

No. 22484

MULTILATERAL

Protocol of 1978 relating to the International Convention for the prevention of pollution from ships, 1973 (with annexes, final act and International Convention of 1973). Concluded at London on 17 February 1978

Authentic texts: English, Russian, French and Spanish.

Registered by the International Maritime Organization on 26 November 1983.

(For the authentic French and Spanish texts, see volume 1341.)

MULTILATÉRAL

Protocole de 1978 relatif à la Convention internationale de 1973 pour la prévention de la pollution par les navires (avec annexes, acte final et Convention internationale de 1973). Conclu à Londres le 17 février 1978

Textes authentiques : anglais, russe, français et espagnol.

Enregistré par l'Organisation maritime internationale le 26 novembre 1983.

(Pour les textes authentiques français et espagnol, voir le volume 1341.)

PROTOCOL¹ OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973²

The Parties to the present Protocol,

Recognizing the significant contribution which can be made by the International Convention for the Prevention of Pollution from Ships, 1973², to the protection of the marine environment from pollution from ships,

Recognizing also the need to improve further the prevention and control of marine pollution from ships, particularly oil tankers,

Recognizing further the need for implementing the Regulations for the Prevention of Pollution by Oil contained in Annex I of that Convention as early and as widely as possible,

¹ Came into force on 2 October 1983, i.e., 12 months after the date on which at least 15 States, the combined merchant fleets of which constituted not less than 50 per cent of the gross tonnage of the world's merchant shipping, had signed it definitively or deposited as instrument of ratification, acceptance, approval or accession with the Secretary-General of the International Maritime Organization, in accordance with article V (1):

<i>State</i>	<i>Date of definitive signature (s) or of deposit of the instrument of ratification, approval (AA) or accession (a)</i>	<i>State</i>	<i>Date of definitive signature (s) or of deposit of the instrument of ratification, approval (AA) or accession (a)</i>
Bahamas	7 June 1983 <i>a</i>	Netherlands*	30 June 1983 <i>AA</i>
(With the exception of annexes III, IV and V of the Convention.)		(For the Kingdom in Europe and the Netherlands Antilles. With the exception of annexes III, IV and V of the Convention.)	
China	1 July 1983 <i>a</i>	Norway	15 July 1980 <i>a</i>
(With the exception of annexes III, IV and V of the Convention.)		(With the exception of annex IV of the Convention.)	
Colombia	27 July 1981 <i>a</i>	Peru	25 April 1980 <i>a</i>
Denmark*	27 November 1980 <i>a</i>	Sweden	9 June 1980
Finland	20 September 1983 <i>a</i>	Tunisia	10 October 1980 <i>a</i>
France*	25 September 1981 <i>AA</i>	United Kingdom of Great Britain and Northern Ireland*	22 May 1980
Gabon	26 April 1983 <i>a</i>	(With the exception of annexes III, IV and V of the Convention.)	
Germany, Federal Republic of	21 January 1982	United States of America	12 August 1980
(With a declaration of application to Berlin (West).)		(With the exception of annexes III, IV and V of the Convention. With a declaration that annex I and II of the Protocol shall apply only to seagoing ships.)	
Greece	23 September 1982 <i>a</i>	Uruguay	30 April 1979 <i>s</i>
Israel	31 August 1983 <i>a</i>	Yugoslavia	31 October 1980 <i>a</i>
(With the exception of annexes III, IV and V of the Convention.)			
Italy	1 October 1982 <i>a</i>		
Japan*	9 June 1983 <i>a</i>		
Lebanon	18 July 1983 <i>a</i>		
Liberia	28 October 1980		
(With the exception of annexes III, IV and V of the Convention.)			

*See p. 320 of volume 1341 for the text of the reservations and declarations made upon ratification, accession or approval.

In addition, declarations were made by the Governments of the Federal Republic of Germany, France, Norway, Sweden, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland and the United States of America. See United Nations, *Treaty Series*, vol. 1341, p. 323.

² See p. 184 of this volume.

Acknowledging however the need to defer the application of Annex II of that Convention until certain technical problems have been satisfactorily resolved,

Considering that these objectives may best be achieved by the conclusion of a Protocol relating to the International Convention for the Prevention of Pollution from Ships, 1973,

Have agreed as follows:

Article I. GENERAL OBLIGATIONS

1. The Parties to the present Protocol undertake to give effect to the provisions of:

- (a) The present Protocol and the Annex hereto which shall constitute an integral part of the present Protocol; and
- (b) The International Convention for the Prevention of Pollution from Ships, 1973 (hereinafter referred to as "the Convention"), subject to the modifications and additions set out in the present Protocol.

2. The provisions of the Convention and the present Protocol shall be read and interpreted together as one single instrument.

3. Every reference to the present Protocol constitutes at the same time a reference to the Annex hereto.

Article II. IMPLEMENTATION OF ANNEX II OF THE CONVENTION

1. Notwithstanding the provisions of Article 14(1) of the Convention, the Parties to the present Protocol agree that they shall not be bound by the provisions of Annex II of the Convention for a period of three years from the date of entry into force of the present Protocol or for such longer period as may be decided by a two-thirds majority of the Parties to the present Protocol in the Marine Environment Protection Committee (hereinafter referred to as "the Committee") of the Inter-Governmental Maritime Consultative Organization (hereinafter referred to as "the Organization").

2. During the period specified in paragraph 1 of this Article, the Parties to the present Protocol shall not be under any obligations nor entitled to claim any privileges under the Convention in respect of matters relating to Annex II of the Convention and all reference to Parties in the Convention shall not include the Parties to the present Protocol in so far as matters relating to that Annex are concerned.

Article III. COMMUNICATION OF INFORMATION

The text of Article 11(1)(b) of the Convention is replaced by the following:

"A list of nominated surveyors or recognized organizations which are authorized to act on their behalf in the administration of matters relating to the design, construction, equipment and operation of ships carrying harmful substances in accordance with the provisions of the Regulations for circulation to the Parties for information of their officers. The Administration shall therefore notify the Organization of the specific responsibilities and conditions of the authority delegated to nominated surveyors or recognized organizations."

Article IV. SIGNATURE, RATIFICATION, ACCEPTANCE,
APPROVAL AND ACCESSION

1. The present Protocol shall be open for signature at the Headquarters of the Organization from 1 June 1978 to 31 May 1979 and shall thereafter remain open for accession. States 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.

Article V. 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 fifty per cent of the gross tonnage of the world's merchant shipping, have become Parties to it in accordance with Article IV 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.

Article VI. AMENDMENTS

The procedures set out in Article 16 of the Convention in respect of amendments to the Articles, an Annex and an Appendix to an Annex of the Convention shall apply respectively to amendments to the Articles, the Annex and an Appendix to the Annex of the present Protocol.

Article VII. 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 of the Organization.

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

Article VIII. DEPOSITARY

1. The present Protocol shall be deposited with the Secretary-General of the Organization (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;
 - (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;
 - (iv) Any decision made in accordance with Article II(1) of the present Protocol;
- (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.

Article IX. LANGUAGES

The present Protocol is established in a single original 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 Protocol.

DONE at London this seventeenth day of February one thousand nine hundred and seventy-eight.

A N N E X

MODIFICATIONS AND ADDITIONS TO THE INTERNATIONAL CONVENTION
FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

ANNEX I

REGULATIONS FOR THE PREVENTION OF POLLUTION BY OIL

Regulation 1. DEFINITIONS

Paragraphs (1) to (7): No change.

The existing text of paragraph (8) is replaced by the following:

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

- (i) Which substantially alters the dimensions or carrying capacity of the ship; or
- (ii) Which changes the type of the ship; or
- (iii) The intent of which in the opinion of the Administration is substantially to prolong its life; or
- (iv) Which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present Protocol not applicable to it as an existing ship.

(b) Notwithstanding the provisions of sub-paragraph (a) of this paragraph, conversion of an existing oil tanker of 20,000 tons dead-weight and above to meet the requirements of Regulation 13 of this Annex shall not be deemed to constitute a major conversion for the purposes of this Annex.

Paragraphs (9) to (22): No change.

The existing text of paragraph (23) is replaced by the following:

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

Paragraphs (24) and (25): No change.

The following paragraphs are added to the existing text:

(26) Notwithstanding the provisions of paragraph (6) of this Regulation, for the purposes of Regulations 13, 13B, 13E and 18(5) of this Annex, "new oil tanker" means an oil tanker:

- (a) For which the building contract is placed after 1 June 1979; 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 1 January 1980; or
- (c) The delivery of which is after 1 June 1982; or
- (d) Which has undergone a major conversion:
 - (i) For which the contract is placed after 1 June 1979; or
 - (ii) In the absence of a contract, the construction work of which is begun after 1 January 1980; or
 - (iii) Which is completed after 1 June 1982,

except that, for oil tankers of 70,000 tons deadweight and above, the definition in paragraph (6) of this Regulation shall apply for the purposes of Regulation 13(1) of this Annex.

(27) Notwithstanding the provisions of paragraph (7) of this Regulation, for the purposes of Regulations 13, 13A, 13B, 13C, 13D and 18(6) of this Annex, "existing oil

tanker” means an oil tanker which is not a new oil tanker as defined in paragraph (26) of this Regulation.

(28) “Crude oil” means any liquid hydrocarbon mixture occurring naturally in the earth whether or not treated to render it suitable for transportation and includes:

(a) Crude oil from which certain distillate fractions may have been removed; and

(b) Crude oil to which certain distillate fractions may have been added.

(29) “Crude oil tanker” means an oil tanker engaged in the trade of carrying crude oil.

(30) “Product carrier” means an oil tanker engaged in the trade of carrying oil other than crude oil.

Regulations 2 and 3: No change

Regulation 4

The existing text of Regulation 4 is replaced by the following:

SURVEYS AND INSPECTIONS

(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:

(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, systems, 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, 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 structure, equipment, systems, fittings, arrangements and material fully comply with the requirements of this Annex.

(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 associated pump and piping systems, including oil discharge monitoring and control systems, crude oil washing systems, oily-water separating equipment and oil filtering systems, fully comply with the applicable requirements of this Annex and are in good working order. In cases where only one such intermediate survey is carried out in any one Certificate validity period, it shall be held not before six months prior to, nor later than six months after the half-way date of the Certificate’s period of validity. Such intermediate surveys shall be endorsed on the Certificate 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) (a) 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.

(b) 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 ship and its equipment remain in all respects satisfactory for the service for which the ship is intended. These inspections may be carried out by their own inspection services, or by nominated surveyors or by 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.

(c) An Administration nominating surveyors or recognizing organizations to conduct surveys and inspections as set forth in sub-paragraphs (a) and (b) of this paragraph, shall as a minimum empower any nominated surveyor or recognized organization to:

- (i) Require repairs to a ship; and
- (ii) Carry out surveys and inspections if requested by the appropriate authorities of a Port State.

The Administration shall notify the Organization of the specific responsibilities and conditions of the authority delegated to the nominated surveyors or recognized organizations, for circulation to Parties to the present Protocol for the information of their officers.

(d) When a nominated surveyor or recognized organization determines that the condition of the ship or its equipment does not correspond substantially with the particulars of the Certificate or is such that the ship is not fit to proceed to sea without presenting an unreasonable threat of harm to the marine environment, such surveyor or organization shall immediately 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 and the Administration shall be notified immediately; and 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. When applicable, the Government of the Port State concerned shall take such steps as will ensure that the ship shall not sail until it can proceed to sea or leave the port for the purpose of proceeding to the nearest appropriate repair yard available without presenting an unreasonable threat of harm to the marine environment.

(e) In every case, the Administration concerned shall fully guarantee the completeness and efficiency of the survey and inspection and shall undertake to ensure the necessary arrangements to satisfy this obligation.

(4) (a) The condition of the ship and its equipment shall be maintained to conform with the provisions of the present Protocol to ensure that the ship in all respects will remain fit to proceed to sea without presenting an unreasonable threat of harm to the marine environment.

(b) After any survey of the ship under paragraph (1) of this Regulation has been completed, no change shall be made in the structure, equipment, systems, fittings, arrangements or material covered by the survey, without the sanction of the Administration, except the direct replacement of such equipment and fittings.

(c) Whenever an accident occurs to a ship or a defect is discovered which substantially affects the integrity of the ship or 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, the recognized organization or the nominated surveyor responsible for issuing the relevant Certificate, who shall cause investigations to be initiated to determine whether a survey as required by paragraph (1) of this Regulation is necessary. If the ship is in a port of another Party, the master or owner shall also report immediately to the appropriate authorities of the Port State and the nominated surveyor or recognized organization shall ascertain that such report has been made.

Regulations 5, 6 and 7

In the existing text of these Regulations, delete all references to "(1973)" in relation to the International Oil Pollution Prevention Certificate.

Regulation 8. DURATION OF CERTIFICATE

The existing text of Regulation 8 is replaced by the following:

(1) An International Oil Pollution Prevention Certificate shall be issued for a period specified by the Administration, which shall not exceed five years from the date of issue, provided that in the case of an oil tanker operating with dedicated clean ballast tanks for a limited period specified in Regulation 13(9) of this Annex, the period of validity of the Certificate shall not exceed such specified period.

(2) A Certificate shall cease to be valid if significant alterations have taken place in the construction, equipment, systems, 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.

(3) A Certificate issued to a ship shall also cease to be valid 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 full compliance with the requirements of Regulation 4(4)(a) and (b) 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 transmit as soon as possible 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.

Regulations 9 to 12: No change

The existing text of Regulation 13 is replaced by the following Regulations:

Regulation 13. SEGREGATED BALLAST TANKS, DEDICATED CLEAN BALLAST TANKS AND CRUDE OIL WASHING

Subject to the provisions of Regulations 13C and 13D of this Annex, oil tankers shall comply with the requirements of this Regulation.

New oil tankers of 20,000 tons deadweight and above

(1) Every new crude oil tanker of 20,000 tons deadweight and above and every new product carrier of 30,000 tons deadweight and above shall be provided with segregated ballast tanks and shall comply with paragraphs (2), (3) and (4), or paragraph (5) as appropriate, 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 cargo tanks for water ballast except as provided for in paragraph (3) or (4) of this Regulation. In all cases, however, the capacity of segregated ballast tanks shall be at least such that, in 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 cargo tanks except on those rare voyages when weather conditions are so severe that, in the opinion of the master, it is necessary to carry additional ballast water in cargo tanks for the safety of the ship. Such additional ballast water shall be processed and discharged in compliance with Regulation 9

of this Annex 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) In the case of new crude oil tankers, the additional ballast permitted in paragraph (3) of this Regulation shall be carried in cargo tanks only if such tanks have been crude oil washed in accordance with Regulation 13B of this Annex before departure from an oil unloading port or terminal.

