirnya sampai jangka waktu maksimum sebagaimana ditentukan pada ayat 1 peraturan ini, dengan syarat bahwa survei-survei sebagaimana dirujuk pada Peraturan 5.1.3 dan Peraturan 5.1.4 lampiran ini berlaku apabila suatu sertifikat diterbitkan untuk jangka waktu lima tahun dilaksanakan sebagaimana mestinya.

4 Apabila suatu survei pembaharuan telah dilengkapi dan suatu sertifikat baru tidak dapat diterbitkan atau ditempatkan di atas kapal sebelum berakhirnya tanggal sertifikat yang lama, orang atau organisasi yang diberikan kewenangan oleh otoritas Pemerintah yang berwenang dapat mengesahkan sertifikat yang lama dan sertifikat tersebut wajib diterima sebagai yang sah untuk jangka waktu lebih lanjut yang wajib tidak lebih lima bulan dari tanggal berakhirnya.

5 Apabila suatu kapal, pada saat suatu sertifikat berakhir, tidak berada di suatu pelabuhan yang akan disurvei , otoritas Pemerintah yang berwenang dapat memperpanjang jangka waktu keabsahan dari sertifikat dimaksud, tapi perpanjangan ini wajib diberikan hanya dengan maksud untuk mengijinkan kapal menyelesaikan pelayarannya ke pelabuhan dimana kapal akan disurvei, dan hanya dalam kasus-kasus yang dianggap tepat dan wajar untuk hal demikian. Tidak ada sertifikat wajib diperpanjang untuk suatu jangka waktu lebih dari tiga bulan, dan suatu kapal yang suatu perpanjangan diberikan, pada saat tiba kedatangannya di pelabuhan tempat kapal tersebut akan disurvei wajib tidak diberi hak untuk perpanjangan meninggalkan pelabuhan tanpa memiliki sertifikat baru wajib dinilai sah sampai suatu tanggal yang tidak lebih dari lima tahun sejak tanggal berakhirnya sertifikat yang lama sebelum perpanjangan diberikan.

6 Suatu sertifikat yang diterbitkan untuk suatu kapal yang sedang berlayar dengan jarak pendek yang belum diperpanjang berdasarkan ketentuan-ketentuan sebelumnya dari peraturan ini dapat diperpanjang oleh otoritas Pemerintah yang berwenang untuk suatu jangka waktu sampai dengan satu bukan sejak tanggal berakhirnya sebagai mana dinyatakan di dalamnya. Apabila survei pembaharuan diselesaikan, sertifikat baru wajib dinilai sah sampai dengan suatu tanggal yang tidak lebih dari lima tahun sejak tanggal berakhirnya sertifikat lama sebelum perpanjangan diberikan.

7 Dalam keadaan khusus, sesuai dengan yang telah ditentukan oleh otoritas

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Pemerintah yang berwenang, suatu sertifikat baru tidak perlu ditanggali sejak tanggal berakhirnya sertifikat lama sebagaimana yang dipersyaratkan pada ayat 2.1, ayat 5, atau ayat 6 peraturan ini. Dalam keadaan khusus ini, sertifikat baru wajib dinilai sah sampai dengan suatu tanggal tidak lebih dari lima tahun sejak tanggal penyelesaian survei pembaharuan dimaksud.

8 Apabila suatu survei tahunan atau survei antara diselesaikan sebelum jangka waktu yang tertera di Peraturan 5 lampiran ini, maka:

1. tanggal ulang tahun sebagaimana tertera pada sertifikat wajib diubah dengan pengesahan untuk suatu tanggal wajib tidak lebih dari tiga bulan dari tanggal saat survei diselesaikan;
2. survei tahunan atau antara yang terus-menerus, yang dipersyaratkan berdasarkan pada Peraturan 5 lampiran ini wajib diselesaikan pada waktu-waktu jeda sebagaimana diatur oleh aturan tersebut dengan menggunakan tanggal ulang tahun yang baru; dan
3. tanggal berakhir tetap tidak dapat dirubah, dengan satu satu atau lebih survei tahunan atau antara yang sesuai, dilakukan sehingga waktu-waktu jeda maksimum di antara survei-survei sebagaimana diatur oleh Peraturan 5 lampiran ini tidak melebihi.

9 Suatu Sertifikat yang diterbitkan berdasarkan Peraturan 6 atau Peraturan 7 dari lampiran ini harus berakhir keabsahannya karena hal-hal berikut ini:

1. apabila survei-survei yang relevan tidak diselesaikan dalam jangka waktu yang diuraikan berdasarkan Peraturan 5.1 lampiran ini;
2. apabila sertifikat tidak disahkan sesuai dengan Peraturan 5.1.3 atau Peraturan 5.1.4 lampiran ini; dan
3. sejak penggantian bendera kapal ke negara lain. Suatu sertifikat baru wajib hanya diterbitkan apabila Pemerintah yang menerbitkan sertifikat baru tersebut sepenuhnya telah menyatakan bahwa kapal telah memenuhi persyaratan Peraturan 5.4 lampiran ini. Dalam hal suatu pergantian terjadi antara para pihak, apabila diminta dalam waktu tiga bulan setelah penggantian dilakukan pemerintah dari pihak yang bendera kapalnya sebelumnya diberi hak untuk dikibarkan, sesegera mungkin wajib mengirimkan kepada otoritas Pemerintah yang berwenang salinan-salinan sertifikat yang dibawa oleh kapal tersebut sebelum penggantian bendera dan, apabila ada salinana-salinan dari laporan survei yang relevan.

Peraturan 10
Pengawasan Negara Pelabuhan
terhadap Persyaratan Operasional

1 Suatu kapal, pada saat berada di pelabuhan atau terminal lepas pantai yang berada di bawah yurisdiksi pihak lainnya, tunduk kepada pemeriksaan oleh para petugas yang diberikan kewenangan oleh pihak tersebut berkenaan dengan persyaratan operasional berdasarkan lampiran ini, apabila terdapat alasan yang jelas untuk mempercayai bahwa nakhoda atau awak kapal tidak terbiasa dengan prosedur-prosedur utama di atas kapal terkait dengan pencegahan pencemaran udara dari kapal.

2 Dalam keadaan khusus sebagaimana diatur pada ayat 1 peraturan ini, pihak tersebut wajib mengambil langkah yang memastikan bahwa kapal tidak boleh berlayar sampai situasi telah sesuai dengan persyaratan lampiran ini.

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3 Prosedur-prosedur terkait dengan pengawasan negara pelabuhan sebagaimana diatur dalam Pasal 5 dari konvensi ini wajib berlaku untuk peraturan ini.

4 Tidak satu pun dalam peraturan ini yang wajib diartikan untuk membatasi hak dan kewajiban pihak untuk melakukan pengawasan atas persyaratan-persyaratan operasional yang secara khusus diatur dalam konvensi ini

Peraturan 11
Pendeteksian Pelanggaran dan Penegakan

1 Para pihak wajib bekerja sama dalam pendeteksian pelanggaran-pelanggaran dan penegakan ketentuan-ketentuan lampiran ini, dengan menggunakan semua langkah pendeteksian yang sesuai dan dapat dipraktikkan dan pemantauan lingkungan, prosedur-prosecur yang memadai untuk pelaporan dan pengumpulan bukti.

2 Suatu kapal yang terkena ketentuan lampiran ini, di setiap pelabuhan atau terminal lepas pantai dari suatu pihak, dapat tunduk pada pemeriksaan oleh para petugas yang ditunjuk atau diberi kewenangan oleh pihak tersebut untuk maksud memverifikasi apakah kapal itu telah mengeluarkan bahan-bahan sebagaimana tercakup dalam lampiran ini yang merupakan pelanggaran dari ketentuan lampiran ini. Apabila suatu pemeriksaan mengindikasikan adanya pelanggaran terhadap Lampiran ini, suatu laporan wajib diteruskan kepada otoritas Pemerintah yang berwenang untuk diambil tindakan yang sesuai.

3 Setiap pihak wajib menyerahkan bukti kepada otoritas Pemerintah yang berwenang, apabila ada, bahwa kapal tersebut telah mengeluarkan emisi dari bahan-bahan yang tercakup dalam lampiran ini sebagai pelanggaran dari ketentuan-ketentuan Lampiran ini. Apabila dapat dilakukan demikian, otoritas yang berwenang dari pihak sebelumnya wajib memberitahukan kepada nakhoda kapal mengenai dugaan pelanggaran dimaksud.

4 Sejak menerima bukti tersebut, otoritas Pemerintah yang berwenang wajib menginvestigasi hal tersebut, dan dapat meminta kepada pihak lainnya untuk memberikan bukti lebih lanjut atau lebih baik dari dugaan kontraversi dimaksud. Apabila otoritas Pemerintah yang berwenang menyatakan bahwa bukti yang ada telah mencukupi untuk memungkinka dilakukan proses hukum berkenaan dengan adanya dugaan pelanggaran tersebut, yang wajib dilakukan sesegera mungkin sesuai dengan hukumnya. Otoritas Pemerintah yang berwenang wajib dengan segera memberitahukan kepada pihak lainnya yang telah melaporkan adanya dugaan pelanggaran, serta kepada organisasi mengenai tindakan yang telah diambil.

