No. 18961. INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974. CONCLUDED AT LONDON ON 1 NOVEMBER 1974[1]

RATIFICATIONS, ACCESSIONS and ACCEPTANCES

Instruments deposited with the Secretary-General of the Inter-Governmental Maritime Consultative Organization on the following dates, to take effect as indicated hereafter:

State	*Date of deposit of the instrument of ratification, accession* (a) *or acceptance* (A)
Papua New Guinea (With effect from 12 February 1981.)	12 November 1980 *a*
Finland (With effect from 21 February 1981.)	21 November 1980 *a*
Qatar (With effect from 22 March 1981.)	22 December 1980 *a*
Republic of Korea (With effect from 31 March 1981.)	31 December 1980
Maldives (With effect from 14 April 1981.)	14 January 1981 *a*
Guinea (With effect from 19 April 1981.)	19 January 1981 *a*
Indonesia (With effect from 17 May 1981.)	17 February 1981 *A*
Singapore (With effect from 16 June 1981.)	16 March 1981 *a*

Certified statements were registered by the Inter-Governmental Maritime Consultative Organization on 26 May 1981.

[1] United Nations, *Treaty Series*, vol. 1184, p. 2, and annex A in volumes 1198 and 1208.

PROTOCOL[1] RELATING TO THE INTERNATIONAL CONVENTION OF 1 NOVEMBER 1974 FOR THE SAFETY OF LIFE AT SEA[2] (WITH ANNEX, APPENDIX AND FINAL ACT OF THE INTERNATIONAL CONFERENCE ON TANKER SAFETY AND POLLUTION PREVENTION, 1978). CONCLUDED AT LONDON ON 17 FEBRUARY 1978

Authentic texts of the Protocol, annex and appendix: Chinese, English, French, Russian and Spanish.

Authentic texts of the Final Act: English, French, Russian and Spanish.

Registered by the Inter-Governmental Maritime Consultative Organization on 26 May 1981.

The Parties to the present Protocol,

Being Parties to the International Convention for the Safety of Life at Sea, 1974, done at London on 1 November 1974,[2]

Recognizing the significant contribution which can be made by the above-mentioned Convention to the promotion of the safety of ships and property at sea and the lives of persons on board,

Recognizing also the need to improve further the safety of ships, particularly tankers,

Considering that this objective may best be achieved by the conclusion of a Protocol relating to the International Convention for the Safety of Life at Sea, 1974,

Have agreed as follows:

Article I. GENERAL OBLIGATIONS

The Parties to the present Protocol undertake to give effect to the provisions of the present Protocol and the annex hereto which shall constitute an integral part of the present

[1] Came into force on 1 May 1981, i.e., six months after the date on which not less than 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 become Parties to the Protocol by definitive signature, or by deposit with the Secretary-General of the Inter-Governmental Maritime Consultative Organization of an instrument of ratification, acceptance, approval or accession, in accordance with article V (1). Instruments of ratification, acceptance, approval or accession were deposited as follows:

State	*Date of the deposit of the instrument of ratification, acceptance (A), approval (AA), or accession (a)*
Bahamas	16 February 1979 *a*
Belgium	24 September 1979
Colombia	31 October 1980 *a*
Denmark	27 November 1980 *a*
Finland	30 April 1981 *a*
France	21 December 1979 *AA*
Germany, Federal Republic of*	6 June 1980
(With a declaration of application to Berlin (West))	
Japan	15 May 1980 *a*
Kuwait*	29 June 1979 *a*
Liberia	28 October 1980
Netherlands	8 July 1980 *AA*
(In respect of the Kingdom of Europe and the Netherlands Antilles.)	
Norway	25 March 1981 *a*
Spain	30 April 1980 *a*
Sweden	21 December 1979
Tunisia	6 August 1980 *a*
United Kingdom of Great Britain and Northern Ireland	5 November 1979
United States of America	12 August 1980
Uruguay	30 April 1979 *a*
Yugoslavia	31 October 1980

* See p. 334 of this volume for the texts of the reservation and understanding made upon ratification and accession.

[2] United Nations, *Treaty Series*, vol. 1184, p. 2.

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

Article II. APPLICATION

1. The provisions of articles II, III (other than paragraph (*a*)), IV, VI(*b*), (*c*) and (*d*), VII and VIII of the International Convention for the Safety of Life at Sea, 1974 (hereinafter referred to as "the Convention") are incorporated in the present Protocol, provided that references in those articles to the Convention and to Contracting Governments shall be taken to mean references to the present Protocol and to the Parties to the present Protocol, respectively.

2. Any ship to which the present Protocol applies shall comply with the provisions of the Convention, subject to the modifications and additions set out in the present Protocol.