(5) Notwithstanding the provisions of paragraph (2) of this Regulation, the segregated ballast conditions for oil tankers less than 150 metres in length shall be to the satisfaction of the Administration.

(6) Every new crude oil tanker of 20,000 tons deadweight and above shall be fitted with a cargo tank cleaning system using crude oil washing. The Administration shall undertake to ensure that the system fully complies with the requirements of Regulation 13B of this Annex within one year after the tanker was first engaged in the trade of carrying crude oil or by the end of the third voyage carrying crude oil suitable for crude oil washing, whichever occurs later. Unless such oil tanker carries crude oil which is not suitable for crude oil washing, the oil tanker shall operate the system in accordance with the requirements of that Regulation.

Existing crude oil tankers of 40,000 tons deadweight and above

(7) Subject to the provisions of paragraphs (8) and (9) of this Regulation every existing crude oil tanker of 40,000 tons deadweight and above shall be provided with segregated ballast tanks and shall comply with the requirements of paragraphs (2) and (3) of this Regulation from the date of entry into force of the present Protocol.

(8) Existing crude oil tankers referred to in paragraph (7) of this Regulation may, in lieu of being provided with segregated ballast tanks, operate with a cargo tank cleaning procedure using crude oil washing in accordance with Regulation 13B of this Annex unless the crude oil tanker is intended to carry crude oil which is not suitable for crude oil washing.

(9) Existing crude oil tankers referred to in paragraph (7) or (8) of this Regulation may, in lieu of being provided with segregated ballast tanks or operating with a cargo tank cleaning procedure using crude oil washing, operate with dedicated clean ballast tanks in accordance with the provisions of Regulation 13A of this Annex for the following period:

- (a) For crude oil tankers of 70,000 tons deadweight and above, until two years after the date of entry into force of the present Protocol; and
- (b) For crude oil tankers of 40,000 tons deadweight and above but below 70,000 tons deadweight, until four years after the date of entry into force of the present Protocol.

Existing product carriers of 40,000 tons deadweight and above

(10) From the date of entry into force of the present Protocol, every existing product carrier of 40,000 tons deadweight and above shall be provided with segregated ballast tanks and shall comply with the requirements of paragraphs (2) and (3) of this Regulation, or, alternatively, operate with dedicated clean ballast tanks in accordance with the provisions of Regulation 13A of this Annex.

An oil tanker qualified as a segregated ballast oil tanker

(11) Any oil tanker which is not required to be provided with segregated ballast tanks in accordance with paragraph (1), (7) or (10) of this Regulation may, however, be qualified as a segregated ballast tanker, provided that it complies with the requirements of paragraphs (2) and (3), or paragraph (5) as appropriate, of this Regulation.

**Regulation 13A. REQUIREMENTS FOR OIL TANKERS WITH
DEDICATED CLEAN BALLAST TANKS**

(1) An oil tanker operating with dedicated clean ballast tanks in accordance with the provisions of Regulation 13(9) or (10) of this Annex, shall have adequate tank capacity,

dedicated solely to the carriage of clean ballast as defined in Regulation 1(16) of this Annex, to meet the requirements of Regulation 13(2) and (3) of this Annex.

(2) The arrangements and operational procedures for dedicated clean ballast tanks shall comply with the requirements established by the Administration. Such requirements shall contain at least all the provisions of the Specifications for Oil Tankers with Dedicated Clean Ballast Tanks adopted by the International Conference on Tanker Safety and Pollution Prevention, 1978, in Resolution 14 and as may be revised by the Organization.

(3) An oil tanker operating with dedicated clean ballast tanks shall be equipped with an oil content meter, approved by the Administration on the basis of specifications recommended by the Organization*, to enable supervision of the oil content in ballast water being discharged. The oil content meter shall be installed no later than at the first scheduled shipyard visit of the tanker following the entry into force of the present Protocol. Until such time as the oil content meter is installed, it shall immediately before discharge of ballast be established by examination of the ballast water from dedicated tanks that no contamination with oil has taken place.

(4) Every oil tanker operating with dedicated clean ballast tanks shall be provided with:

- (a) A Dedicated Clean Ballast Tank Operation Manual detailing the system and specifying operational procedures. Such a Manual shall be to the satisfaction of the Administration and shall contain all the information set out in the Specifications referred to in paragraph (2) of this Regulation. If an alteration affecting the dedicated clean ballast tank system is made, the Operation Manual shall be revised accordingly; and
- (b) A Supplement to the Oil Record Book referred to in Regulation 20 of this Annex as set out in Supplement 1 to Appendix III of this Annex. The Supplement shall be permanently attached to the Oil Record Book.

Regulation 13B. REQUIREMENTS FOR CRUDE OIL WASHING

(1) Every crude oil washing system required to be provided in accordance with Regulation 13(6) and (8) of this Annex shall comply with the requirements of this Regulation.

(2) The crude oil washing installation and associated equipment and arrangements shall comply with the requirements established by the Administration. Such requirements shall contain at least all the provisions of the Specifications for the Design, Operation and Control of Crude Oil Washing Systems adopted by the International Conference on Tanker Safety and Pollution Prevention, 1978, in Resolution 15 and as may be revised by the Organization.

(3) An inert gas system shall be provided in every cargo tank and slop tank in accordance with the appropriate Regulations of Chapter II-2 of the International Convention for the Safety of Life at Sea, 1974,¹ as modified and added to by the Protocol of 1978 Relating to the International Convention for the Safety of Life at Sea, 1974.²

(4) With respect to the ballasting of cargo tanks, sufficient cargo tanks shall be crude oil washed prior to each ballast voyage in order that, taking into account the tanker's trading pattern and expected weather conditions, ballast water is put only into cargo tanks which have been crude oil washed.

* Reference is made to the Recommendation on International Performance and Test Specifications for Oily-Water Separating Equipment and Oil Content Meters adopted by the Organization by Resolution A.393(X).

¹ United Nations, *Treaty Series*, vol. 1184, p. 2.

² *Ibid.*, vol. 1226, p. 213.

(5) Every oil tanker operating with crude oil washing systems shall be provided with:

- (a) An Operations and Equipment Manual detailing the system and equipment and specifying operational procedures. Such a Manual shall be to the satisfaction of the Administration and shall contain all the information set out in the Specifications referred to in paragraph (2) of this Regulation. If an alteration affecting the crude oil washing system is made, the Operations and Equipment Manual shall be revised accordingly; and
- (b) A Supplement to the Oil Record Book referred to in Regulation 20 of this Annex as set out in Supplement 2 to Appendix III of this Annex. The Supplement shall be permanently attached to the Oil Record Book.

Regulation 13C. EXISTING TANKERS ENGAGED IN SPECIFIC TRADES

(1) Subject to the provisions of paragraphs (2) and (3) of this Regulation, Regulation 13(7) to (10) of this Annex shall not apply to an existing oil tanker solely engaged in specific trades between:

- (a) Ports or terminals within a State Party to the present Protocol; or
- (b) Ports or terminals of States Parties to the present Protocol, where:
 - (i) The voyage is entirely within a Special Area as defined in Regulation 10(1) of this Annex; or
 - (ii) The voyage is entirely within other limits designated by the Organization.

(2) The provisions of paragraph (1) of this Regulation shall only apply when the ports or terminals where cargo is loaded on such voyages are provided with reception facilities adequate for the reception and treatment of all the ballast and tank washing water from oil tankers using them and all the following conditions are complied with:

- (a) Subject to the exceptions provided for in Regulation 11 of this Annex, all ballast water, including clean ballast water, and tank washing residues are retained on board and transferred to the reception facilities and the entry in the appropriate Sections of the Supplement to the Oil Record Book referred to in paragraph (3) of this Regulation is endorsed by the competent Port State authority;
- (b) Agreement has been reached between the Administration and the Governments of the Port States referred to in subparagraph (1)(a) or (b) of this Regulation concerning the use of an existing oil tanker for a specific trade;
- (c) The adequacy of the reception facilities in accordance with the relevant provisions of this Annex at the ports or terminals referred to above, for the purpose of this Regulation, is approved by the Governments of the States Parties to the present Protocol within which such ports or terminals are situated; and
- (d) The International Oil Pollution Prevention Certificate is endorsed to the effect that the oil tanker is solely engaged in such specific trade.

(3) Every oil tanker engaged in a specific trade shall be provided with a Supplement to the Oil Record Book referred to in Regulation 20 of this Annex as set out in Supplement 3 to Appendix III of this Annex. The Supplement shall be permanently attached to the Oil Record Book.

Regulation 13D. EXISTING OIL TANKERS HAVING SPECIAL BALLAST ARRANGEMENTS

(1) Where an existing oil tanker is so constructed or operates in such a manner that it complies at all times with the draught and trim requirements set out in Regulation 13(2) of this Annex without recourse to the use of ballast water, it shall be deemed to comply

with the segregated ballast tank requirements referred to in Regulation 13(7) of this Annex, provided that all of the following conditions are complied with:

- (a) Operational procedures and ballast arrangements are approved by the Administration;
- (b) Agreement is reached between the Administration and the Governments of the Port States Parties to the present Protocol concerned when the draught and trim requirements are achieved through an operational procedure; and
- (c) The International Oil Pollution Prevention Certificate is endorsed to the effect that the oil tanker is operating with special ballast arrangements.

(2) In no case shall ballast water be carried in oil tanks except on those rare voyages when weather conditions are so severe that, in the opinion of the master, it is necessary to carry additional ballast water in cargo tanks for the safety of the ship. Such additional ballast water shall be processed and discharged in compliance with Regulation 9 of this Annex 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.

(3) An Administration which has endorsed a Certificate in accordance with subparagraph (1)(c) of this Regulation shall communicate to the Organization the particulars thereof for circulation to the Parties to the present Protocol.

Regulation 13E. PROTECTIVE LOCATION OF SEGREGATED BALLAST SPACES

(1) In every new crude oil tanker of 20,000 tons deadweight and above and every new product carrier of 30,000 tons deadweight and above, the segregated ballast tanks required to provide the capacity to comply with the requirements of Regulation 13 of this Annex which are located within the cargo tank length, shall be arranged in accordance with the requirements of paragraphs (2), (3) and (4) of this Regulation to provide a measure of protection against oil outflow in the event of grounding or collision.

(2) Segregated ballast tanks and spaces other than oil tanks within the cargo tank length (L_t) shall be so arranged as to comply with the following requirement:

$$\Sigma PA_c + \Sigma PA_s \geq J[L_t (B + 2D)]$$

where:

- PA_c = the side shell area in square metres for each segregated ballast tank or space other than an oil tank based on projected moulded dimensions,
- PA_s = the bottom shell area in square metres for each such tank or space based on projected moulded dimensions,
- L_t = length in metres between the forward and after extremities of the cargo tanks,
- B = maximum breadth of the ship in metres as defined in Regulation 1(21) of this Annex,
- D = moulded depth in metres measured vertically from the top of the keel to the top of the freeboard deck beam at side amidships. In ships having rounded gunwales, the moulded depth shall be measured to the point of intersection of the moulded lines of the deck and side shell plating, the lines extending as though the gunwale were of angular design,
- J = 0.45 for oil tankers of 20,000 tons deadweight 0.30 for oil tankers of 200,000 tons deadweight and above, subject to the provisions of paragraph (3) of this Regulation.

For intermediate values of deadweight the value of "J" shall be determined by linear interpolation.

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

(3) For tankers of 200,000 tons deadweight and above the value of "J" may be reduced as follows:

$$J \text{ reduced} = \left[J - \left(a - \frac{0_c + 0_s}{4 0_A} \right) \right] \text{ or } 0.2 \text{ whichever is greater}$$

where:

- a = 0.25 for oil tankers of 200,000 tons deadweight
- a = 0.40 for oil tankers of 300,000 tons deadweight
- a = 0.50 for oil tankers of 420,000 tons deadweight and above,

For intermediate values of deadweight the value of "a" shall be determined by linear interpolation.

- 0_c = as defined in Regulation 23(1)(a) of this Annex,
- 0_s = as defined in Regulation 23(1)(b) of this Annex,
- 0_A = the allowable oil outflow as required by Regulation 24(2) of this Annex.

(4) In the determination of "PA_c" and "PA_s" for segregated ballast tanks and spaces other than oil tanks the following shall apply:

- (a) The minimum width of each wing tank or space either of which extends for the full depth of the ship's side or from the deck to the top of the double bottom shall be not less than 2 metres. The width shall be measured inboard from the ship's side at right angles to the centre line. Where a lesser width is provided the wing tank or space shall not be taken into account when calculating the protecting area "PA_c"; and
- (b) The minimum vertical depth of each double bottom tank or space shall be B/15 or 2 metres, whichever is the lesser. Where a lesser depth is provided the bottom tank or space shall not be taken into account when calculating the protecting area "PA_s".

The minimum width and depth of wing tanks and double bottom tanks shall be measured clear of the bilge area and, in the case of minimum width, shall be measured clear of any rounded gunwale area.

Regulation 14: No change

Regulation 15

In the existing text of this Regulation, delete reference to "(1973)" in relation to the International Oil Pollution Prevention Certificate.

Regulations 16 and 17: No change

Regulation 18. PUMPING, PIPING AND DISCHARGE ARRANGEMENTS OF OIL TANKERS

Paragraphs (1) to (4): No change.

The following paragraphs are added to the existing text:

(5) Every new oil tanker required to be provided with segregated ballast tanks, or fitted with a crude oil washing system shall comply with the following requirements:

- (a) It shall be equipped with oil piping so designed and installed such that oil retention in the lines is minimized; and
- (b) Means shall be provided to drain all cargo pumps and all oil lines at the completion of cargo discharge, where necessary by connexion to a stripping device. The line and pump drainings shall be capable of being discharged both ashore and to a cargo tank

or a slop tank. For discharge ashore a special small diameter line shall be provided for that purpose and connected outboard of the ship's manifold valves.

(6) Every existing crude oil carrier required to be provided with segregated ballast tanks, or fitted with a crude oil washing system or operated with dedicated clean ballast tanks, shall comply with the provisions of paragraph (5)(b) of this Regulation.

Regulation 19: No change

Regulation 20

In the existing text of this Regulation, delete reference to "(1973)" in relation to the International Oil Pollution Prevention Certificate.

Regulations 21 to 25: No change

Appendix I. LIST OF OILS: No change

Appendix II. FORM OF CERTIFICATE

The existing form of Certificate is replaced by the following form:

INTERNATIONAL OIL POLLUTION PREVENTION CERTIFICATE

Issued under the provisions of the Protocol of 1978 Relating to 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 Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973)

Table with 4 columns: Name of ship, Distinctive number or letters, Port of registry, Gross tonnage

Type of ship:

- Crude oil tanker*
Product carrier*
Crude oil/product carrier*
Ship other than an oil tanker with cargo tanks coming under Regulation 2(2) of Annex I of the Protocol*
Ship other than any of the above*

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

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 effluent with an oil content not exceeding 100 parts per million)
(b) An oil filtering system* (capable of producing 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 effluent with an oil content not exceeding 15 parts per million) in lieu of (a) or (b) above.