5 Suatu pihak dapat juga memeriksa suatu kapal yang dalam lampiran ini diberlakukan saat memasuki pelabuhan-pelabuhan atau terminal-terminal lepas pantai berdasarkan yurisdiksinya, apabila ada permintaan untuk pemeriksaan diterima dari pihak mana pun, yang disertai dengan bukti-bukti yang mencukupi bahwa kapal tersebut telah mengeluarkan bahan-bahan sebagaimana tercakup dalam lampiran ini yang merupakan pelanggaran lampiran ini. Laporan dari investigasi dimaksud wajib dikirimkan kepada pihak yang memintanya dan kepada otoritas Pemerintah yang berwenang sehingga tindakan yang sesuai dapat diambil berdasarkan Konvensi ini.

6 Hukum internasional berkenaan dengan pencegahan, pengurangan dan pengawasan terhadap pencemaran lingkungan laut dari kapal, termasuk hukum yang terkait dengan penegakan dan perlindungan, yang berlaku pada saat penerapan atau penafsiran lampiran ini, yang berlaku secara *mutatis mutandis* (serta merta) terhadap aturan-aturan dan standar-standar yang tercantum dalam lampiran ini.

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BAB III
PERSYARATAN-PERSYARATAN TERHADAP PENGAWASAN EMISI DARI KAPAL

Peraturan 12
Bahan-Bahan Perusak Ozon

1 Peraturan ini tidak berlaku untuk perlengkapan yang disegel secara permanen yang tidak terdapat sambungan pengisian bahan pendingin atau yang komponen yang secara potensial dapat dipindahkan yang berisi bahan-bahan yang merusak ozon.

2 Tunduk kepada ketentuan-ketentuan Peraturan 3.1, setiap pelepasan emisi bahan-bahan perusak ozon wajib dilarang. Pelepasan Emisi termasuk emisi yang terjadi pada saat melakukan pemeliharaan, pelayanan, perbaikan dari sistem atau perlengkapan, kecuali untuk melepaskan emisi dalam jumlah sedikit dengan pemanfaatan dan atau daur ulang dari suatu bahan perusak ozon. Emisi yang timbul dari kebocoran suatu bahan yang perusak ozon, baik yang terlepas maupun tidak, dapat diatur diatur oleh para pihak.

3.1 Instalasi yang mengandung bahan-bahan perusak ozon selain dari hydrochlorofluorocarbons, wajib dilarang:

1. pada kapal yang dibangun pada atau setelah 19 Mei 2005 atau
2. dalam hal kapal dibangun sebelum 19 Mei 2005, yang tanggal kontrak pengiriman perlengkapannya untuk kapal tersebut pada atau setelah 19 Mei 2005 atau, dalam hal tidak ada tanggal kontrak pengiriman, pengiriman yang benar-benar dilakukan atas perlengkapan pada kapal tersebut pada atau setelah 19 Mei 2005.

3.2 Instalasi yang mengandung hydrochlorofluorocarbons, wajib dilarang:
1. pada kapal yang dibangun pada atau setelah 1 Januari 2020, atau
2. dalam hal kapal dibangun sebelum 1 januari 2020, yang tanggal kontrak pengiriman perlengkapannya untuk kapal tersebut pada atau setelah 1 Januari 2020 atau, dalam hal tidak ada tanggal kontrak pengiriman pengiriman yang benar-benar dilakukan atas perlengkapan pada kapal tersebut pada atau setelah 1 Januari 2020

4 Bahan-bahan sebagaimana dirujuk dalam peraturan ini, dan perlengkapan yang mengandung bahan-bahan dimaksud, wajib dikirimkan ke fasilitas penampungan yang sesuai pada saat dikeluarkan dari kapal.

5 Setiap kapal yang tunduk pada Peraturan 6.1, wajib menyimpan suatu daftar perlengkapan yang mengandung bahan-bahan perusak ozon[2].

6 Setiap kapal yang tunduk kepada Peraturan 6.1, yang memiliki sistem yang dapat diisi ulang yang mengandung bahan-bahan perusak ozon wajib menyimpan buku catatan bahan-bahan perusak ozon. Buku catatan ini dapat merupakan bagian dari buku harian kapal yang telah ada atau sistem pencatatan elektronik sebagaimana telah disetujui oleh otoritas Pemerintah yang berwenang.

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[2] Lihat apendiks 1, pelengkap terhadap Sertifikat Pencegahan Pencemaran dari Udara (Sertifikat IAPP), bagian 2.1

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7 Pengisian buku catatan bahan-bahan perusak ozon wajib dicatat dalam satuan berat (kg) dari bahan-bahan dan wajib dilengkapi tanpa penundaan dari setiap kegiatan, berkenaan dengan hal-hal sebagai berikut :

1. pengisian ulang, secara penuh atau sebagian dari perlengkapan yang mengandung bahan-bahan perusak ozon;
2. perbaikan atau pemeliharaan perlengkapan yang mengandung bahan-bahan perusak ozon;
3. pembuangan bahan-bahan perusak ozon ke atmosfir secara :
   3.1. sengaja ; dan
   3.2. tidak sengaja
4. pembuangan bahan-bahan perusak ozon ke fasilitas penampungan di darat dan
5. pengadaan bahan-bahan perusak ozon ke kapal

Peraturan 13
Nitrogen Oksida (NOx)

Pemberlakuan

1.1 Peraturan ini wajib berlaku kepada:
1. setiap mesin diesel laut dengan *output* daya lebih dari 130 kW yang dipasang di suatu kapal; dan
2. setiap mesin diesel laut dengan output daya lebih dari 130 kW yang dipasang di suatu kapal yang mengalami perubahan yang besar pada atau setelah tanggal 1 Januari 2000 kecuali yang memenuhi syarat otoritas Pemerintah yang berwenang pada saat ditunjukkan bahwa mesin tersebut merupakan penggantian yang sama mesin tersebut yang sedang diganti dan sebaliknya tidak tercakup dalam ayat 1.1.1 peraturan ini.

1.2 Peraturan ini tidak berlaku untuk.
1. suatu mesin diesel laut yang diperuntukkan untuk digunakan semata-mata pada keadaan darurat, atau semata-mata digunakan untuk menguatkan setiap alat atau perlengkapan yang dimaksudkan akan digunakan dalam keadaan darurat di kapal yang dipasang, atau mesin disel laut yang dipasang pada sekoci yang dimaksudkan untuk digunakan semata-mata pada keacaan darurat,

2. suatu mesin disel laut yang dipasang pada suatu kapal yang semata-mata digunakan dalam pelayaran di perairan tunduk pada kedaulatan atau yurisdiksi negara tersebut yang kapal tersebut berhak mengibarkan bendera itu, dengan syarat bahwa mesin tersebut tunduk pada suatu tindakan pengawasan NOx alternatif yang ditetapkan oleh otoritas Pemerintah yang berwenang.

1.3 Meskipun terdapat ketentuan-ketentuan sub ayat 1.1 dari ayat ini, otoritas Pemerintah yang berwenang dapat memberikan suatu pengecualian terhadap pemberlakuan peraturan ini untuk setiap mesin disel laut yang dipasang untuk suatu pembangunan kapal, atau untuk setiap mesin disel yang telah mengalami perubahan besar, sebelum tanggal 19 Mei 2005, dengan syarat bahwa kapal yang mesinnya dipasang semata-mata digunakan untuk berlayar di pelabuhan atau terminal lepas pantai dalam wilayah negara yang bendera kapalnya diberi hak untuk dikibarkan.

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Perubahan Besar

2.1 Untuk maksud peraturan ini, perubahan besar adalah modifikasi suatu mesin diesel laut yang pada atau setelah 1 Januari 2000 standarnya belum disertifikasi sebagaimana diatur pada ayat 3.4. atau 5.1.1 peraturan ini apabila:

1. mesin tersebut digantikan dengan suatu mesin diesel laut atau suatu mesin diesel laut tambahan yang dipasang, atau
2. setiap modifikasi substansial, sebagaimana telah ditentukan dalam Kode Teknis NOx 2008, yang telah direvisi, dibuat untuk mesin tersebut, atau
3. Tingkat mesin maksimum yang berkelanjutan ditingkatkan lebih dari 10 % dibandingkan dari tingkat maksimum sertifikasi asli dari mesin yang berkelanjutan.