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

Article III. COMMUNICATION OF INFORMATION

The Parties to the present Protocol undertake to communicate to, and deposit with, the Secretary-General of the Inter-Governmental Maritime Consultative Organization (hereinafter referred to as "the Organization"), a list of nominated surveyors or recognized organizations which are authorized to act on their behalf in the administration of measures for safety of life at sea 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 the 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 1 March 1979 and shall thereafter remain open for accession. Subject to the provisions of paragraph 3 of this article, 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.

3. The present Protocol may be signed without reservation, ratified, accepted, approved or acceded to only by States which have signed without reservation, ratified, accepted, approved or acceded to the Convention.

Article V. ENTRY INTO FORCE

1. The present Protocol shall enter into force six 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, provided however

that the present Protocol shall not enter into force before the Convention has entered into force.

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 under article VIII of the Convention, any instrument of ratification, acceptance, approval or accession deposited shall apply to the present Protocol as amended.

Article VI. DENUNCIATION

1. The present Protocol may be denounced by any Party at any time after the expiry of five years from the date on which the present 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 one year, or such longer period as may be specified in the instrument of denunciation, after its receipt by the Secretary-General of the Organization.

4. A denunciation of the Convention by a Party shall be deemed to be a denunciation of the present Protocol by that Party.

Article VII. 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;

(*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 VIII. LANGUAGES

The present Protocol is established in a single original in the Chinese, English, French, Russian and Spanish languages, each text being equally authentic. Official translations in the Arabic, German and Italian 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.

ANNEX. MODIFICATIONS AND ADDITIONS TO THE INTERNATIONAL CONVENTION FOR THE SAFETY OF LIFE AT SEA, 1974

CHAPTER I. GENERAL PROVISIONS

PART A. APPLICATION, DEFINITIONS, ETC.

Regulation 2. DEFINITIONS

The following paragraph is added to the existing text:

(*n*) "Age of a ship" means the elapsed period of time determined from the year of build as indicated on the ship's registry papers.

PART B. SURVEYS AND CERTIFICATES

Regulation 6. INSPECTION AND SURVEY

The existing text of regulation 6 is replaced by the following:

(*a*) The inspection and survey of ships, so far as regards the enforcement of the provisions of the present regulations and the granting of exemptions therefrom, shall be carried out by officers of the Administration. The Administration may, however, entrust the inspections and 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 the Administration's 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 regulations 8 and 10 of this chapter, establishes mandatory annual surveys, the above unscheduled inspections shall not be obligatory.

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

(i) Require repairs to a ship; and

(ii) Carry out inspections and surveys 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 nominated surveyors or recognized organizations.

(*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 danger to the ship, or persons on board, 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 relevant certificate should be withdrawn and the Administration shall be notified immediately; and, if the ship is in the 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 Regula-

tion. When applicable, the Government of the Port State concerned shall ensure that the ship shall not sail until it can proceed to sea, or leave port for the purpose of proceeding to the appropriate repair yard, without danger to the ship or persons on board.

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

Regulation 7. SURVEYS OF PASSENGER SHIPS

The existing text of paragraph (*b*) (iii) is replaced by the following:

(iii) A survey either general or partial, according to the circumstances, shall be made after a repair resulting from investigations prescribed in regulation 11 of this Chapter, or whenever any important repairs or renewals are made. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory, and that the ship complies in all respects with the provisions of the Convention and the present Protocol and of the International Regulations for Preventing Collisions at Sea[1] in force, and of the laws, decrees, orders and regulations promulgated as a result thereof by the Administration.

Regulation 8. SURVEYS OF LIFE-SAVING APPLIANCES AND OTHER EQUIPMENT OF CARGO SHIPS

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

(*a*) The life-saving appliances, except a radiotelegraph installation in a motor lifeboat or a portable radio apparatus for survival craft, the echo-sounding device, the gyro-compass, the fire-extinguishing appliances and the inert gas system of cargo ships to which chapters II-1, II-2, III and V of the Convention and the present Protocol apply, shall be subject to initial and subsequent surveys as prescribed for passenger ships in regulation 7 of chapter I of the Convention and the present Protocol with the substitution of 24 months for 12 months in sub-paragraph (*a*)(ii) of that regulation. The fire control plans in new ships and the pilot ladders, mechanical pilot hoists, lights, shapes and means of making sound signals carried by new and existing ships shall be included in the surveys for the purpose of ensuring that they comply fully with the requirements of the Convention and the present Protocol and, where applicable, the International Regulations for Preventing Collisions at Sea in force.