* Delete as appropriate.

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

.....

Remarks:

*Endorsement for existing ships**

This is to certify that this ship has now been so equipped as to comply with the requirements of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973, as relating to existing ships.**

Signed
 (Signature of duly authorized official)

Place

Date

(Seal or stamp of the Authority,
 as appropriate)

*Part B. OIL TANKERS****

Carrying capacity of ship (m ³)	Deadweight of ship (metric tons)	Length of ship (m)

It is certified that this ship is constructed and equipped, and must operate, in accordance with the following:

1. This ship is:

- (a) Required to be constructed according to and complies with†
- (b) Not required to be constructed according to†

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

** The period after the entry into force of the Protocol within which oily-water separating equipment, oil discharge control systems, oil filtering systems and/or slop tank arrangements must be provided is set out in Regulations 13A(3), 15(1) and 16(4) of Annex I of the Protocol.

*** This Part should be completed for oil tankers including combination 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.

† Delete as appropriate.

(c) Not required to be constructed according to, but complies with* the requirements of Regulation 24 of Annex I of the Protocol.

2. This ship is:

(a) Required to be constructed according to and complies with*

(b) Not required to be constructed according to*

the requirements of Regulation 13E of Annex I of the Protocol.

3. This ship is:

(a) Required to be provided with segregated ballast tanks according to, and complies with*

(b) Not required to be provided with segregated ballast tanks according to*

(c) Not required to be provided with segregated ballast tanks according to, but complies with*

(d) In accordance with Regulation 13C or 13D of Annex I of the Protocol, and as specified in Part C of this Certificate, exempted from*

the requirements of Regulation 13 of Annex I of the Protocol

(e) Fitted with a cargo tank cleaning system using crude oil washing in accordance with the provisions of Regulation 13B of Annex I of the Protocol, in lieu of being provided with segregated ballast tanks*

(f) Provided with dedicated clean ballast tanks in accordance with the provisions of Regulation 13A of Annex I of the Protocol, in lieu of being either provided with segregated ballast tanks or fitted with a cargo tank cleaning system using crude oil washing*

4. This ship is:

(a) Required to be fitted with a cargo tank cleaning system using crude oil washing according to, and complies with*

(b) Not required to be fitted with a cargo tank cleaning system using crude oil washing according to*

the requirements of Regulation 13(6) of Annex I of the Protocol.

*Segregated ballast tanks***

The segregated ballast tanks are distributed as follows:

Tank	Volume (m ³)	Tank	Volume (m ³)

*Dedicated Clean Ballast Tanks***

This ship is operating with dedicated clean ballast tanks until (Date)

in accordance with the requirements of Regulation 13A of Annex I of the Protocol.

* Delete as appropriate.
 ** Delete if not applicable.

The dedicated clean ballast tanks are designated as follows:

Tank	Volume (m ³)	Tank	Volume (m ³)

*Manual**

This is to certify that this ship has been supplied with:

- (a) A valid Dedicated Clean Ballast Tank Operation Manual in accordance with Regulation 13A of Annex I of the Protocol**
- (b) A valid Operations and Equipment Manual for Crude Oil Washing in accordance with Regulation 13B of Annex I of the Protocol**

Identification of the valid Manual

Signed
(Signature of duly authorized official)

Place

Date

(Seal or stamp of the Authority,
as appropriate)

Identification of the valid Manual

Signed
(Signature of duly authorized official)

Place

Date

(Seal or stamp of the Authority,
as appropriate)

* Delete if not applicable.

** Delete as appropriate.

Part C. EXEMPTIONS*

This is to certify that this ship is:

- (a) Solely engaged in trade between and in accordance with Regulation 13C of Annex I of the Protocol**; or
- (b) Operating with special ballast arrangements in accordance with Regulation 13D of Annex I of the Protocol**

and is therefore exempted from the requirements of Regulation 13 of Annex I of the Protocol.

Signed
(Signature of duly authorized official)

Place

Date

(Seal or stamp of the Authority,
as appropriate)

THIS IS TO CERTIFY:

That the ship has been surveyed in accordance with Regulation 4 of Annex I of the Protocol of 1978 Relating to 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, systems, 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 that Protocol.

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)

(Seal or stamp of the Authority, as appropriate)

INTERMEDIATE SURVEY

This is to certify that at an intermediate survey required by Regulation 4(1)(c) of Annex I of the Protocol 1978 Relating to the International Convention for the Prevention

* Delete if not applicable.
** Delete as appropriate.

of Pollution from Ships, 1973, this ship and the condition thereof were found to comply with the relevant provisions of that Protocol.

Signed
(Signature of duly authorized official)

Place

Date

Next intermediate survey due

(Seal or stamp of the Authority,
as appropriate)

Signed
(Signature of duly authorized official)

Place

Date

Next intermediate survey due

(Seal or stamp of the Authority,
as appropriate)

Signed
(Signature of duly authorized official)

Place

Date

Next intermediate survey due

(Seal or stamp of the Authority,
as appropriate)

Signed
(Signature of duly authorized official)

Place

Date

(Seal or stamp of the Authority,
as appropriate)

Appendix III. FORM OF OIL RECORD BOOK

The following forms of Supplements to the Oil Record Book are added to the existing form:

Supplement 1

FORM OF SUPPLEMENT TO OIL RECORD BOOK FOR OIL TANKERS OPERATED WITH DEDICATED CLEAN BALLAST TANKS*

Name of ship

Distinctive number or letters

Total cargo carrying capacity cubic metres

Total dedicated clean ballast capacity cubic metres

The following tanks are designated as dedicated clean ballast tanks:

Tank	Volume (m ³)	Tank	Volume (m ³)

NOTE: The periods covered by the Supplement should be consistent with the periods covered by the Oil Record Book.

* This Supplement should be attached to the Oil Record Book for oil tankers operating with dedicated clean ballast tanks in accordance with Regulation 13A of Annex I of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973. Other information as required should be entered in the Oil Record Book.

(A) *Ballasting of dedicated clean ballast tanks*

101.	Identity of tank(s) ballasted			
102.	Date and position of ship when water intended for flushing, or port ballast was taken to dedicated clean ballast tank(s)			
103.	Date and position of ship when pump(s) and lines were flushed to slop tank			
104.	Date and position of ship when additional ballast water was taken to dedicated clean ballast tank(s)			
105.	Date, time and position of ship when (a) valves to slop tank, (b) valves to cargo tanks, (c) other valves affecting the clean ballast system were closed			
106.	Quantity of clean ballast taken on board			

The undersigned certifies that, in addition to the above, all sea valves, cargo tank and pipeline connexions and connexions between tanks or inter-tank connexions, were secured on the completion of ballasting of dedicated clean ballast tanks.

Date of entry Officer in charge

Master

(B) *Discharge of clean ballast*

107.	Identity of tank(s)			
108.	Date, time and position of ship at start of discharge of clean ballast (a) to sea, or (b) into reception facility			
109.	Date, time and position of ship upon completion of discharge to sea			
110.	Quantity discharged (a) to sea, or (b) into reception facility			
111.	Was the ballast water checked for oil contamination before discharge?			
112.	Was the discharge monitored during discharge by an oil content meter?			
113.	Was there any indication of oil contamination of the ballast water before or during discharge?			
114.	Date and position of ship when pump and lines were flushed after loading			
115.	Date, time and position of ship when (a) valves to slop tank, (b) valves to cargo tanks, (c) other valves affecting the clean ballast system were closed			
116.	Quantity of polluted water transferred to slop tank(s). (Identify slop tank(s))			

The undersigned certifies that, in addition to the above, all sea valves overboard discharge valves, cargo tank and pipeline connexions and connexions between tanks or inter-tank connexions, were secured on completion of discharge of clean ballast and that the pump(s) and pipes designated for clean ballast operations were properly cleaned upon completion of discharge of clean ballast.

Date of entry Officer in charge

Master

Supplement 2

FORM OF SUPPLEMENT TO OIL RECORD BOOK FOR CRUDE OIL TANKERS
OPERATING WITH A CARGO TANK CLEANING PROCEDURE USING
CRUDE OIL WASHING*

Name of ship

Distinctive number or letters

Total cargo carrying capacity cubic metres

Voyage from to
(Port(s)) (Date) (Port(s)) (Date)

NOTES: The periods covered by the supplement should be consistent with the periods covered by the Oil Record Book.

The cargo tanks crude oil washed should be those laid down in the Operations and Equipment Manual required by Regulation 13B(5)(a) of the Protocol.

A separate column should be used for each tank washed or water rinsed.

(A) *Crude oil washing*

201.	Date when and port where crude oil washing was carried out or ship's position if carried out between two discharge ports				
202.	Identity of tank(s) washed (see Note 1)				
203.	Number of machines in use				
204.	Commenced washing (a) Date and time (b) Ullage				
205.	Washing pattern employed (see Note 2)				
206.	Washing line pressure				
207.	Completed or stopped washing (a) Date and time (b) Ullage				
208.	Remarks				

* This Supplement should be attached to the Oil Record Book for crude oil tankers operating with a cargo tank cleaning procedure using crude oil washing in accordance with Regulation 13B of Annex I of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973, and is intended to replace Section (e) of the Oil Record Book. Details of ballasting and deballasting and other information required should be entered in the Oil Record Book.

Note 1. When an individual tank has more machines than can be operated simultaneously, as described in the Operations and Equipment Manual, then the section being crude oil washed should be identified, e.g. No. 2 centre, forward section.

Note 2. In accordance with the Operations and Equipment Manual, enter whether single-stage or multi-stage method of washing is employed. If multi-stage method is used, give the vertical arc covered by the machines and the number of times that arc is covered for that particular stage of the programme.

The tanks were washed in accordance with programmes given in the Operations and Equipment Manual (see Note 3) and confirmed dry on completion.

Date of entry Officer in charge

Master

(B) *Water rinsing or flushing of tank bottoms*

209.	Date and position of ship when rinsing or flushing was carried out				
210.	Identity of tank(s) and date				
211.	Volume of water used				
212.	Transferred to: (a) Reception facilities (b) Slop tank(s) (identify slop tank(s))				

Date of entry Officer in charge

Master

Note 3. If the programmes given in the Operations and Equipment Manual are not followed, then details must be given under Remarks.

Supplement 3

FORM OF SUPPLEMENT TO OIL RECORD BOOK
FOR OIL TANKERS ENGAGED IN SPECIFIC TRADES*

Name of ship

Distinctive number or letters

Total cargo carrying capacity cubic metres

Total ballast water capacity required for compliance with Regulation 13(2) and (3) of Annex I of the Protocol cubic metres

Voyages from to
(Port(s)) (Port(s))

NOTE: The periods covered by the Supplement should be consistent with the periods covered by the Oil Record Book.

(A) *Loading of ballast water*

301.	Identity of tank(s) ballasted				
302.	Date and position of ship when ballasted				
303.	Total quantity of ballast loaded in cubic metres				
304.	Method of calculating ballast quantity				
305.	Remarks				
306.	Date and signature of officer in charge				
307.	Date and signature of Master				

* This Supplement should be attached to the Oil Record Book for oil tankers engaged in specific trades in accordance with Regulation 13C of Annex I of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973, and is intended to replace Sections (d), (f), (g) and (i) of the Oil Record Book. Other information required should be entered in the Oil Record Book.

(B) *Re-allocation of ballast water within the ship*

308.	Reason for re-allocation				
309.	Date and signature of officer in charge				
310.	Date and signature of Master				

(C) *Ballast water discharge to reception facility*

311.	Date and port(s) where ballast water was discharged				
312.	Name or designation of reception facility				
313.	Total quantity of ballast water discharged in cubic metres				
314.	Method of calculating ballast quantity				
315.	Date and signature of officer in charge				
316.	Date and signature of Master				
317.	Date, signature and stamp of port authority official				

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

No change

*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

No change

ANNEX IV

REGULATIONS FOR THE PREVENTION OF POLLUTION BY SEWAGE FROM SHIPS

No change

ANNEX V

REGULATIONS FOR THE PREVENTION OF POLLUTION BY GARBAGE FROM SHIPS

No change

FINAL ACT OF THE INTERNATIONAL CONFERENCE ON TANKER SAFETY AND POLLUTION PREVENTION, 1978

1. In consideration of recommendations made by the Maritime Safety Committee, the Council of the Inter-Governmental Maritime Consultative Organization decided, on 25 May 1977, to convene the International Conference on Tanker Safety and Pollution Prevention which was held in London from 6 to 17 February 1978.

2. Upon the invitation of the Inter-Governmental Maritime Consultative Organization, the following States were represented by delegations at the Conference:

Algeria	Liberia
Argentina	Malaysia
Australia	Mexico
Bahamas	Morocco
Bahrain	Netherlands
Barbados	New Zealand
Belgium	Nigeria
Brazil	Norway
Bulgaria	Oman
Canada	Panama
Chile	Philippines
Colombia	Poland
Cuba	Portugal
Cyprus	Republic of Korea
Denmark	Romania
Egypt	Saudi Arabia
Finland	Senegal
France	Singapore
German Democratic Republic	Spain
Germany, Federal Republic of	Sweden
Ghana	Thailand
Greece	Trinidad and Tobago
India	Tunisia
Indonesia	Turkey
Iran	Union of Soviet Socialist Republics
Iraq	United Kingdom of Great Britain and Northern Ireland
Ireland	United States of America
Israel	Uruguay
Italy	Venezuela
Japan	Yugoslavia
Kenya	
Kuwait	

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

China
Ecuador
Mauritius

4. At the invitation of the Organization, the following organization in the United Nations system sent a representative to the Conference:

United Nations Environment Programme (UNEP)

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

Organisation for Economic Co-operation and Development (OECD)
Commission of the European Communities (EEC)

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

International Chamber of Shipping (ICS)
International Shipping Federation (ISF)
International Union of Marine Insurance (IUMI)
International Confederation of Free Trade Unions (ICFTU)
International Radio-Maritime Committee (CIRM)
International Association of Ports and Harbors (IAPH)
Baltic and International Maritime Conference (BIMCO)
International Association of Classification Societies (IACS)
Oil Companies International Marine Forum (OCIMF)
International Shipowners' Association (INSA)
Engineering Committee on Oceanic Resources (ECOR)
Friends of the Earth International (FOE)
International Association of Institutes of Navigation (IAIN)
Association of West European Shipbuilders (AWES)

7. At the opening of the Conference, Mr. S. Clinton Davis, Parliamentary Under-Secretary of State for Companies, Aviation and Shipping of the Department of Trade of the United Kingdom, made a statement on behalf of Her Majesty's Government welcoming delegates to the Conference.