2.2 Untuk suatu perubahan besar yang menggunakan penggantian suatu mesin diesel laut dengan suatu mesin diesel laut yang non-identik atau pemasangan suatu mesin diesel laut tambahan, standar-standar dalam peraturan ini berlaku pada saat penggantian atau penambahan mesin tersebut wajib dilakukan. Pada atau setelah tanggal 1 Januari 2016 dalam hal hanya penggantian mesin apabila suatu penggantian mesin tidak mungkin memenuhi standar yang diatur dalam ayat 5.1.1 dari peraturan ini (Tier III), kemudian penggantian mesin wajib memenuhi standar sebagaimana diatur pada ayat 4 dari peraturan ini (Tier II). Pedoman-pedoman yang akan dikembangkan oleh organisasi, untuk mengatur kriteria apabila hal tersebut tidak mungkin untuk suatu penggantian mesin yang memenuhi standar sesuai dengan sub ayat 5.1.1 dari peraturan ini.

2.3 Suatu mesin diesel laut sebagaimana dirujuk pada ayat 2.1.2 atau 2.1.3 wajib memenuhi standar sebagai berikut :

1. untuk kapal yang dibangun sebelum tanggal 1 Januari 2000, standar sebagaimana diatur pada ayat 3 dariperaturan ini wajib berlaku ; dan
2. untuk kapal yang dibangun pada atau setelah tanggal 1 Januari 2000, standar-standar pada saat kapal tersebut dibangun wajib berlaku

Tier I

3 Tunduk pada Peraturan 3 lampiran ini, pengoperasian suatu mesin diesel laut yang dipasang pada suatu kapal yang dibangun pada atau setelah tanggal 1 Januari 2000 atau sebelum tanggal 1 Januari 2011 dilarang, kecuali apabila emisi dari nitrogen oksida (dihitung sebagai keseluruhan berat total emisi NO2) dari mesin dengan batas-batas sebagai berikut, apabila n = kecepatan putaran mesin (putaran mesin per menit) :

1. 17.0 g/kWh jika n < 130 rpm;
2. 45. n (-0,2) g/kWh jika 130 ≤ n , 2000 rpm;
3. 9.8 g/kWh jika n ≥ 2000 rpm.

Tier II

4. Tunduk pada Peraturan 3 lampiran ini, pengoperasian suatu mesin diesel laut yang dipasang pada suatu kapal yang dibangun pada atau setelah tanggal 1 Januari 2011 dilarang kecuali apabila emisi dari nitrogen oksida (dihitung sebagai keseluruhan berat total emisi NO2) dari mesin dengan batas-batas sebagai berikut, apabila n = kecepatan putaran

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mesin (putaran mesin per menit):

1. 14.4 g/kWh jika n < 130 rpm;
2. 44. n (-0,23) g/kWh jika 130 < n ,2000 rpm;
3. 7.7 g/kWh jika n ≥ 2000 rpm.

Tier III

5.1 Tunduk pada Peraturan 3 lampiran ini, pengoperasian suatu mesin diesel laut yang dipasang pada suatu kapal yang dibangun pada atau setelah tanggal 1 Januari 2016 :

1. dilarang kecuali kecuali apabila emisi dari nitrogen oksida (dihitung sebagai keseluruhan berat total emisi NO2) dari mesin dengan batas-batas sebagai berikut, apabila n = kecepatan putaran mesin (putaran mesin per menit)
   1.1. 3.4 g/kWh jika n < 130 rpm ;
   1.2. 9. n (-0,2) g/kWh jika 130 < n , 2000 rpm; dan
   1.3. 2.0 g/kWh jika n≥2000rpm.

2. tunduk pada standar sebagaimana diatur dalam sub ayat 5.1.1 dalam paragraf ini apabila kapal dioperasikan di daerah pengawasan emisi yang ditunjuk berdasarkan ayat 6 peraturan ini; dan
3. tunduk pada standar sebagaimana diatur dalam ayat 4 peraturan ini apabila kapal dioperasikan di luar daerah pengawasan emisi yang ditentukan dalam ayat 6 peraturan ini.

5.2 Tunduk pada peninjauan kembali sebagaimana diatur dalam ayat 10 dari peraturan ini, standar sebagaimana diatur pada ayat 5.1.1 dari peraturan ini wajib tidak berlaku untuk:

1. suatu mesin diesel laut yang dipasang pada kapal dengan panjang (Lt sebagaimana didefinisikan dalam Peraturan 1.19 pada lampiran I pada konvensi ini, kurang dari 24 meter saat kapal tersebut telah dirancang secara khusus dan digunakan semata-mata untuk keperluan rekreasi (pesiar); atau
2. suatu mesin diesel laut yang dipasang pada suatu kapal dengan mesin diesel plat gabungan yang berdaya dorong kurang dari 750 kW pada saat didemonstrasikan untuk memenuhi syarat otoritas Pemerintah yang berwenang, yang kapalnya tidak dapat memenuhi standard yang diatur pada ayat 5.1.1 peraturan ini karena terbatasnya desain atau konstruksi kapal.

Kawasan Pengawasan Emisi

6 Untuk maksud peraturan ini, suatu kawasan pengawasan emisi wajib berada di kawasan laut, termasuk setiap kawasan pelabuhan yang ditunjuk oleh organisasi sesuai dengan kriteria dan prosedur yang diatur pada Apendiks III lampiran ini.

Mesin Diesel Laut yang Dipasang pada Suatu Kapal yang Dibangun Sebelum 1 Januari 2000

7.1 Meskipun telah diatur pada ayat 1.1.1 dari peraturan ini, suatu mesin diesel laut dengan *output* daya lebih dari 5.000 kW dan setiap pemindahan per silinder pada atau di atas 90 liter yang dipasang pada suatu kapal yang dibangun pada atau setelah tanggal 1 January 1990 tapi sebelum tanggal 1 Januari 2000 wajib memenuhi batas emisi sebagaimana diatur pada sub-ayat 7.4 pada peraturan ini, dengan syarat bahwa suatu

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Metode Persetujuan untuk mesin tersebut telah disertifikasi oleh suatu otoritas Pemerintah yang berwenang dari suatu pihak dan pemberitahuan mengenai sertifikasi dimaksud telah disampaikan kepada organisasi oleh otoritas Pemerintah yang berwenang yang menyertifikasinya. Kesesuaian dengan ayat ini wajib ditunjukkan melalui sah satu dari berkut ini :

1. pemasangan metode persetujuan yang telah disertifikasi, sebagaimana telah dikonfirmasikan melalui suatu survei yang menggunakan prosedur verifikasi sebagaimana diura kan pada berkas metode persetujuan dimaksud termasuk catatan yang diperlukan pada sertifikat internasional pencegahan pencemaran udara atas metode persetujuan ini; atau

2. sertifikasi mesin yang mengkonfirmasi bahwa mesin tersebut beroperasi dalam batas yang sebagaimana diatur dalam ayat 3.4 atau 5.1.1 peraturan ini dan catatan yang diperlukan mengenai sertifikasi mesin pada sertifikat internasional pencegahan pencemaran udara.

7.2 Sub-ayat 7.1 wajib berlaku tidak lebih dari survei pembaharuan yang pertama yang dilakukan 12 bulan atau lebih setelah penyampaian pemberitahuan sesuai sub-ayat 7.1. Apabila pemilik kapal yang metode persetujuannya akan cipasang dapat menunjukkan telah memenuhi ketentuan otoritas Pemerintah yang berwenang yang metode persetujuan tersebut tidak disediakan untuk tujuan komersial meskipun telah melakukan upaya terbaiknya, lalu metode persetujuan tersebut wajib dipasang pada kapal tidak lebih dari survei tahunan berikutnya atas kapal tersebut yang akan tidak berlaku setelah metode persetujuan tersebut digunakan untuk tujuan komersial.

7.3 Berkenaan dengan suatu kapal dengan mesin diesel laut yang memiliki *output* daya lebih dari 5.000 kW dan pemindahan per silindernya pada atau lebih dari 90 liter yang dipasang pada suatu kapal yang dibangun pada atau setelah tanggal 1 January 1990 tetap sebelum tanggal 1 Januari 2000, sertifikat internasional pencegahan pencemaran udara, untuk suatu mesin diesel laut yang ayat 7.1 peraturan ini berlaku, wajib mengindikasikan bahwa salah satu metode persetujuan telah diterapkan sesuai dengan ayat 7.1.1 peraturan ini atau mesin tersebut telah disertifikasi sesuai dengan ayat 7.1.2 peraturan ini atau metode persetujuan belum ada atau belum tersedia untuk tujuan komersial sebagaimana diuraikan pada sub-ayat 7.2 peraturan ini.

7.4 Tunduk pada Peraturan 3 lampiran ini, pengoperasian suatu mesin diesel laut sebagaimana diuraikan pada sub-ayat 7.1 adalah dilarang, kecuali apabila emisi dari nitrogen oksida (dihitung sebagai keseluruhan berat total emisi NO2) dari mesin dengan batas-batas sebagai berikut, apabila n = kecepatan putaran mesin (putaran mesin per menit) :

1. 17.0 g/kWh jika n < 130 rpm;
2. 45. n (-0,2) g/kWh jika 130 < n , 2000 rpm;
3. 9 8 g/kWh jika n ≥ 2000 rpm.