(*b*) Intermediate surveys shall be made for tankers of ten years of age and over, within three months before or after the anniversary date of the Cargo Ship Safety Equipment Certificate, to ensure that equipment specified in paragraph (*a*) of this regulation has been maintained in accordance with regulation 11 of this chapter and that it is in good working condition. Such intermediate surveys shall be endorsed on the Cargo Ship Safety Equipment Certificate issued in accordance with regulation 12(*a*)(iii) of chapter I of the Convention.

Regulation 10. SURVEYS OF HULL, MACHINERY AND EQUIPMENT OF CARGO SHIPS

The existing text of regulation 10 is replaced by the following:

(*a*) The hull, machinery and equipment (other than items in respect of which Cargo Ship Safety Equipment Certificates, Cargo Ship Safety Radiotelegraphy Certificates or Cargo Ship Radiotelephony Certificates are issued) of a cargo ship shall be surveyed on completion and thereafter in such a manner as the Administration

[1] United Nations, *Treaty Series*, vol. 1050, p. 16.

may consider necessary in order to ensure that their condition is in all respects satisfactory and at the following intervals:

(i) At intervals specified by the Administration but not exceeding five years (periodical surveys);

(ii) In addition to such periodical surveys a tanker of ten years of age and over shall undergo a minimum of one intermediate survey during the period of validity of its Cargo Ship Safety Construction Certificate; 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.

(*b*) The initial and periodical survey shall be such as to ensure that the arrangements, material and scantlings of the structure, boilers and other pressure vessels, their appurtenances, main and auxiliary machinery including steering gear and associated control systems, electrical installation and other equipment are in all respects satisfactory for the service for which the ship is intended. Such surveys shall, in the case of tankers, also include inspection of the outside of the ship's bottom, pump rooms, cargo and bunker piping systems, vent piping, pressure vacuum valves and flame screens.

(*c*) The intermediate survey of tankers of ten years of age and over shall include inspection of steering gear equipment and associated control systems, pump rooms, cargo and bunker piping systems on deck and in pump rooms, vent piping, pressure vacuum valves and flame screens, the electrical installations in dangerous zones, and the outside of the ship's bottom. In addition to the visual inspection of the electrical installation, the insulation resistance of the electrical equipment in dangerous zones is to be tested. If, upon examination, there should be any doubt as to the condition of the piping, extra measures, such as pressure tests and thickness determination, shall be taken as necessary. Such intermediate surveys shall be endorsed on the Cargo Ship Safety Construction Certificate issued in accordance with regulation 12(*a*)(ii) of chapter I of the Convention.

(*d*) A survey, either general or partial according to the circumstances, shall be made when required after an investigation prescribed in regulation 11 of this chapter, or whenever any important repairs or renewals are made. The survey shall be such as to ensure that the necessary repairs or renewals have been effectively made, that the material and workmanship of such repairs or renewals are in all respects satisfactory, and that the ship is fit to proceed to sea without danger to the ship or persons on board.

Regulation 11. MAINTENANCE OF CONDITIONS AFTER SURVEY

The existing text of regulation 11 is replaced by the following:

(*a*) The condition of the ship and its equipment shall be maintained to conform with the provisions of the Convention and the present Protocol to ensure that the ship in all respects will remain fit to proceed to sea without danger to the ship or persons on board.

(*b*) After any survey of the ship under regulations 6, 7, 8, 9 or 10 of chapter I of the Convention and the present Protocol has been completed, no change shall be made in the structural arrangement, machinery, equipment and other items covered by the survey, without the sanction of the Administration.

(*c*) Whenever an accident occurs to a ship or a defect is discovered, either of which affects the safety of the ship or the efficiency or completeness of its life-saving appliances or other equipment, the master or owner of the ship shall report at the earliest opportunity to the Administration, the nominated surveyor or recognized organization responsible for issuing the relevant certificate, who shall cause investiga-

tions to be initiated to determine whether a survey, as required by regulations 6, 7, 8, 9 or 10 of chapter I of the Convention and the present Protocol, 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 a report has been made.

Regulation 14. DURATION AND VALIDITY OF CERTIFICATES

The existing text of regulation 14 is replaced by the following:

(*a*) Certificates other than the Cargo Ship Safety Construction Certificate, the Cargo Ship Safety Equipment Certificate and any Exemption Certificate shall be issued for a period not exceeding 12 months. The Cargo Ship Safety Construction Certificate shall be issued for a period not exceeding five years. The Cargo Ship Safety Equipment Certificate shall be issued for a period not exceeding 24 months. Exemption Certificates shall not be valid for longer than the period of the certificates to which they refer.

(*b*) No extension of the five-year period of validity of the Cargo Ship Safety Construction Certificate shall be permitted.