8. His Excellency Mr. Manuel Tello, C.M.G. of the delegation of Mexico was elected President of the Conference. The following Vice-Presidents were also elected:

Mr. M. Jacquier (France)
Mr. P. Gavai (India)
Mr. R. Adero (Kenya)
H.E. Mr. Said Ben Ammar (Tunisia)
Mr. A. Kolesnitchenko (USSR)

9. The following officers of the Conference were appointed:

Secretary-General: Mr. C. P. Srivastava;
Executive Secretaries: Captain G. P. Kostylev, Mr. Y. Sasamura.

10. The Conference established the following Committees:

Committee I

Chairman: Mr. J. Vonau (Poland);
Vice-Chairman: Mr. S. Abboud (Egypt).

Committee II

Chairman: Mr. P. Eriksson (Sweden);
Vice-Chairman: Mr. J. H. Birtwhistle (Canada).

Committee III

Chairman: Dr. L. Spinelli (Italy);
Vice-Chairman: Captain J. F. Schwarz (Argentina).

Credentials Committee

Chairman: Captain S. Tardana (Indonesia).

Drafting Committee

Chairman: Mr. S. N. Burbridge (United Kingdom).

11. The following documentation formed the basis for the work of the Conference:

- The International Convention for the Prevention of Pollution from Ships, 1973;¹
- The International Convention for the Safety of Life at Sea, 1974;²
- Draft Protocols to those Conventions jointly prepared by the Maritime Safety Committee and the Marine Environment Protection Committee of the Organization;
- Draft Resolutions relating to the improvement of safety at sea and the prevention of marine pollution from ships;
- Proposals and comments submitted to the Conference by interested governments and organizations.

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

Protocol of 1978 relating to the International Convention for the Safety of life at Sea, 1974³ and

Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973⁴

The above Protocols constitute Attachments 1 and 2 to this Final Act respectively.

13. The Conference also adopted the Resolutions shown at Attachment 3 to this Final Act.

14. The text of this Final Act, including its Attachments, is deposited with the Secretary-General of the Inter-Governmental Maritime Consultative Organization. It is established in a single original in the English, French, Russian and Spanish languages, and is accompanied by the texts of the Protocol of 1978 Relating to the International Convention for the Safety of Life at Sea, 1974, and of the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973. The texts of the Protocols appear in the authentic languages specified in the Conventions to which they relate. Official translations

¹ See p. 184 of this volume.

² United Nations, *Treaty Series*, vol. 1185, p. 2.

³ *Ibid.*, vol. 1226, p. 213.

⁴ See p. 62 of this volume.

of the Protocols will be prepared in the languages specified in the Conventions to which they relate. Originals of these official translations will be deposited with this Final Act.

15. The Secretary-General of the Inter-Governmental Maritime Consultative Organization shall send certified copies of this Final Act with the Resolutions of the Conference, certified copies of the authentic texts of the Protocols and, when they have been prepared, official translations of the Protocols, to the Governments of the States 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 seventeenth day of February one thousand nine hundred and seventy-eight.

Attachment 3

RESOLUTION 1

TARGET DATE FOR THE ENTRY INTO FORCE OF THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

The Conference,

Recognizing that the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol) when implemented, would substantially 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,

Desiring to bring the MARPOL Protocol which incorporates and modifies the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Convention) into force as soon as possible,

Taking note of the work by the Inter-Governmental Maritime Consultative Organization to resolve the technical problems involved in the implementation of the MARPOL Convention,

Recommends that all Governments concerned adopt a target date of June 1981 for the entry into force of the MARPOL Protocol which incorporates and modifies the MARPOL Convention,

Recommends also that those States which contemplate becoming Parties to the MARPOL Protocol:

- (a) Make every effort to deposit their instruments of ratification, approval, acceptance or accession at as early a date as possible but not later than June 1980;
- (b) If they have not deposited such instruments before June 1980, give the Secretary-General of the Organization by that date an indication of the period within which they expect to be able to do so,

Recommends further that, prior to the entry into force of the MARPOL Protocol, Governments should ensure that the provisions of that Protocol are applied by the date fixed to new ships in respect of requirements which contain a specific implementation date,

Noting that, with regard to existing oil tankers, the MARPOL Protocol prescribes that requirements should be implemented in relation to the date on which the Protocol enters into force,

Invites all Governments concerned to put these requirements into effect, to the maximum extent, without waiting for the entry into force of the MARPOL Protocol, by June 1981, or as soon as possible thereafter, namely:

—For existing crude oil tankers:

Requirements for segregated ballast tanks, crude oil washing system or dedicated clean ballast tanks contained in Regulation 13 of Annex I of the MARPOL Protocol

—For existing product carriers:

Requirements for segregated ballast tanks or dedicated clean ballast tanks contained in Regulation 13 of Annex I of the MARPOL Protocol,

Recommends that the eleventh session of the Assembly of the Organization in 1979 review progress towards meeting those dates.

RESOLUTION 2

TARGET DATE FOR THE ENTRY INTO FORCE OF THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AND THE PROTOCOL OF 1978 RELATING TO THAT CONVENTION

The Conference,

Recognizing that the International Convention for the Safety of Life at Sea, 1974, (SOLAS Convention) and the Protocol of 1978 relating to that Convention (SOLAS Protocol) when implemented, can make a significant improvement in the safety of ships and property at sea and the life of persons on board,

Noting that the SOLAS Protocol adopted by the Conference cannot enter into force before the SOLAS Convention enters into force,

Desiring to bring the SOLAS Convention and the SOLAS Protocol into force as soon as possible,

Recommends that all Governments concerned adopt a target date of June 1979 for the entry into force of the SOLAS Convention and endeavour to ensure that the SOLAS Protocol enters into force at the same time or as soon as possible thereafter,

Recommends also that those States which contemplate becoming Parties to the SOLAS Convention:

- (a) Make every effort to deposit their instruments of ratification, approval, acceptance or accession at the earliest possible date, but not later than June 1978;
- (b) Deposit instruments of ratification, approval or acceptance of, or accession to, the SOLAS Protocol when it is open for signature or as soon as possible thereafter; and when it becomes possible to do so, endeavour to deposit instruments of ratification, approval or acceptance of, or accession to, both the SOLAS Convention and the SOLAS Protocol simultaneously;
- (c) If they have not deposited such instruments before June 1978, give the Secretary-General of the Inter-Governmental Maritime Consultative Organization by that date an indication of the period within which they expect to be able to do so,

Recommends also that States which have deposited instruments of ratification of the SOLAS Convention should deposit instruments of ratification of the SOLAS Protocol as soon as possible,

Recommends further that, prior to the entry into force of the SOLAS Protocol, Administrations should ensure that the provisions of that instrument are applied to new tankers by the date fixed in respect of requirements which contain a specific implementation date,

Noting that, with regard to existing ships, the SOLAS Protocol prescribes that the requirements should be implemented in relation to the date on which that Protocol enters into force,

Invites all Governments concerned to put these requirements into effect to the maximum extent, without waiting for the entry into force of the SOLAS Protocol, by the following dates, or as soon as possible thereafter, namely:

—Requirements for inert gas systems contained in Regulation 60 of Chapter II-2 of the SOLAS Protocol

Existing tankers of 70,000 tons deadweight and above: by June 1981

Existing tankers of 40,000 tons deadweight and above but below 70,000 tons deadweight, and existing crude oil tankers of 20,000 tons and above but below 40,000 tons deadweight fitted with high capacity tank washing machines: by June 1983

—Requirements for steering gear for existing tankers contained in Regulation 29(d) of Chapter II-1 of the SOLAS Protocol: by June 1981,

Recommends that the eleventh session of the Assembly of the Inter-Governmental Maritime Consultative Organization in 1979 review progress towards meeting these dates.

RESOLUTION 3

FUTURE DEVELOPMENTS AIMED AT ELIMINATING POLLUTION

The Conference,

Noting that Resolutions 1 and 3 of the International Conference on Marine Pollution, 1973, expressed the belief that the International Convention for the Prevention of Pollution from Ships, 1973, will, when implemented, constitute a further important step towards the complete elimination of pollution of the sea by harmful substances from ships,

Believing that the Protocol of 1978 relating to that Convention (MARPOL Protocol) will further contribute towards the objective of eliminating pollution by oil,

Noting the provisions of the MARPOL Protocol extending the requirements for segregated ballast tanks to all new crude oil tankers of 20,000 tons deadweight and above and also making the crude oil washing systems obligatory for such oil tankers,

Being aware that the combination of the requirements for segregated ballast tanks and crude oil washing systems provides Administrations with a greatly improved ability to meet the objective of completely eliminating pollution of the sea from ships,

Recommends that such combination of requirements should be an ultimate objective of the Inter-Governmental Maritime Consultative Organization in respect of pollution from crude oil tankers,

Invites the Organization to develop, not later than 1986, proposals for appropriate amendments to the MARPOL Protocol to achieve the above objective.

RESOLUTION 4

CONTROL PROCEDURES FOR EXISTING CRUDE OIL TANKERS OF LESS THAN 40,000 TONS DEADWEIGHT

The Conference,

Having adopted the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol),

Noting that the MARPOL Protocol contains new requirements relating to the carriage of ballast and the washing of cargo tanks in oil tankers of 40,000 tons deadweight and above,

Recognizing that in order to implement these requirements effectively, continuing strong emphasis should be placed on the effective operation of washing procedures, which will be required regardless of whether existing oil tankers of 40,000 tons deadweight and above operate with segregated ballast tanks, crude oil washing systems or dedicated clean ballast tanks,

Recognizing also that for existing tankers of less than 40,000 tons deadweight full reliance will need to be placed on the effective operation of the systems to be used for retaining the oil on board,

Recognizing further the progress made by the Inter-Governmental Maritime Consultative Organization in developing procedures for the control of discharges referred to in Resolution 6 adopted by this Conference,

Urges Governments to pay special attention to implementing those procedures on tankers of less than 40,000 tons deadweight, both in loading and unloading ports or terminals,

Recommends that the measures taken to implement such procedures should be kept under regular review by the Organization.

RESOLUTION 5

FURTHER DEVELOPMENT OF INTERNATIONAL STANDARDS FOR INERT GAS SYSTEMS

The Conference,

Recognizing that the International Convention for the Safety of Life at Sea, 1974 (SOLAS Convention) and the Protocol of 1978 relating to that Convention (SOLAS Protocol) significantly extend the application of inert gas systems to both new and existing tankers,

Bearing in mind Resolution 2 adopted by this Conference to implement the SOLAS Convention and the SOLAS Protocol as soon as possible and the effect of this extended application on the available manufacturing capacity and the essential need to ensure that every inert gas system is in compliance with the highest technical standards,

Recommends that the Inter-Governmental Maritime Consultative Organization promote studies with a view to re-examining the requirements relating to inert gas systems in Regulation 62 of Chapter II-2 of the SOLAS Convention and developing guidelines to supplement the requirements of that Regulation by taking account of the arduous operating conditions and the need to maintain these systems to a satisfactory standard.

RESOLUTION 6

PROCEDURES FOR THE EFFECTIVE ENFORCEMENT OF CONVENTIONS RELATING TO SAFETY OF LIFE AT SEA AND THE PREVENTION OF POLLUTION FROM SHIPS

The Conference,

Recognizing the importance of making acceptable international instruments covering safety and the prevention of pollution, ensuring their rapid entry into force and their effective enforcement subsequently,

Noting with regard to prevention of pollution from ships that Resolution 1 adopted by the International Conference on Marine Pollution, 1973, urged Governments to accept the 1969 Amendments¹ to the International Convention for the Prevention of Pollution of the Sea by Oil, 1954,² as a matter of urgency,

Noting also with satisfaction that the aforementioned Amendments came into force on 20 January 1978,

Being aware that Resolution A.391(X) adopted by the Assembly of the Inter-Governmental Maritime Consultative Organization on 14 November 1977,³ set out guidelines for the enforcement of the aforementioned Convention as amended,

Noting further that Resolution A.321(IX) adopted by the Assembly of the Organization on 12 November 1975⁴ setting out procedures for the control of ships in respect of the International Convention for the Safety of Life at Sea, 1960,⁵ and the International Convention on Load Lines, 1966,⁶

¹ United Nations, *Treaty Series*, vol. 1140, p. 340.

² *Ibid.*, vol. 327, p. 3.

³ Resolutions and other Decisions, *International Governmental Maritime Consultative Organization Assembly, Tenth Session, 7-17 November 1977*, p. 208.

⁴ *Ibid.*, *Ninth Session, 3-14 November 1975*, p. 26.

⁵ United Nations, *Treaty Series*, vol. 536, p. 27.

⁶ *Ibid.*, vol. 640, p. 133.

Urges Governments to implement the above-mentioned procedures and guidelines in order to ensure that the standards of safety on ships and those concerning the prevention of pollution from ships are fully complied with,

Invites the Organization to develop further these procedures and guidelines, as appropriate, as new standards contained in conventions and protocols relating to safety and prevention of pollution come into force.

RESOLUTION 7

DEVELOPMENT OF GUIDELINES FOR THE PERFORMANCE OF IN PORT INSPECTIONS OF THE RESULT OF CARGO TANK CLEANING USING CRUDE OIL WASHING

The Conference,

Noting that Regulations 13 and 13B of Annex I of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol) adopted by this Conference contain new requirements for a cargo tank cleaning procedure using crude oil washing,

Recognizing that in order to implement these requirements effectively continuing strong emphasis should be placed on the effective operation of crude oil washing procedures with a view to achieving the ultimate objective of complete elimination of pollution from ships,

Recognizing also that uniform guidelines for the extent and particulars of in port inspections of the results of cargo tank cleaning are a prerequisite for ensuring compliance of crude oil tankers using crude oil washing systems at all times with the provisions of the MARPOL Protocol,

Recommends that the Inter-Governmental Maritime Consultative Organization take urgent action to develop such guidelines which should be implemented by Governments as soon as they are adopted by the Organization.

RESOLUTION 8

IMPROVEMENT OF THE STANDARDS OF CREWS ON TANKERS

The Conference,

Having adopted the Protocols of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, and the International Convention for the Safety of Life at Sea, 1974, which contain more stringent requirements for the design, equipment, inspection and certification of ships, particularly tankers,

Noting that an international conference will shortly be held on training and certification of seafarers with the intention of concluding a convention thereon,

Bearing in mind that the human factor is of critical importance with regard to the safe operation of ships,

Recognizing therefore that the full advantage of complex and advanced design and equipment of tankers with regard to safety of life at sea and protection of the marine environment can only be obtained if at the same time requirements are introduced on adequate training and certification of crews on tankers,

Invites the Inter-Governmental Maritime Consultative Organization to bring to the attention of the 1978 International Conference on Training and Certification of Seafarers the need for the adoption of provisions in an international convention for adequate training and certification of crews on tankers.