7.5 Sertifikasi suatu metode persetujuan wajib sesuai dengan Bab 7 Revisi Koda Teknis NOx 2008 dan wajib memasukkan verifikasi :

1. oleh perancang dari dasar mesin diesel laut sebagaimana metode persetujuan mengaplikasikan bahwa pengaruh yang telah dihitung dari metoda persetujuan tidak akan mengurangi putaran mesin lebih dari 1.0 %, meningkatkan konsumsi bahan bakar melebihi 2.0 % yang diukur sesuai dengan tes putaran yang ditentukan pada Revisi Koda Teknis NOx 2008, atau berdampak sebaliknya terhadap daya tahan atau keandalan mesin dan

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2. bahwa biaya dari metoda persetujuan tidak terlalu mahal, yang ditentukan dengan suatu perbandingan dari jumlah NOx yang dikurangi dengan metode persetujuan untuk mencapai standar yang ditentukan pada sub-ayat 7.4 ayat ini dan biaya pembelian dan pemasangan suatu metode persetujuan[3].

Sertifikasi

8 Revisi Koda Teknis 2008 telah direvisi wajib diterapkan untuk sertifikasi, pengetesan dan prosedur pengukuran untuk standard-standar yang ditentukan dalam peraturan ini.

9 Prosedur-Prosedur penentuan emisis NOx yang diatur dalam revisi Koda Teknis 2008 dimaksudkan sebagai gambaran operasi mesin yang normal. Alat-alat yang tidak berfungsi normal dan strategi kontrol emisi yang tidak sesuai dengan aturan ini tidak diizinkan. Peraturan ini wajib tidak melarang penggunaan alat kontrol tambahan yang digunakan untuk melindungi mesin dan atau peralatan pelengkap operasi lainnya yang dapat menyebabkan kerusakan atau kegagalan atau yang digunakan untuk membantu menghidupkan mesin.

Tinjauan

10 Mulai pada tahun 2012 dan tidak lebih dari tahun 2013, organisasi wajib meninjau ulang status pengembangan teknologi untuk menerapkan standar yang ditentukan ayat 5.1.1 peraturan ini dan wajib, jika perlu dibuktikan, disesuaikan dengan periode waktu yang diatur dalam ayat tersebut.

Peraturan 14
Sulfur Oksida (Sox) dan Bahan Tertentu

Persyaratan Umum

1 Kandungan sulfur dari bahan bakar minyak yang digunakan di kapal wajib tidak melebihi batas sebagai berikut :

1. 4.50% m/m sebelum 1 Januari 2012;
2. 3.50% m/m pada dan setelah 1 Januari 2012;
3. 0.50% m/m pada dan setelah 1 Januari 2020

2 Rata-rata kandungan sulfur bahan bakar minyak residu di dunia yang digunakan di kapal wajib dipantau sesuai dengan pedoman yang dikembangkan oleh organisasi[4].

Persyaratan pada Daerah Kontrol Emisi

3 Untuk maksud peraturan ini, daerah kontrol emisi wajib mencakup:

1. Laut Baltic seperti dimaksud pada Peraturan 1.11.2 lampiran I, Laut Utara seperti dimaksud pada Peraturan 5 (1)(f) Lampiran V; dan
2. Daerah laut lainnya, termasuk daerah-daerah pelabuhan yang ditentukan oleh organisasi sesuai dengan kriteria dan prosedur-prosedur pada Apendik III pada Lampiran ini.

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[3] Biaya metode yang disetujui wajib tidak lebih 375 hak gambar khususnya untuk tes Nox dihitung berdasarkan dengan biaya dengan rumus biaya efektif di bawah

Metoda biaya yang disetujui [3]

Ce = P(kW).0.75β.6000 (jam/tahun) . 5 (tahun) . Δ NOx (g/kWh)

[4] MEPC. 82(43) "Pedoman untuk memantau rata-rata muatan sulfur dieluruh dunia terhadap penyaluran bahan bakar minyak bekas untuk digunakan di atas kapal-kapal".

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4 Ketika kapal beroperasi pada daerah kontrol emisi, kandungan sulfur dari bahan bakar yang digunakan di kapal tidak boleh melebihi batas berikut:

1. 1.50% m/m sebelum 1 Juli 2010;
2. 1.00% m/m pada dan setelah 1 Juli 2010; dan
3. 0.10% m/m pada dan setelah 1 Januari 2015

5 Kandungan sulfur dari bahan bakar sebagaimana dimaksud pada ayat 1 dan ayat 4 peraturan ini harus didokumentasikan oleh penyedia bahan bakar seperti disyaratkan oleh Peraturan 18 Lampiran ini.

6 Kapal-kapal yang menggunakan bahan bakar dari jenis yang berbeda untuk memenuhi ayat 4 peraturan ini, dan keluar masuk daerah kontrol emisi yang ditetapkan dalam ayat 3 peraturan ini, harus membawa prosedur tertulis yang menunjukkan bagaimana pergantian bahan bakar dilakukan, memberikan cukup waktu untuk melakukan pembersihan bahan bakar tersebut yang melebihi kandungan sulfur sesuai dengan aturan pada ayat 4 peraturan ini, sebelum memasuki daerah kontrol emisi. Volume bahan bakar berkadar sulfur rendah di setiap tangki dicatat dalam buku harian kapal (*logbook*) seperti yang disyaratkan oleh pemerintah, termasuk, tanggal, waktu, dan posisi kapal ketika proses pergantian bahan bakar telah selesai dilakukan sebelum memasuki daerah kontrol emisi atau dilaksanakan setelah keluar dari daerah tersebut.

7 Dalam waktu dua belas bulan pertama setelah suatu daerah ditetapkan sebagai daerah kontrol emisi khusus sesuai dengan ayat 3.2 peraturan ini, kapal-kapal yang beroperasi di daerah kontrol emisi dibebaskan dari persyaratan ayat 4 dan ayat 6 peraturan ini dan persyaratan dari ayat 5 peraturan sepanjang masih berkaitan dengan ayat 4 peraturan ini.

Ketentuan Tinjauan

8 Tinjauan standar yang ditetapkan pada ayat 1.3 peraturan ini wajib selesai pada Tahun 2018 untuk menentukan ketersediaan bahan bakar yang memenuhi standar bahan bakar pada ayat tersebut dan wajib memperlimbangkan faktor-faktor sebagai berikut.

1. persediaan dan permintaan pasar global untuk bahan bakar yang memenuhi standar pada ayat 1.3 ada, pada saat tinjauan ini dilakukan;
2. suatu analisis terhadap kondisi pasar bahan bakar; dan
3. isu-isu lain yang terkait.

9 Organisasi wajib membentuk kelompok ahli, yang terdiri atas perwakilan tenaga ahli di bidang pengolahan bahan bakar, maritim, lingkungan, keilmuan, dan ahli hukum yang sesuai untuk melakukan kajian sebagaimana dimaksud pada ayat 8 peraturan ini.

10 Para pihak, berdasarkan informasi yang dikembangkan oleh kelompok ahli tersebut, dapat memutuskan apakah kapal tersebut memenuhi tenggat waktu pada ayat 1.3 peraturan ini. Apabila suatu keputusan diambil bahwa tidak dimungkinkan bagi kapal-kapal untuk memenuhi standar pada ayat tersebut, ayat tersebut wajib efektif berlaku pada bulan Januari 2025.

Peraturan 15
Senyawa Organik yang Mudah Menguap (VOC)

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1 Apabila emisi VOC dari suatu kapal tangki akan diatur pada suatu pelabuhan atau pelabuhan-pelabuhan atau suatu terminal atau terminal-terminal di bawah yurisdiksi suatu pihak, wajib diatur sesuai dengan ketentuan dari peraturan ini.

2 Suatu pihak yang mengatur kapal tangki atas emisi VOC wajib menyampaikan suatu pemberitahuan kepada organisasi. Pemberitahuan ini wajib memasukkan informasi atas ukuran kapal-kapal tangki yang akan diawasi, kargo-kargo yang membutuhkan sistem pengawasan emisi uap dan tanggal efektif pengawasan dimaksud. Pemberitahuan wajib disampaikan sekurang-kurangnya 6 bulan sebelum tanggal efektifnya.

3 Suatu pihak yang menunjuk pelabuhan-pelabuhan atau terminal-terminal tempat emisi VOC kapal-kapal tangki akan diatur wajib memastikan bahwa sistem pengawasan emisi uap, disetujui oleh pihak tersebut dengan mempertimbangkan standar-standar keselamatan untuk suatu sistem yang dikembangkan oleh organisasi[3], telah diberikan pada setiap pelabuhan dan terminal yang ditunjuk dan dalam suatu cara yang dapat menghindari terjadinya penundaan pada suatu kapal.

4 Organisasi wajib mengedarkan suatu daftar pelabuhan-pelabuhan dan terminal-terminal yang ditunjuk oleh para pihak kepada para Pihak lainnya dan negara-negara anggota dari organisasi untuk informasi mereka.

5 Suatu kapal tangki yang pada ayat 1 peraturan ini diberlakukan wajib dilengkapi dengan suatu sistem pengumpul uap yang disetujui oleh otoritas Pemerintah yang berwenang dengan mempertimbangkan standar keselamatan untuk sistem yang dikembangkan oleh organisasi, dan wajib menggunakan sistem ini selama pemuatan kargo yang relevan. Suatu pelabuhan atau terminal yang telah dipasangi sistem pengawasan emisi uap sesuai dengan peraturan ini dapat menerima kapal tangki yang tidak dilengkapi dengan sistem pengumpul uap untuk suatu jangka waktu 3 tahun setelah tanggal efektif yang tertera pada ayat 2 peraturan ini.

6 Suatu kapal tangki yang membawa minyak mentah wajib memiliki di atas kapal dan mengimplementasikan suatu rencana manajemen VOC yang telah disetujui oleh otoritas Pemerintah yang berwenang. Suatu rencana tersebut wajib disiapkan dengan mempertimbangkan pedoman yang dikembangkan oleh organisasi. Rencana tersebut wajib spesifik untuk setiap kapal dan wajib sekurang-kurangnya :

1. menyediakan prosedur tertulis untuk meminimalisasi emisi VOC selama pemuatan, berlayar di laut, dan pembongkaran kargo
2. memberikan pertimbangkan terhadap VOC tambahan yang dihasilkan dari pencucian minyak mentah;
3. menunjuk orang yang bertanggung jawab untuk implementasi rencana tersebut; dan
4. menulis dalam bahasa kerja nakhoda dan ABK untuk kapal-kapal dengan pelayaran internasional dan, jika bahasa yang digunakan oleh nakhoda dan ABK bukan bahasa Inggris, Perancis, atau Spanyol, dimasukkan suatu terjemahan ke dalam salah satu bahasa ini.

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[3] MSC/Circular 585, Ukuran untuk Sistem pengendalian emisi asap.

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7 Peraturan ini wajib juga berlaku bagi kapal pembawa gas, hanya apabila tipe sistem pemuatan dan penyimpanan mengizinkan untuk penyimpanan yang aman dari VOC non-methan di atas kapal atau atau kembali ke darat dengan aman[6].

Sertifikat Persetujuan Tipe dikeluarkan sesuai dengan resolusi MEPC.59(33), Pedoman Revisi untuk implementasi dari Lampiran V dari MARPOL 73/78, atau MEPC.76 (40), standar spesifikasi untuk insinerator diatas kapal

Peraturan 16
Pembakaran di Atas Kapal

1 Kecuali diatur dalam ayat 4, pembakaran di atas kapal wajib diizinkan hanya pada suatu insinerator kapal.

2 Pembakaran di atas kapal terhadap bahan bahan berikut wajib dilarang

1. residu dari kargo yang tunduk pada Lampiran I, Lampiran II, atau Lampiran III atau bahan-bahan kemasan yang terkontaminasi;
2. polychlorinated biphenyls (PCBs);
3. sampah, sebagaimana didefinisikan oleh Lampiran V, yang mengandung lebih dari sedikit logam berat;
4. produk-produk minyak olahan yang mengandung senyawa halogen;
5. endapan kotoran dan endapan minyak yang tidak dihasilkan di atas kapal;
6. residu dari sistem pembersihan alat pembuang gas; dan
7. Pembakaran Polyvinyl chlorides (PVCs) di atas kapal wajib dilarang, kecuali pada insinerator kapal yang sertifikat persetujuan Tipe IMO telah dikeluarkan.

3 Pembakaran di atas kapal untuk polivinil khlorida (PVCs) wajib dilarang, kecuali di dalam pembakaran dikapal yang tipe sertifikat [7] persetujuan IMO telah dikeluarkan.

4 Pembakaran di atas kapal untuk endapan kotoran dan endapan minyak yang dihasilkan selama pengoperasian normal dari suatu kapal dapat juga terjadi pada pembangkit listrik utama atau bantu atau boiler, tetapi dalam hal-hal tertentu, wajib tidak dilakukan di dalam pelabuhan, bandar-bandar, dan muara-muara.

5 Tidak ada dalam peraturan ini maupun:

1. mempengaruhi larangan dalam, atau persyaratan-persyaratan lainnya dari, konvensi tentang Pencegahan Pencemaran Laut oleh Pembuangan Limbah dan Bahan-Bahan Lainnya Tahun 1972, sebagaimana telah diubah, dan Protokol Tahun 1966, atau

2. menghalangi pengembangan, pemasangan, dan pengoperasian dari peralatan alternatif rancang bangun alat pengolahan limbah panas kapal yang memenuhi atau melebihi persyaratan-persyaratan peraturan ini.

6.1 Kecuali sebagaimana diatur dalam ayat 6.2 dari peraturan ini, setiap insinerator di atas kapal yang dibangun pada atau setelah tanggal 1 Januari 2000 atau insinerator yang dicasang di suatu kapal pada atau setelah 1 Januari 2000 wajib memenuhi persyaratan-

---

[6] MSC 30 (61), "International Kode untuk Pembangunan dan Peralatan kapal-kapal yang membawa Gas alir dalam jumlah besar", Bab 5.
[7] Tipe Sertifikat Persetujuan dikeluarkan berdasarkan resolusi MEPC.59 (33) atau MEPC. 76(40).

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persyaratan yang terdapat dalam Apendik IV pada Lampiran ini. Setiap insinerator yang tunduk pada ayat ini wajib disetujui oleh otoritas Pemerintah yang berwenang dengan mempertimbangkan standar spesifikasi untuk insinerator kapal yang dikembangkan oleh organisasi[9], atau

6.2 Otoritas Pemerintah yang berwenang dapat mengizinkan pengecualian dari penerapan ayat 6.1 peraturan ini terhadap setiap insinerator yang dipasang di atas kapal sebelum 19 Mei 2005, dengan memperhatikan bahwa kapal semata-mata berlayar di dalam perairan yang tunduk kepada kedaulatan atau yurisdiksi dari negara bendera yang mana kapal berhak untuk mengkibarkan .

7 Insinerator yang dipasang sesuai dengan persyaratan ayat 6.1 peraturan ini wajib dilengkapi dengan suatu petunjuk pengoperasian dari pabrik pembuat, yang harus tetap berada di unit dan wajib menjelaskan bagaimana mengoperasikan insinerator dalam batasan sesuai yang digambarkan pada ayat 2 dari Apendik IV lampiran ini.

8 Personel yang bertanggung jawab atas pengoperasian suatu insinerator yang dipasang sesuai dengan persyaratan-persyaratan ayat 6.1 peraturan ini wajib dilatih untuk mengimplementasikan panduan yang diberikan dalam buku petunjuk pengoperasian dari pabrik sesuai dengan yang dipersyaratkan oleh ayat 7 peraturan ini.

9 Untuk incinerator yang dipasang sesuai dengan persyaratan-persyaratan dari ayat 6.1 peraturan ini, temperatur gas yang keluar dari ruang pembakaran wajib dipantau setiap saat unit dioperasikan. Apabila insinerator adalah jenis berkelanjutan (*continuous-feed*), limbah wajib tidak dimasukkan ke dalam unit pada saat temperatur gas yang keluar dari ruang pembakaran di bawah 850oC. Apabila insinerator adalah tipe *batch loaded*, unit wajib didesain sehingga temperature gas yang keluar dari ruang pembakaran wajib mencapai 600oC dalam waktu lima menit setelah insinerator dinyalakan dan akan sesudahnya stabil pada suatu temperatur yang tidak kurang dari 850oC

Peraturan 17
Fasilitas Penampungan

1 Setiap pihak wajib memastikan penyediaan fasilitas yang memadai untuk memenuhi:

1. kebutuhan kapal yang menggunakan pelabuhan perbaikannya bahan-bahan perusak ozon dan peralatan yang menggunakan bahan-bahan perusak lapisan ozon pada saat dikeluarkan dari kapal;

2. kebutuhan kapal yang menggunakan pelabuhan, terminal atau pelabuhan perbaikan untuk penampungan sisa pembersihan alat pembuangan gas dari sistem pembersihan alat pembuangan gas tanpa menyebabkan keterlambatan kapal; dan

3. kebutuhan fasilitas pemotongan kapal untuk bahan perusak lapisan ozon dan peralatan yang menggunakan bahan-bahan perusak lapisan ozon ketika dibuang dari kapal.