RESOLUTION 9

PROTECTION OF PARTICULARLY SENSITIVE SEA AREAS

The Conference,

Noting with appreciation the work being carried out by the Inter-Governmental Maritime Consultative Organization concerning the protection of the marine environment against pollution from ships and from dumping of wastes,

Noting further the action taken by the International Conference on Marine Pollution, 1973, to include in the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Convention) special mandatory provisions to prevent pollution of the sea in certain defined special areas, including the Mediterranean Sea area, the Baltic Sea area, the Black Sea area, the Red Sea area and the "Gulfs" area, because of their particular oceanographic characteristics and ecological significance,

Noting also that, under Article VIII of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972¹ (the London Dumping Convention), Contracting Parties with common interests to protect in the marine environment in a given geographical area shall endeavour, taking into account characteristic regional features, to enter into regional agreements consistent with that Convention for the prevention of pollution, especially by dumping,

Being aware of continuing activities in special regions including the Mediterranean Sea, the Red Sea, the "Gulfs" area, the Gulf of Guinea, the Caribbean and South East Asian Waters, within the United Nations system under the co-ordination of the United Nations Environment Programme and with the participation of IMCO,

Being aware also of the need for measures aiming at the protection of particularly sensitive sea areas against pollution from ships and dumping of wastes,

Realizing that this need cannot be met without special studies undertaken as a matter of priority,

Recognizing the competence of the Organization in the field of the prevention and control of marine pollution from ships and dumping of wastes, and the competence of other international organizations in the field of the marine environment,

Invites the Organization:

- (a) To pursue its efforts in respect of the protection of the marine environment against pollution from ships and dumping of wastes;
- (b) To initiate, as a matter of priority and in addition to the work under way, studies, in collaboration with other relevant international organizations and expert bodies, with a view to:
 - (i) Making an inventory of sea areas around the world which are in special need of protection against marine pollution from ships and dumping, on account of the areas' particular sensitivity in respect of their renewable natural resources or in respect of their importance for scientific purposes;
 - (ii) Assessing, inasmuch as possible, the extent of the need of protection, as well as the measures which might be considered appropriate, in order to achieve a reasonable degree of protection, taking into account also other legitimate uses of the seas;
- (c) To consider, on the basis of the studies carried out accordingly and the results of other work undertaken, what action will be needed in order to enhance the protection of the marine environment from pollution from ships and dumping of wastes;

¹ United Nations, *Treaty Series*, vol. 1046, p. 120.

- (d) To take action, when appropriate, in accordance with the established procedure, with a view to incorporating any necessary provisions, within the framework of relevant conventions, as may be identified as a result of the above studies;
- (e) To formulate a recommendation to the Consultative Meeting of Contracting Parties that appropriate steps be taken within the framework of the London Dumping Convention, to protect such particularly sensitive sea areas from pollution caused by dumping.

RESOLUTION 10

DEVELOPMENT OF GUIDELINES FOR THE PERFORMANCE OF STATUTORY SURVEYS AND INSPECTIONS, INCLUDING UNSCHEDULED INSPECTIONS AND MANDATORY ANNUAL SURVEYS OF SHIPS

The Conference,

Noting that the Protocols of 1978 relating to the International Convention for the Safety of Life at Sea, 1974, (SOLAS Protocol) and to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol) provide for modifications to the provisions relating to the intervals of surveys and inspections, and the introduction of unscheduled inspections and mandatory annual surveys conducted in lieu of unscheduled inspections of ships,

Realizing that the efficiency of such surveys and inspections depends on the national rules promulgated by Administrations to give effect to the provisions of the Conventions and Protocols,

Recognizing that uniform requirements for the extent and particulars of the surveys and inspections can make a valuable contribution to the cause of ensuring continual compliance of ships with the requirements of the Conventions and Protocols,

Recognizing also that at the present time there are a number of different periods of validity for the Certificates required by the SOLAS and MARPOL Conventions and the International Convention on Load Lines, 1966, as well as different intervals of intermediate surveys or inspections required by the said Conventions and Protocols and that it would be of advantage to standardize these periods and intervals,

Recommends that the Inter-Governmental Maritime Consultative Organization take early action to develop guidelines for Administrations as to the extent, particulars and frequency of such surveys and inspections of ships having due regard to their construction, machinery, equipment and age; these guidelines should also contain requirements for the frequency and scope of unscheduled inspections and the scope of mandatory annual surveys conducted in lieu of unscheduled inspections,

Recommends also that in due course the Organization take the necessary action to amend the appropriate instruments with a view to standardizing the periods of validity of the Certificates as well as the intervals of intermediate surveys and inspections required by the above-mentioned Conventions and Protocols.

RESOLUTION 11

MARINE SAFETY CORPS

The Conference,

Noting the importance of all Administrations exercising effectively their responsibilities for formulating regulations and causing surveys and inspections of ships to be undertaken in accordance with international conventions relating to maritime safety and the prevention of pollution from ships,

Recognizing that certain Administrations have inadequate reserves of skilled and experienced personnel to undertake such work as fully and frequently as desirable and that the Inter-Governmental Maritime Consultative Organization may be able to help them to develop such reserves by providing appropriate skilled advice and assistance, on request and through the available technical assistance programmes,

Requests the Organization to formulate arrangements for making such advice and assistance available by the establishment and utilization of a Marine Safety Corps of experts whose services may be made available by Governments willing to provide such assistance,

Requests the Secretary-General of the Organization to make such arrangements widely known among Member States, to arrange to make these experts available to Governments in response to their requests for such assistance, through the available technical assistance programmes, and to report on these operations to the Maritime Safety Committee or the Marine Environment Protection Committee of the Organization, as appropriate.

RESOLUTION 12

IMPROVED STEERING GEAR STANDARDS

The Conference,

Having adopted the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974, (SOLAS Protocol),

Noting that substantive changes to the technical provisions of the 1974 Convention concerning improved steering gear standards incorporated in that Protocol will apply only to tankers of 10,000 tons gross tonnage and upwards,

Noting also that Resolution A.325(IX) adopted by the Assembly of the Inter-Governmental Maritime Consultative Organization¹, which deals, *inter alia*, with improved steering arrangements for new ships of various tonnages, is in the form of a recommendation only,

Recognizing the need to consider the application of the improved steering gear standards in the SOLAS Protocol and in the above-mentioned Resolution to all new ships,

Requests the Organization as a matter of urgency:

- (a) To redraft the steering gear standards for passenger and cargo ships as contained in Resolution A.325(IX), taking into account the provisions of the SOLAS Protocol;
- (b) To study the need for making the steering gear standards, which are applicable to tankers only in the SOLAS Protocol, applicable also to ships other than tankers; and
- (c) To consider the adoption of improved steering gear standards, together with other provisions for machinery and electrical installations in Resolution A.325(IX), as amendments to Chapter II-1 of the International Convention for the Safety of Life at Sea, 1974, upon its entry into force.

RESOLUTION 13

CARRIAGE OF COLLISION AVOIDANCE AIDS

The Conference,

Recognizing that the proper use of collision avoidance aids will assist the interpretation of radar data and could reduce the risk of collision and pollution of the marine environment,

¹ Resolutions and other Decisions, *International Governmental Maritime Consultative Organization Assembly, Ninth Session, 3-14 November 1975*, p. 36.

Bearing in mind that collision avoidance aids with inadequate operational performance standards or operated by insufficiently trained personnel might prejudice safety of navigation,

Considering the need to prepare requirements for the carriage of such aids on all ships of 10,000 tons gross tonnage and upwards,

Considering also that the preparation of performance standards is a prerequisite for such requirements,

Invites the Inter-Governmental Maritime Consultative Organization:

- (a) To develop performance standards for collision avoidance aids as a matter of urgency and not later than 1 July 1979;
- (b) To prepare, within the same period, requirements for the carriage of such aids on all ships of 10,000 tons gross tonnage and upwards so that Chapter V of the International Convention for the Safety of Life at Sea, 1974, can be amended at the earliest practicable time; and
- (c) To invite the attention of the 1978 International Conference on Training and Certification of Seafarers to the need for including appropriate provisions concerning the use of collision avoidance aids in an international convention on training and certification of seafarers.

RESOLUTION 14

SPECIFICATIONS FOR OIL TANKERS WITH DEDICATED CLEAN BALLAST TANKS

The Conference,

Having adopted the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol) which contains new and more stringent requirements for the design, equipment and operation of new and existing oil tankers,

Noting Regulation 13 of Annex I of the MARPOL Protocol which requires certain oil tankers to operate with dedicated clean ballast tanks,

Noting further that under Regulation 13A(2) of Annex I of the MARPOL Protocol requirements for arrangements and operational procedures for dedicated clean ballast tanks shall contain at least all the provisions of the Specifications adopted by the Conference,

Adopts the Specifications for Oil Tankers with Dedicated Clean Ballast Tanks, the text of which is set out in the Annex to this Resolution,

Recognizes that further improvement may be required in the Specifications,

Requests the Inter-Governmental Maritime Consultative Organization to review and revise, as necessary, those Specifications.

ANNEX

SPECIFICATIONS FOR OIL TANKERS WITH DEDICATED CLEAN BALLAST TANKS

1. Purpose

The purpose of these Specifications is to define:

- (a) The proper on board arrangements; and
- (b) The operational procedures

for the dedicated clean ballast tanks (CBT) concept. These Specifications are intended to be used by shipowners when developing and by Administrations when approving detailed arrangements and procedures for each individual tanker.

2. *Application*

These Specifications apply to oil tankers intended to be operated under the CBT concept in accordance with Regulation 13A of Annex I of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol).

3. *On board arrangements*

The selection of tanks dedicated solely to the carriage of clean ballast and the pumping and piping arrangements shall be developed by the shipowner and be approved and certified by the Administration on the basis of these Specifications.

3.1. *Selection of tanks*

The selection of clean ballast tanks shall be made to achieve the best overall result from operational and pollution prevention points of view, having regard to the following aspects:

- (a) Tanks shall be so selected as to provide adequate capacity to enable the tanker to meet the requirements of Regulation 13(2) and (3) of Annex I of the MARPOL Protocol.
- (b) Hull stress must be within acceptable limits in the resulting ballast and loaded conditions.
- (c) Tanks shall be so selected as to require a minimum of involvement of the cargo piping and pumping system.
- (d) While wing tanks are preferable from the damage protection point of view for carriage of clean ballast, centre tanks are acceptable if they offer a significantly better overall arrangement with regard to tank volume and piping arrangements.
- (e) If a slop tank is not included in the original tank arrangement, a tank of sufficient capacity shall be designated as the slop tank to receive the pipe flushing water.

3.2. *Pumping and piping*

In the overall arrangement the following points should also be kept in mind:

- (a) All ballast tanks should, whenever possible, be served by a single pump with a minimum of piping involved, in order to reduce the risk of contamination.
- (b) The piping system required for ballast handling should be so arranged as to flush without depositing oily water in the clean ballast tanks. Flushing may be done from a sea chest through the piping to a slop tank or from the clean ballast tanks to the slop tank. If separate ballast lines are used, these lines need not be flushed.
- (c) "Dead end" pipe sections should be avoided as far as possible but where necessary means shall be provided to drain such sections by connexion to a stripping device.
- (d) Double valve separation of ballast and cargo spaces should always be maintained during the voyage and to the maximum extent possible during cargo and ballast operations.
- (e) When an oil content meter is installed as required by Regulation 13A(3) of Annex I of the MARPOL Protocol, sampling points should be arranged to enable sampling of all discharges of clean ballast water, as well as regular load on top (LOT) discharges. When possible a sampling point should be arranged to enable sampling of the pipe flushing water routed to the slop tank.

4. *Operational Procedures*

A Clean Ballast Tank Operation Manual, which includes a check list, shall be developed by the shipowner for each individual tanker and shall be approved by the Administration on the basis of these Specifications.

4.1. *In loading port*

Prior to the tanker's arrival at loading port, the clean ballast quantity may be reduced to berthing condition, using a pipe that has been cleaned during the ballast voyage. A CBT tanker is never loaded to its full cargo carrying capacity, and is normally capable of carrying a full cargo together with the normal quantity of port ballast, i.e. quantity of clean ballast for arrival purposes. This enables the tanker to operate, draught permitting, without handling any ballast water in port.

After any discharge of clean ballast in port the affected pipe system should be drained, and all valves to clean ballast tanks should be closed. If the pipe flushing procedure requires water to be available in the ballast tanks, the proper quantity is left in these tanks before they are closed off from the piping system. Thereafter, the piping system is used for normal cargo loading operations.

4.2. *Loaded voyage*

During the voyage in loaded condition pump and pipe flushing is carried out. Any resulting oily mixtures are to be settled in a slop tank. Overboard discharges from the slop tank are to be controlled in accordance with the requirements of the MARPOL Protocol.

When convenient after departure, the pumping and piping system to be used for clean ballast handling is flushed to a slop tank. The quantity of flushing water available should be at least 10 times the affected pipe volume. If ballast in excess of the necessary flushing water quantity is retained on board during loading, the remaining quantity can be discharged overboard using the clean piping.

When an oil content meter is installed in accordance with the requirements of Regulation 13A(3) of Annex I of the MARPOL Protocol, all discharges shall be monitored by this equipment. Where possible, the oil content in the pipe flushing water shall also be monitored to assist in controlling the efficiency of the flushing and for the detection of any abnormalities in the operation.

4.3. *In unloading port*

Prior to berthing in an unloading port, a quantity of clean ballast, adequate for flushing the piping designated for handling clean ballast, shall be taken on board through that piping which has remained clean throughout the voyage. If port draught limitations permit, it is recommended that more ballast be taken on board within the deadweight limit, up to the normal quantity for departure condition, thereby eliminating the need for further handling of ballast during the unloading. If it is expected that further ballasting during the unloading is necessary, the required pump and pipe section is initially left clean. The desired ballast is taken on as soon as draught conditions permit, whereupon the unloading can continue with all pumps available.

Upon completion of the unloading or at departure, the pump and piping are flushed to the slop tank, followed by ballasting of the clean ballast tanks to normal sea conditions.

4.4. *Ballast voyage*

During the ballast voyage the pumping and piping system used for handling clean ballast shall be kept clean and, after any handling of oily water, be reflushed as necessary in preparation for ballast handling in the loading port. Overboard discharges from the slop tank are to be controlled in accordance with the requirements of the MARPOL Protocol.