---

[9] Merujuk pada resolusi MEPC 76(40), Ukuran spesifikasi untuk pembakaran di atas kapal

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2 Apabila suatu pelabuhan atau terminal tertentu dari suatu pihak dengan memperhatikan pedoman-pedoman yang akan dikembangkan oleh organisasi yang letaknya terpencil dari, atau kurangnya prasarana industrial yang diperlukan untuk mengelola dan mengolah bahan-bahan yang sebagaimana dirujuk dalam ayat 1 peraturan ini dan selanjutnya tidak dapat menerima bahan-bahan dimaksud, pihak tersebut kemudian wajib memberitahukan kepada organisasi mengenai setiap pelabuhan atau terminal tersebut sehingga informasi ini dapat diedarkan kepada seluruh pihak dan negara-negara anggota organisasi sebagai informasi dan setiap tindakan yang sesuai. Setiap pihak yang telah memberikan informasi dimaksud kepada organisasi wajib juga memberitahukan kepada organisasi mengenai pelabuhan-pelabuhan dan terminal-terminal tempat fasilitas penampungan tersedia untuk mengelola dan mengolah bahan-bahan dimaksud.

3 Setiap pihak wajib memberitahukan kepada organisasi untuk diteruskan kepada semua anggota organisasi mengenai setiap hal apabila fasilitas yang disediakan tidak tersedia atau diduga tidak mencukupi.

Peraturan 18
Ketersediaan dan Kualitas
Bahan Bakar Minyak

Ketersediaan Bahan Bakar Minyak

1 Setiap pihak wajib mengambil langkah-langkah yang tepat untuk meningkatkan ketersediaan bahan bakar minyak yang sesuai dengan lampiran ini serta memberitahukan kepada organisasi tentang ketersediaan bahan bakar minyak di pelabuhan dan terminalnya.

2.1 Apabila suatu kapal ditemukan oleh suatu pihak tidak sesuai dengan standar bahan bakar sebagaimana diatur dalam peraturan ini. Otoritas yang berwenang berhak meminta kapal untuk:

1. memaparkan suatu catatan yang sudah ada mengenai tindakan yang diambil untuk memenuhi atau mencapai kesesuaian itu; dan

2. memberikan bukti bahwa pembelian bahan bakar yang sesuai dengan rencana pelayarannya dan apabila tidak dilakukan sesuai sebagaimana direncanakan, upaya itu dilakukan untuk menempatkan sumber-sumber bahan bakar alternatif dan meskipun upaya-upaya terbaik untuk mendapatkan bahan bakar minyak yang sesuai, tidak ada bahan bakar minyak yang tersedia untuk dibeli .

2.2 Kapal tersebut seharusnya tidak dipersyaratkan untuk menyimpang dari rute pelayarannya atau menunda pelayarannya dalam rangka mencapai kesesuaian dimaksud.

2.3 Apabila suatu kapal yang memberikan informasi sebagaimana diatur pada sub-ayat 2.1 ayat ini, suatu pihak wajib memperhatikan semua keadaan yang relevan dan bukti-bukti yang dipaparkan dan menentukan tindakan-tindakan sesuai yang akan diambil, termasuk dengan tidak mengambil tindakan-tindakan pengawasan .

2.4 Suatu kapal wajib memberitahukan kepada otoritas Pemerintah yang berwenang dan otoritas yang berkompeten dari pelabuhan tujuan yang relevan apabila tidak dapat membeli bahan bakar minyak yang sesuai.

2.5 Suatu pihak wajib memberitahukan kepada organisasi apabila suatu kapal telah

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memaparkan bukti ketiadaan bahan bakar minyak yang sesuai.

Kualitas Bahan Bakar Minyak

3 Bahan bakar minyak untuk keperluan pembakaran yang diterima untuk dan digunakan di atas kapal yang diberlakukan dalam lampiran ini wajib memenuhi persyaratan sebagai berikut :

1. kecuali diatur dalam sub-ayat 3.2:

   1.1 bahan bakar minyak wajib merupakan campuran dari hidrokarbon yang berasal dari pemurnian minyak bumi. Hal ini wajb tidak menghalangi pencampuran sejumlah kecil dari zat aditif yang digunakan untuk meningkatkan beberapa aspek kinerja;
   1.2 bahan bakar minyak wajib bebas dari asam anorganik; dan
   1.3 bahan bakar minyak wajib tidak memasukkan setiap bahan tambahan atau limbah kimia yang:
      1.3.1 membahayakan keselamatan kapal atau berdampak sebaliknya terhadap kinerja mesin, atau
      1.3.2 berbahaya bagi personil, atau
      1.3.3 berkontribusi secara keseluruhan menambah terjadinya pencemaran udara.

2. bahan bakar minyak untuk tujuan pembakaran yang dihasilkan berdasarkan metode-metode selain pemurnian minyak bumi wajib tidak.

   2.1 melebihi kandungan sulfur yang diberlakukan sebagaimana diatur dalam Peraturan 14 lampiran ini;
   2.2 menyebabkan mesin melebihi batas emisi Nox yang diberlakukan sebagaimana diatur dalam ayat 3, ayat 4, ayat 5.1.1 dan dan 7.4 dari Peraturan 13;
   2.3 mengandung asam anorganik; atau.
   2.4.1 membahayakan keselamatan kapal atau berdampak sebaliknya terhadap kinerja mesin , atau
   2.4.2 berbahaya bagi personil, atau
   2.4.3 berkontribusi secara keseluruhan menambah terjadinya pencemaran udara.

4 Peraturan ini tidak berlaku untuk batubara dalam bentuk padat atau bahan bakar nuklir. Ayat 5, ayat 6,7.1, ayat 7.2, ayat 8.1, ayat 8.2, ayat 9.2, ayat 9.3, dan ayat 9,4 peraturan ini tidak berlaku untuk bahan bakar gas seperti gas alam cair, gas alam yang dimampatkan, atau gas minyak cair kandungan sulfur dari bahan bakar gas yang dikirim ke suatu kapal secara spesifik untuk maksud pembakaran di atas kapal wajib didokumentasikan oleh pemasok.

5 Untuk setiap kapal untuk tunduk pada Peraturan 5 dan Peraturan 6 lampiran ini, rincian bahan bakar minyak untuk maksud pembakaran sebagaimana dikirimkan dan untuk digunakan di atas kapal wajib dicatat dengan cara catatan pengiriman bahan bakar yang wajib memuat paling tidak informasi sebagaimana diuraikan dalam Apendiks V Lampiran ini.

6 Catatan pengiriman bahan bakar wajib disimpan di atas kapal sedemikian rupa yang akan siap dibaca untuk pemeriksaan setiap saat. Catatan wajib tetap disimpan untuk suatu jangka waktu tiga tahun setelah bahan bakar minyak telah dikirim ke atas kapal.

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7.1 Otoritas yang berkompeten dari suatu pihak dapat memeriksa catatan pengiriman bahan bakar di atas kapal sebagaimana diberlakukan dalam lampiran ini pada saat kapal tersebut berada di pelabuhan atau terminal lepas pantai, dapat membuat suatu salinan dari setiap catatan pengiriman, dan dapat meminta nakhoda atau personel yang bertugas di kapal tersebut untuk mengesahkan setiap salinan itu sebagai suatu salinan yang benar dari catatan a pengiriman bahan bakar. Otoritas yang berkompeten dapat juga memverifikasi isi dari setiap catatan melalui konsultas dengan pelabuhan dimana catatan tersebut diterbitkan

7.2 Pemeriksaan catatan pengiriman bunker dan pembuatan salinan resmi oleh otoritas yang berkompeten berdasarkan ayat ini wajib dilakukan sesegera mungkin tanpa menyebabkan keterlambatan kapal.

8.1 Catatan pengiriman bahan bakar wajib disertai dengan suatu contoh yang mewakili bahan bakar minyak tersebut yang dikirim dengan memperhatikan pedoman yang dikembangkan oleh organisasi[9]. Sampel yang akan dicap dan ditandatangani oleh perwakilan pemasok dan nakhoda atau petugas yang bertanggung jawab atas pengisian bahan bakar dan menjaga tetap berada di bawah pengawasan kapal tersebut sampai bahan bakar tersebut dikonsumsi sebagian besar. Akan tetapi, dengan catatan untuk suatu jangka waktu yang tidak lebih dari 12 bulan dari sejak waktu pengiriman.

8.2 Apabila otoritas Pemerintah yang berwenang meminta kepada wakil tersebut suatu contoh untuk analisis, wajib dilakukan sesuai dengan prosedur verifikasi sebagaimana diatur dalam Apendik VI untuk menentukan apakah bahan bakar minyak tersebut memenuhi persyaratan lampiran ini.

9 Para pihak wajib memastikan bahwa otoritas yang sesuai yang ditunjuknya untuk:

1. menyimpan suatu daftar pemasok lokal untuk bahan bakar minyak;
2. meminta para pemasok lokal untuk menyediakan catatan pengiriman bahan bakar dan contoh sebagaimana dipersyaratkan dalam peraturan ini, yang disahkan oleh pemasok bahan bakar minyak tersebut bahwa bahan bakar minyak itu memenuhi persyaratan Peraturan 14 dan Peraturan 18 lampiran ini;
3. meminta pemasok lokal untuk tetap menyimpan suatu salinan catatan pengiriman bahan bakar sekurang-kurangnya tiga tahun untuk keperluan pemeriksaan dan verifikasi oleh negara pelabuhan apabila diperlukan
4. mengambil tindakan yang sesuai terhadap para pemasok bahan bakar minyak yang telah ditemukan mengirimkan bahan bakar minyak yang tidak sesuai dengan sebagaimana dinyatakan dalam catatan pengiriman bahan bakar,
5. memberitahukan kepada otoritas pemerintah yang berwenang setiap kapal yang menerima bahan bakar minyak yang ditemukan tidak sesuai dengan persyaratan Peraturan 14 dan Peraturan 18 lampiran ini; dan
6. memberitahukan kepada organisasi untuk disampaikan kepada para pihak dan negara anggota organisasi mengenai segala hal apabila para pemasok bahan bakar minyak telah gagal memenuhi persyaratan Peraturan 14 dan Peraturan 18 lampiran ini

10 Sehubungan dengan pemeriksaan negara pelabuhan yang dilakukan oleh para pihak, para pihak lebih lanjut wajib:

1. memberitahukan kepada pihak atau bukan pihak yang berada di bawah

[9] Mengacu kepada MEPC.96(47), Panduan untuk pengambilan sampel bahan bakar minyak untuk ketentuan penerapan Lampiran VI dari MARPOL 73/78

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yurisdiksinya suatu catatan pengiriman bahan bekar telah diterbitkan dalam hal pengiriman bahan bakarnya tidak sesuai dengan mengirimkan semua informasi yang relevan; dan

2. memastikan bahwa tindakan perbaikan yang diperlukan diambil untuk menyesuaikan bahan bakar yang tidak sesuai menjadi sesuai.

11 Untuk setiap kapal dengan Tonase Kotor 400 atau lebih pada layanan yang terjadwal dengan frekwensi dan panggilan pelabuhan rutin, suatu otoritas Pemerintah yang berwenang dapat memutuskan setelah penerapan dan berkonsultasi dengan negara-negara yang terkena dampak bahwa kesesuaian dengan ayat 6 peraturan ini dapat didokumentasikan dengan suatu cara alternatif yang memberikan kepastian yang serupa terhadap kesesuaian Peraturan 14 dan Peraturan 18 lampiran ini.

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APENDIKS I

(Peraturan 8)

SERTIFIKAT INTERNASIONAL PENCEGAHAN PENCEMARAN OLEH UDARA

Dikeluarkan Menurut Ketentuan Protokol 1997 Sebagaimana Diamandemen Oleh Resolusi MEPC 176(58) Pada Tahun 2008 Untuk Mengamandemen Konvensi Internasional Tentang Pencegahan Pencemaran dari Kapal-Kapal Tahun 1973, Sebagaimana Diubah dengan Protokol Tahun 1978, yang Terkait Daripadanya (Selanjutnya Mengacu Kepada "Konvensi"), Berdasarkan Wewenang Pemerintah :

.....

(Penyebutan Negara secara lengkap)

Oleh : .....

(Penyebutan secara lengkap orang yang memiliki

kompetensi atau organisasi yang berwenang menurut ketentuan konvensi)

Kapal Khusus*

Nama Kapal : .....

Nomor atau Huruf Pengenal .....

Pelabuhan Pendaftaran .....

Tonase Kotor .....

Nomor IMO† .....

---

* Pilihan, kapal khusus dapat ditempatkan di dalam kotak secara horizontal

† Berdasarkan skema nomor pengenal IMO yang diadopsi oleh organisasi melalui resolusi A. 600 (15).

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DENGAN INI **MENYATAKAN** :

1. Bahwa kapal telah diperiksa sesuai dengan Peraturan 5 Lampiran VI Konvensi; dan

2. Bahwa hasil pemeriksaan menunjukkan bahwa perlengkapan, sistem, kelengkapan, tata susunan dan bahan secara lengkap memenuhi persyaratan yang berlaku dari Lampiran VI Konvensi ini.

Tanggal pemeriksaan terakhir yang dijadikan dasar penerbitan sertifikat.....(hh/bb/yyyy)

Sertifikat Ini Berlaku Sampai Dengan ....* tunduk pada Pemeriksaan-Pemeriksaan Sesuai Dengan Peraturan 5 Lampiran VI Konvensi Ini.

Dikeluarkan di : .....

(Tempat penerbitan sertifikat)

(dd/mm/yyyy) ....

(Tanggal penerbitan) (Tandatangan pejabat yang berwenang menerbitkan sertifikat)

(segel atau cap stempel yang berwenang, dengan tepat)

---

* Memasukkan tanggal berakhirnya yang ditentukan oleh Otoritas Pemerintah yang berwenang berdasarkan peraturan 9.1 Lampiran VI konvensi. Hari dan bulan tanggal tersebut sesuai dengan tanggal ulang tahun sebagaimana disebutkan Peraturan 2.3 Lampiran VI Konvensi, kecuali diubah sesuai peraturan 9.8 Lampiran VI Konvensi

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PENGUKUHAN UNTUK PEMERIKSAAN TAHUNAN DAN PEMERIKSAAN ANTARA

Dengan ini dinyatakan bahwa pada pemeriksaan yang diisyaratkan oleh Peraturan 8 Lampiran II dari Konvensi, ternyata bahwa kapal memenuhi ketentuan-ketentuan yang berhubungan dengan Konvensi.

PEMERIKSAAN TAHUNAN : ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : .....

(segel atau cap stempel yang berwenang, dengan tepat)

PEMERIKSAAN TAHUNAN /ANTARA* ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : .....

(segel atau cap stempel yang berwenang, dengan tepat)

PEMERIKSAAN TAHUNAN /ANTARA ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : .....

(segel atau cap stempel yang berwenang, dengan tepat)

* Hapus yang tidak perlu

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PEMERIKSAAN TAHUNAN/Antara Sesuai dengan Peraturan 9.8.3

Dengan ini untuk menyatakan, Pada saat Pemeriksaan tahunan/antara* sesuai dengan Peraturan 9.8.3 Lampiran VI dari konvensi, kapal dinyatakan sesuai dengan ketentuan yang ada pada lampiran :

ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : (tt/bb/tttt).....

(segel atau cap stempel yang berwenang, dengan tepat)

Pengukuhan untuk memperpanjang sertifikat apabila masa berlakunya kurang dari 5 tahun dimana Peraturan 9.3 diterapkan

Kapal memenuhi ketentuan yang aca pada Lampiran, dan sertifikat ini wajib, sesuai dengan Peraturan 9.3 Lampiran VI konvensi, dapat diterima dengan masa berlaku sampai (tt/bb/tttt) .....

ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : (tt/bb/tttt).....

(segel atau cap stempel yang berwenang, dengan tepat)

Pengukuhan apabila survei pembaharuan telah selesai dilakukan dan Peraturan 9.4 diterapkan

Kapal memenuhi ketentuan yang ada pada Lampiran dan sertifikat ini wajib, sesuai dengan Peraturan 9.4 Lampiran VI konvensi dapat diterima dengan masa berlaku sampai (dd/mm/yyyy) : .....

ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : (tt/bb/tttt).....

(segel atau cap stempel yang berwenang, dengan tepat)

---

* Coret yang tidak perlu

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Pengukuhan untuk memperpanjang masa berlaku sertifikat sampai mencapai pelabuhan untuk disurvei atau untuk periode perpanjangan dimana Peraturan 9.5 atau 9.6 diterapkan

Sertifikat ini wajib, sesuai dengan Peraturan 9.5 atau 9.6 dari Lampiran VI konvensi, dapat diterima dengan masa berlaku sampai (tt/bb/tttt) : .....

ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : (tt/bb/tttt).....

(segel atau cap stempel yang berwenang, dengan tepat)

Pengukuhan untuk memajukan tanggal masa berlaku dimana Peraturan 9.8 diterapkan

Sesuai dengan Peraturan 9.8 Lampiran VI konvensi ini, tanggal ulang tahun baru adalah (tt/bb/tttt) : .....

ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : (tt/bb/tttt).....

(segel atau cap stempel yang berwenang, dengan tepat)

Sesuai dengan Peraturan 9.8 Lampiran VI konvensi ini, tanggal ulang tahun yang baru adalah (tt/bb/tttt) : .....

ditandatangani : .....

(Tandatangan pejabat yang berwenang)

Tempat : .....

Tanggal : (tt/bb/tttt).....

(segel atau cap stempel yang berwenang, dengan tepat)

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TAMBAHAN SERTIFIKAT INTERNASIONAL

PENCEGAHAN PENCEMARAN OLEH UDARA

(I.A.P.P SERTIFIKAT)

CATATAN TENTANG KONSTRUKSI DAN PERLENGKAPAN KAPAL

Catatan :

1 Catatan suplemen ini wajib secara permanen dilampirkan pada Seifikat IAPP.Sertifikat wajib ada dikapal pada setiap saat.