4.5. *Check list*

The approved operational procedures should be supplemented by a check list. The list in the Appendix to these Specifications applies generally to all tankers operating under the CBT concept. When the check list for a specific tanker is prepared, it should be expanded to include any other step of relevance and be completed with appropriate identification of pumps, valves, etc.

5. *Survey and certification*

5.1 Every oil tanker intended to be operated with dedicated clean ballast tanks in accordance with Regulation 13A of Annex I of the MARPOL Protocol, shall be subject to the survey required by Regulation 4 of Annex I of that Protocol.

5.2 Such survey should be made prior to the date of entry into force of the MARPOL Protocol in order to enable issue of the International Oil Pollution Prevention Certificate before compliance with the MARPOL Protocol requirements becomes mandatory.

5.3 The survey shall include the verifications of the appropriateness of:

—The selection of ballast tanks and pumping and piping arrangements, in accordance with Section 3 above;

—The CBT Operation Manual, i.e. the detailed operational procedures including check list, in accordance with Section 4 above.

5.4 Upon approval in the respects mentioned in Sections 5.1 and 5.3 above, the International Oil Pollution Prevention Certificate shall be issued by the Administration. The Certificate shall indicate which tanks are approved solely for the carriage of dedicated clean ballast. It shall also state that the master has been supplied with information concerning approved operational procedures (CBT Operation Manual).

5.5 Alterations to a CBT tanker which affect its capability to be operated under the CBT concept require the approval of the Administration and shall be reflected in the International Oil Pollution Prevention Certificate and, if appropriate, in the CBT Operation Manual.

6. *Documents*

The International Oil Pollution Prevention Certificate and the CBT Operation Manual shall at all times be available on board the tanker.

APPENDIX

CBT Operational procedures—check list

I. *Prior to arrival at the loading port*

1. Transfer all remaining slop to a cargo tank.
2. Ensure that the pumping and piping designated for clean ballast operation have been properly cleaned to accommodate simultaneous discharge of clean ballast while loading.
3. Ensure that all valves to the slop tank and the cargo tanks are closed.
4. Perform visual inspection of all clean ballast tanks and their contents, if any, for signs of contamination.
5. Discharge a sufficient amount of clean ballast water to ensure that remaining ballast water and cargo to be loaded will not exceed the permissible deadweight or draught. Leave a sufficient amount of water for flushing the piping, and as a minimum, a quantity equal to 10 times the volume of the affected piping.
6. Ensure that all valves to the clean ballast tanks are closed.
7. If no further ballast discharge is anticipated, drain the clean ballast piping.

II. *In the loading port*

1. Perform normal loading operations of cargo tanks.
2. Ensure sufficient slop tank capacity is available for subsequent reception of cargo pump and pipe flushings.

3. When applicable, discharge remaining clean ballast before entire piping system is used for loading. Leave the required minimum quantity of flushing water in ballast tanks.
4. Ensure that all valves to the clean ballast tanks are closed.
5. Ensure that all valves to the cargo tanks are closed upon completion of loading.

III. *After departure from the loading port*

1. Flush appropriate pumping and piping with sufficient water from clean ballast tanks into a slop tank.
2. Ensure that valves to the slop tank are closed before pumping the remaining clean water overboard and monitoring oil content of the water, either visually or by a content meter.
3. Ensure that all valves in the clean ballast tanks are closed.

IV. *Prior to arrival at the unloading port*

1. Ensure that all valves to the slop tank and the cargo tanks are closed.
2. Recheck that the pumping and piping designated for clean ballast operation have been properly cleaned.
3. Ballast as required through clean cargo pumps and pipes, considering port draught requirements.
4. Ensure that all valves in the clean ballast tanks are closed.

V. *In the unloading port*

1. Allocate pumping and piping intended for clean ballast operation.
2. Perform normal unloading operations.
3. As soon as draught conditions permit, complete ballasting as required to departure condition.
4. Ensure that all valves to the clean ballast tanks are closed.
5. Complete unloading.

VI. *After departure from the unloading port*

1. Flush pumping and piping serving the clean ballast tanks into the slop tank.
2. Top up clean ballast tanks as required.
3. Process the slop tank content in accordance with LOT procedures.

RESOLUTION 15

SPECIFICATIONS FOR THE DESIGN, OPERATION AND CONTROL OF CRUDE OIL WASHING SYSTEMS

The Conference,

Having adopted the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol) which contains new and more stringent requirements for the design, equipment and operation of new and existing oil tankers,

Noting Regulation 13 of Annex I of the MARPOL Protocol which requires certain oil tankers to operate with a cargo tank cleaning procedure using crude oil washing,

Noting further that under Regulation 13B(2) of Annex I of the MARPOL Protocol the requirements for the crude oil washing installation and associated equipment and arrangements shall contain at least all the provisions of the Specifications adopted by the Conference,

Adopts the Specifications for the Design, Operation and Control of Crude Oil Washing Systems, the text of which is set out in the Annex to this Resolution,

Recognizes that further improvement may be required in the Specifications, taking into account the development of technology in this field and in the light of experience gained,

Requests the Inter-Governmental Maritime Consultative Organization to review and revise, as necessary, the Specifications in order that the revised Specifications reflect the latest technology and practices as may be developed by the time of entry into force of the Protocol.

ANNEX

SPECIFICATIONS FOR THE DESIGN, OPERATION AND CONTROL OF CRUDE OIL WASHING SYSTEMS

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1. *Purpose*

The purpose of these Specifications is to provide specific design criteria, operational requirements and control and enforcement procedures for the crude oil washing of cargo tanks of crude oil carriers as specified in Section 2.

2. *Application*

2.1 These Specifications apply to:

- (a) Existing crude oil tankers of 40,000 tons deadweight and above in accordance with Regulation 13(8) of Annex I of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol); and
- (b) New crude oil tankers of 20,000 tons deadweight and above in accordance with Regulation 13(6) of Annex I of the MARPOL Protocol, with the changes listed in Appendix I.

Compliance of these ships with these Specifications shall be shown on the International Oil Pollution Prevention Certificate as modified by the MARPOL Protocol.

2.2 If a crude oil that is not suitable for crude oil washing is intended to be carried as cargo in a ship that is provided with only a crude oil washing system, then that ship must comply with segregated ballast tank requirements in accordance with Regulation 13(7) or dedicated clean ballast tank requirements in accordance with Regulation 13(9) of Annex I of the MARPOL Protocol.

3. *General Provisions*

3.1 *Definition*

For the purpose of these Specifications,

3.1.1 "Arrival ballast" means clean ballast as defined in Regulation 1(16) of Annex I of the MARPOL Protocol.

3.1.2 "Departure ballast" means ballast other than arrival ballast.

3.2 *Initial survey*

The initial survey referred to in Regulation 4 of Annex I of the MARPOL Protocol shall include a complete inspection of the crude oil washing equipment and arrangements and shall include, except for the cases specified in paragraph 4.2.11, an examination of the tanks after they have been crude oil washed and the additional controls as specified in paragraph 4.2.10 to ensure the washing system efficiency is in accordance with these Specifications.

4. *Design criteria*

4.1 *Piping*

4.1.1 The crude oil washing pipes and all valves incorporated in the supply piping system shall be of steel or other equivalent material and shall be of adequate strength having regard to the pressure to which they may be subjected; and shall be properly jointed and supported.

4.1.2 The crude oil washing system shall consist of permanent pipework and shall be independent of the fire mains or any system other than for tank washing except that sections of the ship's cargo system may be incorporated into the crude oil washing system provided that they meet the requirements as applied to crude oil pipework. Notwithstanding the requirements of this paragraph, in combination carriers the arrangements should allow removal of the equipment, if necessary, when carrying non-liquid cargoes and be such that when reinstated the system is as originally fitted and tested for oil tightness.

4.1.3 Provision shall be made to prevent overpressure in the tank washing supply piping. Any relief device fitted to prevent overpressure shall discharge into the suction side of the supply pump. Alternative methods to the satisfaction of the Administration may be accepted provided an equivalent degree of safety and environmental protection is provided.

4.1.4 Where hydrant valves are fitted for water washing purposes on tank washing lines, all such valves shall be of adequate strength and provisions made for such connexions to be blanked off when washing lines may contain crude oil.

4.1.5 All connexions for pressure gauges or other instrumentation shall be provided with isolating valves adjacent to the lines or the fitting shall be of the sealed type.

4.1.6 No part of the crude oil washing system shall enter the machinery spaces. Where the tank washing system is fitted with a steam heater for use when water washing, the heater must be effectively isolated during crude oil washing by double shut-off valves or by clearly identifiable blanks.

4.1.7 Where a combined crude oil-water washing supply piping is provided the piping shall be so designed that it can be drained so far as is practicable of crude oil, before water washing is commenced, into spaces designated in the Operations and Equipment Manual. These spaces may be the slop tank or other cargo spaces.

4.1.8 The piping system shall be of such a diameter that the greatest number of tank cleaning machines required, as specified in the Operations and Equipment Manual, can be operated simultaneously at the designed pressure and throughput. The arrangement of the piping shall be such that the required number of tank cleaning machines to each cargo compartment as specified in the Operations and Equipment Manual referred to in these Specifications can be operated simultaneously.

4.1.9 The piping system shall be tested to one and one-half times the working pressure after it has been installed on the ship.

4.1.10 The crude oil washing supply piping shall be anchored (firmly attached) to the ship's structure at appropriate locations, and means shall be provided to permit freedom of movement elsewhere to accommodate thermal expansion and flexing of the ship. The anchoring shall be such that any hydraulic shock can be absorbed without undue movement of the supply piping. The anchors should normally be situated at the ends furthest from the entry of the crude oil supply to the supply piping. If tank washing machines are used to anchor the ends of branch pipes then special arrangements are necessary to anchor these sections when the machines are removed for any reason.

4.2 *Tank washing machines*

4.2.1 The tank washing machines for crude oil washing shall be permanently mounted and shall be of a design acceptable to the Administration.

4.2.2 The performance characteristic of a tank washing machine is governed by nozzle diameter, working pressure and the movement pattern and timing. Each tank cleaning machine fitted shall have a characteristic such that the sections of the cargo tank covered by that machine will be effectively cleaned within the time specified in the Operations and Equipment Manual.

4.2.3 Tank washing machines shall be mounted in each cargo tank and the method of support shall be to the satisfaction of the Administration. Where the tank machines are positioned well below the deck level to cater for protuberances in the tank consideration may need to be given to additional support for the machine and its supply piping.

4.2.4 Each machine shall be capable of being isolated by means of stop valves in the supply line. If a deck mounted tank washing machine is removed for any reason provision shall be made to blank off the oil supply line to the machine for the period the machine is removed. Similarly provision shall be made to close the tank opening with a plate or equivalent means.

4.2.5 Where the drive units for the tank cleaning machines are not integral with the tank cleaning machine sufficient drive units shall be provided to ensure that no drive unit need be moved more than twice from its original position during cargo discharge to accomplish the washing programme as specified in the Operations and Equipment Manual.

4.2.6 The number and location of the tank washing machines shall be to the satisfaction of the Administration.

4.2.7 The location of the machines is dependent upon the characteristics detailed in paragraph 4.2.2 and upon the configuration of the internal structure of the tank.

4.2.8 The number and location of the machines shall be such that all horizontal and vertical areas are washed by direct impingement or effectively by deflection or splashing of the impinging jet. In assessing an acceptable degree of jet deflection and splashing, particular attention shall be paid to the washing of upward facing horizontal areas and the following parameters shall be used:

- (i) For horizontal areas of a tank bottom and the upper surfaces of a tank's stringers and other large primary structural members, the total area shielded from direct impingement by deck or bottom transverses, main girders, stringers or similar large primary

structural members shall not exceed 10 per cent of the total horizontal area of tank bottom, the upper surface of stringers, and other large primary structural members.

- (ii) For vertical areas of the sides of a tank, the total area of the tank's sides shielded from direct impingement by deck or bottom transverses, main girders, stringers or similar large primary structural members shall not exceed 15 per cent of the total area of the tank's sides.

In some installations it may be necessary to consider the fitting of more than one type of tank washing machine in order to effect adequate coverage.

4.2.9 At the design stage the following minimum procedures shall be used to determine the area of the tank surface covered by direct impingement:

- (i) Using suitable structural plans, lines are set out from the tips of each machine to those parts of the tank within the range of the jets.
- (ii) Where the configuration of the tanks is considered by the Administration to be complicated, a pinpoint of light simulating the tip of the tank washing machine in a scale model of the tank shall be used.

4.2.10 (i) To confirm the cleanliness of the tank and to verify the design in respect of the number and location of the tank washing machines a visual inspection shall be made by entry to the tanks after a crude oil wash but prior to any water rinse which may be specified in the Operations and Equipment Manual. The bottom of the tank to be inspected may, however, be flushed with water and stripped in order to remove any heel of crude oil before gas freeing for entry. This inspection shall ensure that the tank is essentially free of oil clingage and deposits. If the flushing procedure is adopted, a similar but unflushed tank must be used for the test specified in sub-paragraph (ii) below.

(ii) To verify the effectiveness of the stripping and drainage arrangements a measurement shall be made of the amount of oil floating on top of the departure ballast. The ratio of the volume of oil on top of the total departure ballast water to the volume of tanks that contain this water shall not exceed 0.00085. This test shall be carried out after crude oil washing and stripping in a tank similar in all relevant respects to the tank examined in accordance with sub-paragraph (i), which has not been subjected to a water rinse nor to the intervening water flushing permissible in sub-paragraph (i) above.

(iii) The arrival ballast after a typical ballast voyage before which the arrival ballast tanks have been crude oil washed and during which the tanks have been water rinsed in accordance with the programme set out in the Operations and Equipment Manual shall be totally discharged to the loading port harbour through an oil discharge monitoring and control system approved by the Administration, and the oil content of the effluent shall not exceed 15 ppm.

4.2.11 Where an Administration is satisfied that ships are similar in all relevant respects, the requirements of paragraph 4.2.10 need only be applied to one such ship. Furthermore where a ship has a series of tanks that are similar in all relevant respects then, for that series of tanks, the requirements of sub-paragraph 4.2.10(i) need only be applied to one tank of that series.

4.2.12 The design of the deck-mounted tank washing machines shall be such that means are provided external to the cargo tanks which when crude oil washing would indicate the rotation and arc of the movement of the machine.

4.2.13 Where submerged machines are required they should be non-programmable and in order to comply with the requirements of paragraph 4.2.8 it must be possible to verify their rotation either by indicators external to the tank or by checking their characteristic sound pattern. Where verification by sound pattern is the only method of checking the operation of bottom machines, then the operation of those machines shall be verified towards the end of each wash cycle. The method of verification by sound pattern shall be specified in the Operations and Equipment Manual.