2 Catatan ini wajib sekurang-kurangnya dalam bahasa Inggris, Perancis atau Spanyol. Apabila Bahasa resmi dari negara yang menerbitkan juga digunakan, wajib ditulis juga dalam bahasa tersebut dalam hal adanya perselisihan atau beda pendapat.

3 Pengisian ke dalam kotak-kotak wajib dibuat dengan membubuhkan baik tanda silang (X) untuk jawaban-jawaban 'ya" dan dapat digunakan atau tanda penghubung (-) untuk jawaban-jawaban "tidak" dan tidak dapat digunakan sebagaimana mestinya.

4 Kecuali disebutkan lain, peraturan yang disebutkan dalam catatan ini merujuk pada peraturan dari Lampiran VI pada Konvensi dan Resolusi-Resolusi atau edaran-edaran yang di adopsi dari Organisasi Maritim Internasional.

1 Kapal Khusus

1.1 Nama kapal .....

1.2 Nomor IMO .....

1.3 Tanggal peletakan lunas atau kapal pada tahapan pembangunan yang serupa .....

1.4 Panjang (L) meter .....

dilengkapi hanya dalam hal kapal-kapal yang dibangun pada atau setelah 1 Januari 2016, yang gambar khususnya dan digunakan semata-mata, untuk maksud rekreasi dan untuk itu, sesuai dengan Peraturan 13.5.2.1, pembuatan emisi Nox diberikan oleh Peraturan 13.5.1.1 tidak akan diterapkan.

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2 Pengawasan emisi dari kapal

2.1 Bahan-bahan Perusak Ozon (Peraturan 12)
2.1.1 Sistim pemadaman api, sistim lain dan peralatan yang berisi bahan-bahan perusak ozon selain dari *hydrochlorofluorocarbons (HFCs)* dipasang sebelum tanggal 19 Mei 2005 dapat dilanjutkan dalam pelayanan :

Sistim atau peralatan	Lokasi kapal	Bahan

2.1.2 Sistim berisi *hydrochlorofluorocarbons (HCFs)* dipasang sebelum 1 Januari 2020 dalam melanjutkan pelayanan :

Sistim atau peralatan	Lokasi kapal	Bahan

2.2 *Nitrogen Oxides (Nox)* (Peraturan 13)

2.2.1 Pemasangan mesin diesel laut pada kapal tersebut memenuhi dengan pembatasan emisi yang berlaku dari Peraturan 13 yang berdasarkan dengan revisi Nox Kode Teknikal 2008 :

	Mesin #1	Mesin #2	Mesin #3	Mesin #4	Mesin #5	Mesin #6
Pembuatan dan Model						
Nomor Seri						
Penggunaan						
Daya Keluar (kW)						
Tingkat Kecepatan (RPM)						
Tanggal Pemasangan (tt/bb/tttt)						
Tanggal Perubahan Sesuai Per. 13.2.2 (tt/bb/tttt) Sesuai Per. 13.2.3						
Dikecualikan oleh Peraturan 13.1.1.2	☐	☐	☐	☐	☐	☐
Tier I Per. 13.3	☐	☐	☐	☐	☐	☐
Tier II Per. 13.4	☐	☐	☐	☐	☐	☐
Tier II Per. 13.2.2 atau 13.5.2	☐	☐	☐	☐	☐	☐
Tier III Per. 13.5.1.1	☐	☐	☐	☐	☐	☐
Metode Lama yang disetujui	☐	☐	☐	☐	☐	☐

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Tidak ada Metode Komersial yang Disetujui	☐	☐	☐	☐	☐	☐
Pemasangan Metode yang Disetujui	☐	☐	☐	☐	☐	☐

2.3 *Sulphur oxides* (SOx) dan hal khusus (peraturan 14)

2.3.1 Jika kapal beroperasi di dalam wilayah Pengawas Emisi yang ditentukan Peraturan 14.3, kapal menggunakan :

.1 Bahan bakar minyak dengan belerang dengan kadar tidak melebihi nilai yang berlaku seperti yang didokumentasikan melalui catatan pengiriman bunker ; atau ..... ☐

.2 Suatu persamaan pengaturan yang disetujui sesuai Peraturan 4.1, sebagaimana dalam daftar 2.6 ..... ☐

2.4 *Volatile Organic Compounds* (VOCs) (Peraturan 15)

2.4.1 Kapal tanker yang memiliki suatu sistem pengumpul asap dipasang dan disetujui sesuai dengan MSC/Circ. 585 ..... ☐

2.4.2.1Untuk kapal tanker yang membawa minyak mentah, disetuji suatu Rencana Pengaturan..... ☐

2.4 2.2 Refensi Rencana Persetujuan Management VOCs : ..... ☐

2.5 Pembakaran di atas kapal (peraturan 16)

Kapal memiliki suatu pembakaran :

.1 Dipasang pada atau setelah 1 Januari 2000 yang sesuai dengan resolusi MEPC.76 (40) sebaga mana diubah ..... ☐

.2 Dipasang sebelum 1 Januari 2000 yang memenuhi dengan :

.2.1 resolusi MEPC.59 (33) ..... ☐

.2.2 resolusi MEPC.76 (40) ..... ☐

2.6 Persamaan (Peraturan 4)

Kapal yang diijinkan untuk menggunakan kelengkapan, bahan, alat atau peralatan untuk dipasangkan pada suatu kapal atau prosedur-prosedur lainnya, minyak bahan bakar alternatif atau pemeruhan metode yang digunakan sebagai suatu alternatif yang diminta oleh lampiran ini :

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Sistim atau peralatan	Persamaan Digunakan	Referensi Persetujuan

DENGAN INI MENYATAKAN bahwa salinan ini adalah benar

Dikeluarkan di .....

(tempat dikeluarkannya salinan)

(tt/bb/tttt) : .....
(tanggal dikeluarkan)

.....
(tandatangan pejabat yang berwenang mengeluarkan salinan)

(segel atau cap stempel yang berwenang, dengan tepat)

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Apendiks II

Tes putaran dan faktor-faktor pemberat
(Peraturan 13)

Tes putaran berikut ini dan faktor-faktor pemberat wajib diaplikasikan untuk verifikasi pemenuhan mesin diesel laut dengan batasan Nox yang dapat diaplikasikan sesuai dengan peraturan 13 dari Lampiran ini dengan menggunakan prosedur tes dan metode perhitungan seperti yang tercantum pada Revisi Koda Teknik Nox 2008.

.1 Untuk kecepatan konstan mesin laut untuk kapal dengan tenaga utama termasuk gerakan diesel listrik, tes putaran E2 wajib diterapkan ;

.2 Untuk kumpulan gerakan baling-baling yang dapat dikontrol tes putaran E2 wajib diaplikasikan ;

.3 Untuk baling-baling lain yang dioperasikan utama dan baling-baling lain yang dioperasikan mesin tambahan, tes putaran E3 wajib diaplikasikan

.4 Untuk kecepatan konstan mesin tambahan tes putaran D2 wajib diaplikasikan dan

.5 Untuk kecepatan bervariasi, beban mesin tambahan yang bervariasi, tidak termasuk di atas, tes putaran C1 wajib diaplikasikan

Tes putaran untuk aplikasi kecepatan konstan baling-baling utama
(termasuk gerakan diesel listrik dan semua instalasi gerakan baling-baling terkontrol)

Tes putaran tipe E2	Kecepatan	100%	100%	100%	100%
	Tenaga	100%	75%	50%	25%
	Faktor Pemberat	0.2	0.5	0.15	0.15

Tes putaran untuk aplikasi baling-baling lain dioperasikan utama dan baling-baling lain dioperasikan mesin tambahan

Tes putaran tipe E3	Kecepatan	100%	91%	80%	63%
	Tenaga	100%	75%	50%	25%
	Faktor Pemberat	0.2	0.5	0.15	0.15

Tes putaran untuk aplikasi kecepatan konstan mesin tambahan

Tes Putaran Tipe D2	Kecepatan	100%	100%	100%	100%	100%
	Tenaga	100%	75%	50%	25%	10%
	Faktor Pemberat	0.05	0.25	0.3	0.3	0.1

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Tes putaran untuk aplikasi kecepatan bervariasi dan beban mesin tambahan

Tes putaran tipe C1	kecepatan	tingkat				Antara			tunggu
	Torsi	100 %	75 %	50 %	10 %	100 %	75 %	50 %	0 %
	Faktor pemberat	0 15	0.15	0.15	0.1	0.1	0.1	0.1	0.15

Pada kasus sjatu mesin yang akan disertifikasi sesuai dengan ayat 5.1.1 dari peraturan 13 Emisi khusus pada setiap titik mode individu wajib tidak melebihi batas nilai emisi Nox yang dapat diaplikasikan cengan tidak lebih dari 50% kecuali sebagaimana berikut:

1 Titik mode 10% dalam tes putaran D2

2 Titik mode 10% dalam tes putaran C1\

.3 Titik mode tunggu dalam test putaran C1

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