4.3. *Pumps*

4.3.1 The pumps supplying crude oil to the tank cleaning machines shall be either the cargo pumps or pumps specifically provided for the purpose.

4.3.2 The capacity of the pumps shall be sufficient to provide the necessary throughput at the required pressure for the maximum number of tank cleaning machines required to be operated simultaneously as specified in the Operations and Equipment Manual. In addition to the above requirement the pumps shall, if an eductor system is fitted for tank stripping, be capable of supplying the eductor driving fluid to meet the requirements of paragraph 4.4.2.

4.3.3 The capacity of the pumps shall be such that the requirements of paragraph 4.3.2 can be met with any one pump inoperative. The pumping and piping arrangements shall be such that the crude oil washing system can be effectively operated with any one pump out of use.

4.3.4 The carriage of more than one grade of cargo shall not prevent crude oil washing of tanks.

4.3.5 To permit crude oil washing to be effectively carried out where the back pressure presented by the shore terminal is below the pressure required for crude oil washing, provision shall be made such that an adequate pressure to the washing machines can be maintained in accordance with paragraph 4.3.2. This requirement shall be met with any one cargo pump out of action. The minimum supply pressure required for crude oil washing shall be specified in the Operations and Equipment Manual. Should this minimum supply pressure not be obtainable crude oil washing operations shall not be carried out.

4.4 *Stripping system*

4.4.1 The design of the system for stripping crude oil from the bottom of every cargo tank shall be to the satisfaction of the Administration.

4.4.2 The design and capacity of the tank stripping system shall be such that the bottom of the tank being cleaned is kept free of accumulations of oil and sediment towards completion of the tank washing process.

4.4.3 The stripping system shall be capable of removing oil at a rate of 1.25 times the total throughput of all the tank cleaning machines to be operated simultaneously when washing the bottom of the cargo tank(s) as described in the ship's Operation and Equipment Manual.

4.4.4 Means such as level gauges, hand dipping, and stripping system performance gauges as referred to in paragraph 4.4.8 shall be provided for checking that the bottoms of cargo tanks are dry after the crude oil washing. Suitable arrangements for hand dipping must be provided at the aftermost portion of a cargo tank and in three other suitable locations. For the purpose of this paragraph "dry" means a small quantity of oil near the stripping suction with the tank dry everywhere else.

4.4.5 Means shall be provided to drain all cargo pumps and lines at the completion of cargo discharge, where necessary by connexion to a stripping device. The line and pump drainings shall be capable of being discharged both to a cargo tank and ashore. For discharge ashore a special small diameter line shall be provided for that purpose and connected outboard of the ship's manifold valves.

4.4.6 The means for stripping oil from the cargo tanks shall be by positive displacement pump, self-priming centrifugal pump or eductor or other methods to the satisfaction of the Administration. Where a stripping line is connected to a number of tanks means shall be provided for isolating each tank not being stripped at that particular time.

4.4.7 The carriage of more than one grade of cargo shall not prevent crude oil washing of tanks.

4.4.8 Equipment shall be provided for monitoring the efficiency of the stripping system. All such equipment shall have remote read out facilities in the cargo control room or in some other safe and convenient place easily accessible to the officer in charge of cargo and operations. Where a stripping pump is provided the monitoring equipment shall include either a flow indicator, or a stroke counter or revolution counter as appropriate, and pressure gauges at the inlet and discharge connexions of the pump or equivalent. Where eductors are provided the monitoring equipment shall include pressure gauges at the driving fluid intake and at the discharge and a pressure/vacuum gauge at the suction intake.

4.4.9 The internal structure of the tank shall be such that drainage of oil to the tank sections of the stripping system is adequate to meet the requirements of paragraphs 4.4.2 and 4.4.4. Care shall be taken that both longitudinal and transverse drainage are satisfactory and shall be verified during the inspection required by paragraphs 3.2 and 4.2.10.

4.4.10 The trim conditions for crude oil washing given in the Operations and Equipment Manual shall be adhered to. In general, trim by the stern is only important during the final stages of tank discharge and shall be the maximum possible compatible with operational constraints but in no case less than that recorded during the crude oil washing prior to the inspection required by paragraphs 3.2 and 4.2.10.

4.4.11 The stripping lines and associated fittings shall be in accordance with the requirements of paragraph 4.1.1.

4.5 *Ballast lines*

4.5.1 Where a separate ballast water system for ballasting cargo tanks is not provided the arrangement shall be such that the cargo pump, manifolds and pipes used for ballasting can be safely and effectively drained of oil before ballasting.

5. *Qualification of personnel*

5.1 The training requirements of ships' personnel engaged in the crude oil washing of tankers shall be to the satisfaction of the Administration.

5.2 Where a person such as the Master, the Chief Officer or the Cargo Control Officer assumes overall charge of a crude oil wash he shall:

- (i) Have at least one year's experience on oil tankers where his duties have included the discharge of cargo and associated crude [oil] washing. Where his duties have not included crude oil washing operations, he shall have completed a training programme in crude oil washing in accordance with Appendix II to these Specifications and satisfactory to the Administration;
- (ii) Have participated at least twice in crude oil wash programmes one of which shall be in the particular ship for which he is required to undertake the responsibility of cargo discharge. Alternatively this latter participation may be acceptable if undertaken on a ship that is similar in all relevant respects; and
- (iii) Be fully knowledgeable of the contents of the Operations and Equipment Manual.

5.3 Where other nominated persons are intended to have particular responsibilities as defined in the Operations and Equipment Manual they shall have at least 6 months' experience on oil tankers where in the course of their duties they should have been involved in the cargo discharge operation. In addition they should have been instructed in the crude oil washing operation in the particular ship for which they are required to undertake this responsibility and be fully knowledgeable of the contents of the Operations and Equipment Manual. Appendix II to these Specifications should be used as guidance in establishing the content of such instruction.

6. *Operation*

6.1 *Tankage to be crude oil washed*

Before departure on a ballast voyage, after the complete discharge of cargo, sufficient tanks shall have been crude oil washed, in accordance with the procedures specified in the Operations and Equipment Manual to ensure that:

- (i) As a minimum, sufficient tanks have been washed to permit compliance with the draught and trim requirements of Regulation 13(2)(a), (b) and (c) of Annex I of the MARPOL Protocol during all phases of the ballast voyage; and
- (ii) Account is taken of the ship's trading pattern and the expected weather conditions so that additional ballast water is not put into tanks which have not been crude oil washed.

In addition to the tanks referred to in sub-paragraph (i) above, approximately one-quarter of all remaining tanks shall be crude oil washed for sludge control, but these additional tanks may include the tanks referred to in sub-paragraph (ii) above. However for sludge control purposes, no tank need be crude oil washed more than once in every four months. Crude oil washing shall not be conducted between the final discharge and loading ports; that is to say no crude oil washing shall be undertaken during the ballast voyage. Ballast water shall not be put into tanks that have not been crude oil washed. Water that is put into a tank which has been crude oil washed but not water rinsed shall be regarded as dirty ballast.

6.2 *Drainage and discharge ashore of cargo lines*

At the end of cargo discharge all cargo main and stripping lines shall be drained and stripped and the drainings and strippings passed to the shore via the special small diameter line required by paragraph 4.4.5.

6.3 *Filling of departure ballast tanks*

Care shall be taken at the completion of crude oil washing of any departure ballast tank to strip the tank as completely as possible. Where departure ballast is filled through cargo lines and pumps, these must be drained and stripped of oil using the means required by paragraph 4.4.5 before ballast is loaded.

6.4 *Crude oil washing at sea*

All crude oil washing must be completed before the ship leaves its final port of discharge. Where any tank is crude oil washed whilst the ship is at sea between multiple discharge ports, the tank shall be left empty and available for inspection at the next discharge port before commencing the next ballast voyage. This inspection may consist of multiple sounding/dipping of the bottom of the tank when the tank is empty. Departure ballast tanks shall be ballasted prior to departure from port so that examination of the surface of the ballast water can be made. In the latter case the guidance given in sub-paragraph 4.2.10(ii) is relevant to the inspection.

6.5 *Discharge of oily water effluents on ballast voyage*

The discharge of departure ballast and any other water effluent discharged during the ballast voyage shall comply with the requirements of Regulation 9 of Annex I of the MARPOL Protocol.

6.6 *Use and control of inert gas*

On ships to which these Specifications apply, no tank shall be crude oil washed unless the inert gas system required by Regulation 13B(3) of Annex I of the MARPOL Protocol is in proper operation. Before each tank is crude oil washed, the oxygen level shall be determined at a point 1 metre from the deck and at the middle region of the ullage space and neither of these determination shall exceed 8 per cent by volume. Where tanks have complete or partial wash bulk-heads, the determinations should be taken from similar levels in each section of the tank. The oxygen level of the inert gas being delivered during the washing process shall be continuously monitored. If during crude oil washing:

- (i) The oxygen level of the inert gas being delivered exceeds 8 per cent by volume; or
- (ii) The pressure of the atmosphere at the tanks is no longer positive,

then the washing must be stopped until satisfactory conditions are restored.

6.7. *Precautions against electrostatic generation*

To avoid excessive electrostatic generation in the washing process due to the presence of water in the crude oil washing fluid, the contents of any tank to be used as a source of crude oil washing fluid must first be discharged by at least 1 metre before being so used. Any tank used as a slop tank on the previous ballast voyage shall be completely discharged and refilled with dry crude if that tank is to be used as a source of washing fluid.

6.8 *Vapour emission*

On ships to which these Specifications apply there shall be means to avoid vapour emission during the filling of departure ballast wherever local conditions require it. The method of preventing the emission of hydrocarbon vapour into the atmosphere shall be:

- (a) By the use of permanent ballast tanks wherever these are sufficient to provide the minimum departure draught; or
- (b) By the containment in empty cargo tanks by the simultaneous ballasting and cargo discharge.

Alternative methods to the satisfaction of the Administrations may be accepted provided an equivalent degree of environmental protection is provided.

7. *Operations and equipment manual*

The Operations and Equipment Manual must be to the satisfaction of the Administration and shall contain the following information and operational instructions:

7.1 The complete text of the "Specifications for the Design, Operation and Control of Crude Oil Washing Systems".

7.2 A line drawing of the crude oil washing system showing the respective position of pumps, lines and washing machines which relate to the crude oil washing system.

7.3 A description of the system and a listing of procedures for checking that equipment is working properly during crude oil washing operations. This shall include a listing of the system and equipment parameters to be monitored, such as line pressure, oxygen level, machine revolutions, duration of cycles, etc. The established values for these parameters shall be included. The results of the tests carried out in accordance with paragraph 4.2.10 and the values of all parameters monitored during such tests shall also be included.

7.4 Details of the requirements of Section 6 of these Specifications together with advice and instructions, where appropriate, in meeting these requirements such as:

- (i) Recommended methods and programmes of crude oil washing in order to accord with all foreseeable circumstances of cargo discharge restraints and to obtain maximum trim during the completion of washing and draining of each tank.
- (ii) The procedure on ships to avoid vapour emission in accordance with paragraph 6.8.
- (iii) The method of draining tanks which shall include information on optimum trim conditions as required by paragraph 4.4.10.
- (iv) The method of draining cargo pumps, cargo lines, crude oil washing lines and stripping lines, and spaces into which they may be drained, together with the final discharge ashore via the small discharge line on completion of discharge.
- (v) Typical washing programmes under various conditions of loading specifying:
 - (1) The tanks to be washed in accordance with paragraph 6.1;
 - (2) The method for washing each tank, that is single or multi-stage;
 - (3) The number of tank washing machines to be used simultaneously;
 - (4) The duration of the crude oil wash and water rinse where the latter is appropriate;

- (5) The volume of water used for water rinse, which shall be at least equal to that used in the water rinse prior to the inspection required by paragraphs 3.2 and 4.2.10; and
- (6) The preferred order in which the tanks are to be washed.
- (vi) The procedure for draining and stripping, where appropriate, cargo lines and pumps before being used for the loading of departure ballast.
- (vii) The procedure for water washing lines before discharge of departure ballast and the loading and final discharge of arrival ballast.
- (viii) The procedure for verifying by sound patterns that bottom mounted machines are operating shall be carried out towards the end of the wash cycle for each tank. When carrying out such verification all other machines shall be shut down as necessary.
- (ix) Precise details of procedure to ensure compliance with Regulation 9 of Annex I of the MARPOL Protocol in the discharge of departure ballast, the water flushing of lines and the decanting of the slop tank(s) at sea.

7.5 The dangers of leakage from the crude oil washing system and the precautions necessary to prevent leakage and the action to be taken in the event of a leakage. Guidance shall be given on how the crude oil washing system is to be operationally tested for leakage before each discharge.

7.6 The method of preventing the entry of oil to the engine room through steam heaters as required by paragraph 4.1.6.

7.7 The personnel required at all times to conduct the dual operation of discharging cargo and crude oil washing. The numbers of such personnel shall include:

- (i) The person meeting the requirements of paragraph 5.2 who will have overall control of the crude oil washing process;
- (ii) Those persons meeting the requirements of paragraph 5.3 who will be expected to undertake the actual operation; and
- (iii) At least one person on deck at all times during washing to keep watch for leaks and malfunctioning of equipment, to test the oxygen content of tanks before washing, to check tank atmosphere pressure, to sound tank bottoms if required, to lift ullage floats if necessary and to change drive units when this is necessary.

The duties of such persons are not necessarily mutually exclusive.

7.8 An effective means of communication between the watchkeeper on deck and the cargo control position so that in the event of a leak in or malfunctioning of the crude oil washing system the washing may be stopped as soon as possible.

7.9 The typical procedures for ballasting.

7.10 A pre-crude oil wash operational checklist for the use of the crew at each discharge which shall include the checking and calibration of all instruments.

7.11 The recommended intervals for on board inspection and maintenance of crude oil washing equipment in addition to statutory surveys. Reference should be made to technical manuals supplied by the manufacturers of the equipment.

7.12 A list of crude oils unsuitable for the crude oil washing process and their origin.

APPENDIX I

List of changes when applying the specifications to new crude oil tankers of 20,000 tons deadweight and above

- | <i>Paragraph number</i> | <i>List of changes</i> |
|-------------------------|--|
| 4.2.5 | This paragraph is not applicable. |
| 4.2.10 | Sub-paragraph (iii) is not applicable. |
| 6.1 | Replace by the following: |
| 6.1.1 | Before departure on a ballast voyage: |
| | (i) Approximately one quarter of the cargo tanks shall be crude oil washed for sludge control purposes on a rotational basis and in accordance with the procedures specified in the Operations and Equipment Manual. However, for these purposes, no tank need be crude oil washed more than once in every four months; and |
| | (ii) If it is considered that additional ballast in a cargo tank or tanks may be required during the ballast voyage under the conditions and provisions specified in Regulation 13(3) Annex I of the MARPOL Protocol, the tank or tanks which may be used for this ballast shall be crude oil washed in accordance with the procedures specified in the Operations and Equipment Manual. |
| 6.1.2 | Ballast water shall not be put into cargo tanks that have not been crude oil washed. Water that is put into a tank which has been crude oil washed but not water rinsed shall be regarded as dirty ballast. |
| 6.1.3 | Crude oil washing shall not be conducted between the final discharge and loading ports; that is to say no crude oil washing shall be undertaken during the ballast voyage. |
| 6.3 | Replace by the following: |
| 6.3 | <i>Filling of additional ballasting cargo tanks</i> |
| | Care shall be taken at the completion of crude oil washing of any cargo tank that might contain ballast to strip the tank as completely as possible. Where this ballast is filled through cargo lines and pumps, these must be drained and stripped of oil using the means required by paragraph 4.4.5. |
| 6.4 | The last two sentences are not applicable. |
| 6.5 | Replace by the following: |
| 6.5 | <i>Discharge of oily water effluents on ballast voyage</i> |
| | The discharge of additional ballast from cargo tanks and any other water effluent discharged during the ballast voyage shall comply with the requirements of Regulation 9 of Annex I of the MARPOL Protocol. |
| 6.8 | This paragraph is not applicable. |
| 7.4 | This paragraph is not applicable. |

APPENDIX II

*Training for persons intended to assume overall charge of crude oil washing**Introduction*

Any required training shall be by supervised instruction, conducted in a shore-based facility or aboard a suitably equipped ship having training facilities and instructors for this

purpose, dealing with the principles involved and the application of these principles to ship operation.

In drawing up an Administration-approved syllabus of training, the Specifications for the Design, Operation and Control of Crude Oil Washing Systems of tankers adopted by the Conference shall be taken into account.

Such training shall include but not necessarily be limited to:

(a) An introduction to the principles of crude oil washing which shall include:

- The characteristics of crude oil as a washing fluid and its contrast with water washing;
- Top washing;
- Bottom washing;
- Trim requirements;
- Methods of bleeding off from the cargo discharge;
- Maintenance of required washing fluid pressure;
- Washing at sea between discharge ports;
- Recirculatory washing;
- Relative priorities and requirements for the departure ballast tanks, arrival ballast tanks and cargo only tanks;

(b) Equipment and design

- (i) Location of washing machines;
- (ii) Washing machines, deck-mounted and submerged:
 - Types;
 - Characteristics;
 - Features of construction;
 - Operating parameters;
- (iii) Drive units;
- (iv) Washing fluid supply and distribution systems;
- (v) Stripping systems;
- (vi) Means of sounding tanks;
- (vii) Inert gas requirements.

(c) Generalized crude oil washing procedures

- (i) Traditional pipeline ship/free flow ship/partial free flow ship;
- (ii) Single/multi parcel cargoes;
- (iii) Optimization of procedure to wash with minimum extra berth time;
- (iv) Ballasting for departure with various ship and pipeline configurations;
- (v) Procedure for washing at sea between discharge ports.

(d) Associated procedure

- (i) Means for minimizing residues on board
 - Stripping of cargo tanks;
 - Draining and stripping of cargo lines;
 - Final discharge of cargo ashore;
- (ii) Water rinsing of arrival ballast tanks;

- (iii) Filling and ultimate discharge of arrival ballast;
- (iv) Discharge of departure ballast;
- (v) Build-up and decanting of slop tank;
- (vi) Requirements of Regulation 9 of Annex I of the MARPOL Protocol;
- (vii) Avoidance of venting in port during ballasting operations.

(e) Safety

- (i) Inert gas procedure;
- (ii) Maintenance and monitoring of inert gas quality and pressure;
- (iii) Stopping of washing/discharge under abnormal inert gas conditions;
- (iv) Electrostatic generation and the precautions required to avoid it;
- (v) Pipework integrity;
- (vi) Avoidance of surge pressures;
- (vii) Spillage.

(f) Check lists

- (i) Before entering port;
- (ii) Before commencing crude oil washing;
- (iii) After crude oil washing;
- (iv) After sailing.

(g) Regulatory enforcement procedures

- (i) Operations and Equipment Manual;
- (ii) Oil Record Book;
- (iii) Sounding of tanks;
- (iv) Measurement of oil on top of departure ballast.

(h) Maintenance of plant and equipment

- (i) Maintenance of equipment in accordance with manufacturers' instructions;
- (ii) Additional maintenance items.

Administrations shall ensure that the training facility issues an appropriate document to those qualified in accordance with this Appendix to serve as officers primarily responsible for crude oil washing.

RESOLUTION 16

EXISTING TANKERS ENGAGED IN SPECIFIC TRADES

The Conference,

Noting that Regulation 13C of Annex I of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, (MARPOL Protocol) adopted by this Conference, contains provisions for existing tankers engaged in specific trades within specified areas,

Noting further that that Regulation also provides that such areas may be extended to other limits to be designated by the Inter-Governmental Maritime Consultative Organization,

Bearing in mind that such an extension cannot be appropriately considered without a prior assessment of all aspects and consequences thereof,

Resolves that the Organization should expeditiously promote studies of the concept of specific trades which should address at least the following topics:

- (a) Possible extension of specific trades within other limits as provided for in Regulation 13C(1)(b)(ii) of Annex I of the MARPOL Protocol;
- (b) The environmental implications of such an extension;
- (c) Any additional controls which may be necessary to apply such an extension; and
- (d) Any method (such as the method for acceptance of traffic separation schemes) which may be necessary or advisable to enable the Organization to extend specific trades as provided for in Regulation 13C(1)(b)(ii) of Annex I of the MARPOL Protocol.

RESOLUTION 17

PROTECTIVE LOCATION OF BALLAST TANKS IN SEGREGATED BALLAST TANKERS

The Conference,

Noting that Regulation 13E of Annex I of the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, adopted by the Conference contains empirical criteria for the protective location of segregated ballast tanks which are framed to minimize consequences of grounding and collision accidents to the ship, its cargo and the marine environment from *inter alia* oil outflow, fire, explosion, loss of life and salvage operations,

Noting however that at present the state of knowledge of accident data has not advanced sufficiently to enable the Conference to formulate a possibly more rational probabilistic approach,

Recommends that the Inter-Governmental Maritime Consultative Organization should undertake as soon as possible to study and develop more rational probabilistic formulae or criteria for the protective disposition of segregated ballast tanks, including the feasibility of relating the protective area concept of segregated ballast tanks to the inter-relationship of hypothetical and allowable oil outflow.

RESOLUTION 18

POSSIBLE REPLACEMENT OF "DEADWEIGHT" BY ANOTHER PARAMETER IN THE PROTOCOL OF 1978 RELATING TO THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973, AND THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974, AND ITS PROTOCOL

The Conference,

Noting that the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973, and the International Convention for the Safety of Life at Sea, 1974, and its Protocol contain provisions which use "deadweight" as a parameter to determine the application of various requirements for oil tankers,

Recognizing that "deadweight" might not be the most suitable parameter for the above-mentioned purposes,

Requests the Inter-Governmental Maritime Consultative Organization to study whether "deadweight" in these instruments should be replaced by another parameter which will ensure uniformity in the application of the requirements in these instruments.

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, 1954,¹ 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.

(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;

¹ United Nations, *Treaty Series*, vol. 327, p. 3.

(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;¹ 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.

(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

¹ Should read 29 December 1972. For the text of the Convention, see United Nations, *Treaty Series*, vol. 1046, p. 120.

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 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 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.

(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 Nations¹ 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;

¹ United Nations, *Official Records of the General Assembly, Twenty-fifth Session, Supplement No. 28 (A/8028)*, p. 26.

- (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.

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 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 FORCE¹

(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.

(2) Amendments after consideration by the Organization:

¹ The International Conference on Tanker Safety and Pollution Prevention, 1978, which adopted the Protocol, envisaged that the International Convention for the Prevention of Pollution from Ships, 1973, should not be subject to independent application, in view of the modifications and additions set out in the 1978 Protocol. It is, therefore, the expectation of the Governments which adopted this policy, and of the depositary, that the 1973 Convention will be applied solely as it is incorporated in the 1978 Protocol, and subject to the aforementioned modifications and additions, but will never enter into force on its own. (Information provided by the International Maritime 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;
 - (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.

(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.

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.

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.

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.

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.

(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.

(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.

A N N E X 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.

(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 a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines. 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 fore-side 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.

(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:

- (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.

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 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.

(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
 - (vi) The tank has in operation, except as provided for in Regulation 15(3) [(5) and (6)]¹ 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

¹ The words and paragraphs appearing between brackets reflect corrections to the original text of the Convention and communicated to the States concerned by the Secretary-General of the International Maritime Organization in a procès-verbal of rectification dated 13 June 1978.

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:

(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.

(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 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.

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
- (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 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 subparagraph (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.

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 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.

* 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).

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

(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.

(7) 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

* 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).

the 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 [less] 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 subparagraphs (4)(a) and (b) of this Regulation may be accepted.

(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.

* 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).

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

<i>Description</i>	<i>Dimension</i>
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 oil-proof material, shall be suitable for a service pressure of 6 kg/cm².

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 subparagraph;
- (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.
- (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.

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 (λ_c): $\frac{1}{3}L^{2/3}$ or 14.5 metres, whichever is less

(ii) Transverse extent (t_c): $\frac{B}{5}$ or 11.5 metres, whichever is less

(inboard from the ship's side at right angles to the centre-line at the level corresponding to the assigned summer freeboard)

(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 (λ_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.

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:*

$$O_c = \Sigma W_i + \Sigma K_i C_i \quad (I)$$

(b) *For bottom damages:*

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

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 = 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 λ_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_i 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.

$$S_i = 1 - \frac{\lambda_i}{\lambda_c}$$

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

(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

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

(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 suction 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[s] 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:

- (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 $400 \sqrt[3]{DM}$, 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: $(\frac{0.5 b_i}{B} + 0.1)L$

—Where a centreline longitudinal bulkhead is provided: $(\frac{0.25 b_i}{B} + 0.15)L$

(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.
- (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.

(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:

<i>Spaces</i>	<i>Permeability</i>
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.

Appendix I

LIST OF OILS*

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
Reformats
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

* The list of oils shall not necessarily be considered as comprehensive.

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

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.

* Delete as appropriate.

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

.....
.....

Remarks:

PART B. OIL TANKER†*

Deadweight metric tons. Length of ship metres.

It is certified that this ship is:

- (a) Required to be constructed according to and complies with**
 - (b) Not required to be constructed according to**
 - (c) Not required to be constructed according to, but complies with**
- the requirements of Regulation 24 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

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 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.

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

** Delete as appropriate.

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**

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)

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

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

(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)

APPENDIX III

FORM OF OIL RECORD BOOK

OIL RECORD BOOK

I. FOR OIL TANKERS*

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**			

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

(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?			

* 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.

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

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**			
12.	Closing of applicable cargo tank valves and applicable line cut-off valves on completion of unloading**			

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

(d) *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

(e) *Cleaning of cargo tanks*

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

Date of entry Officer in charge
 Master

(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

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

(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

(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

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

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

(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

* 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".

(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.

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

(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* (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**

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

(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

* 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".

(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

ANNEX I I

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/cm² 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 19(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.

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.

(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:

- (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;

- (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 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 31(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:

- (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;
- (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.

(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
- (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.

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;
- (c) The discharge into the sea of any remaining residues shall be in accordance with the provisions of paragraph (3)(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.

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
 - (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.

(3) In the event of any discharge of the kind referred to in Article [8] 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.
- (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.

(d) 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.

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.

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 TL_m 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 TL_m 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 TL_m 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 highly hazardous to human health, with an LD₅₀ 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 LD₅₀ 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 those categorized in Categories A, B, C and D above.

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		

* 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.

<i>Substance</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>
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		
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 hydro- xide)	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		
Diacetone alcohol*	1148	D		
Dibenzyl ether*	—	C		
Dichlorobenzenes	1591	A	0.1	0.05
Dichloroethyl ether	1916	B		
Dichloropropene—dichloropro- pane mixture (D.D. Soil fumi- gant)	2047	B		

* 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.

<i>Substance</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>
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-dime- thylamino-ethanol)*	2051	C		
Dimethylformamide	—	D		
1,4-Dioxane*	1165	C		
Diphenyl/diphenyloxyde, mix- tures*	—	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		
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-propylacrolein*	—	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		

* 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.

<i>Substance</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>
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		
Methylene chloride	1593	B		
2-Methyl-5-ethylpyridine*	—	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 (tetrachloro- ethylene)	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		
n-Propyl alcohol	1274	D		
n-Propylamine	1277	C		
Pyridine	1282	B		
Silicon tetrachloride	1818	D		
Sodium bichromate (solution)	—	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.

<i>Substance</i>	<i>I</i>	<i>II</i>	<i>III</i>	<i>IV</i>
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.

Appendix III

LIST OF OTHER LIQUID SUBSTANCES CARRIED IN BULK

Acetonitrile (methyl cyanide)	Diethanolamine
tert-Amyl alcohol	Diethylene glycol
n-Butyl alcohol	Dipentene
Butyrolactone	Dipropylene glycol
Calcium chloride (solution)	Ethyl alcohol
Castor oil	Ethylene glycol
Citric juices	Fatty alcohols (C ₁₂ -C ₂₀)
Coconut oil	Glycerine
Cod liver oil	n-Heptane
iso-Decyl alcohol	Heptene (mixed isomers)
n-Decyl alcohol	n-Hexane
Decyl octyl alcohol	Ligroin
Dibutyl ether	Methyl alcohol

Methylamyl acetate	Propylene tetramer
Methyl ethyl ketone (2-butanone)	Propylene trimer
Milk	Sorbitol
Molasses	Sulphur (liquid)
Olive oil	Tridecanol
Polypropylene glycol	Triethylene glycol
iso-Propyl acetate	Triethylenetetramine
iso-Propyl alcohol	Trippropylene glycol
Propylene glycol	Water
Propylene oxide	Wine

*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

(e) *Cleaning 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

..... Signature of Master

23. Procedure and amount of water introduced into tank in final cleaning
24. Location, date 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)

(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

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)

Table with 4 columns: Name of ship, Distinctive number or letter, Port of registry, Gross tonnage

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)

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)

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.

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.

(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.

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.

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.

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.

(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.

(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
- (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

<i>Description</i>	<i>Dimension</i>
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.

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

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

* Delete as appropriate.
** Parameters should be incorporated.

(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)

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.

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 seabed 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:

- (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 sí 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) 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.
- (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.