(*c*) If a survey takes place within two months before the end of the period for which a Cargo Ship Safety Radiotelegraphy Certificate or a Cargo Ship Safety Radiotelephony Certificate issued in respect of cargo ships of 300 tons gross tonnage and upwards, but less than 500 tons gross tonnage, was originally issued, that certificate may be withdrawn, and a new certificate may be issued which shall expire 12 months after the end of the said period.

(*d*) If the ship at the time when a certificate, other than that referred to in paragraph (*b*) of this regulation, expires is not in a port of the country in which it is registered or is to be surveyed, the Administration may extend the certificate, but such extension shall be granted only for the purpose of allowing the ship to complete its voyage to the country in which it is registered or is to be surveyed, and then only in cases where it appears proper and reasonable to do so.

(*e*) No certificate shall be extended under the provisions of paragraph (*d*) of this regulation for a longer period than five months, and a ship to which an extension is granted shall not, on its arrival in the country in which it is registered or the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port or country without having obtained a new certificate.

(*f*) A certificate, other than that referred to in paragraph (*b*) of this regulation, which has not been extended under the foregoing provisions of this regulation, may be extended by the Administration for a period of grace up to one month from the date of expiry stated on it.

(*g*) A certificate shall cease to be valid:

(i) If the inspections and surveys are not carried out within the periods specified under regulations 7(*a*), 8, 9 and 10(*a*) of chapter I of the Convention and the present Protocol or as they may have been extended in accordance with paragraphs (*d*), (*e*) or (*f*) of this regulation; or

(ii) Upon transfer of the ship to the flag of another Government; a new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of regulation 11(*a*) and (*b*) of this chapter; in the case of a transfer between Parties, if requested within three months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificates carried by the ship before the transfer and, if available, copies of the relevant survey reports.

Regulation 19. CONTROL

The existing text of regulation 19 is replaced by the following:

(*a*) Every ship when in a port of another Party is subject to control by officers duly authorized by such Government in so far as this control is directed towards verifying that the certificates issued under regulation 12 or regulation 13 of chapter I of the Convention are valid.

(*b*) Such certificates, if valid, shall be accepted unless there are clear grounds for believing that the condition of the ship or of its equipment does not correspond substantially with the particulars of any of the certificates or that the ship and its equipment are not in compliance with the provisions of regulation 11(*a*) and (*b*) of this chapter.

(*c*) In the circumstances given in paragraph (*b*) of this regulation or where a certificate has expired or ceased to be valid, the officer carrying out the control shall take steps to ensure that the ship shall not sail until it can proceed to sea or leave the port for the purpose of proceeding to the appropriate repair yard without danger to the ship or persons on board.

(*d*) In the event of this control giving rise to an intervention of any kind, the officer carrying out the control shall forthwith inform, in writing, the Consul or, in his absence, the nearest diplomatic representative of the State whose flag the ship is entitled to fly of all the circumstances in which intervention was deemed necessary. In addition, nominated surveyors or recognized organizations responsible for the issue of the certificates shall also be notified. The facts concerning the intervention shall be reported to the Organization.

(*e*) The Port State authority concerned shall notify all relevant information about the ship to the authorities of the next port of call, in addition to parties mentioned in paragraph (*d*) of this regulation, if it is unable to take action as specified in paragraphs (*c*) and (*d*) of this regulation or if the ship has been allowed to proceed to the next port of call.

(*f*) When exercising control under this regulation all possible efforts shall be made to avoid a ship being unduly detained or delayed. If a ship is thereby unduly detained or delayed it shall be entitled to compensation for any loss or damage suffered.

CHAPTER II-1. CONSTRUCTION—SUBDIVISION AND STABILITY, MACHINERY AND ELECTRICAL INSTALLATIONS

PART A. GENERAL

Regulation 1. APPLICATION

The following sub-paragraphs are added to the existing text of paragraph (*b*):

(iii) Notwithstanding the provisions of sub-paragraph (ii) of this paragraph and sub-paragraph (*a*)(iii) of this regulation, for the purposes of paragraph (*d*) of regulation 29 of this chapter, a new tanker means a tanker:

(1) For which the building contract is placed after 1 June 1979; or

(2) 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

(3) The delivery of which is after 1 June 1982; or

(4) Which has undergone an alteration or modification of a major character:

(*a*) For which the contract is placed after 1 June 1979; or

(*b*) In the absence of a contract, the construction work of which is begun after 1 January 1980; or

(*c*) Which is completed after 1 June 1982.

(iv) For the purposes of paragraph (*d*) of regulation 29 of this chapter, an existing tanker is a tanker which is not a new tanker as defined in sub-paragraph (iii) of this paragraph.

(v) For the purposes of sub-paragraph (iii) of this paragraph, conversion of an existing tanker of 20,000 metric tons deadweight and upwards to meet the requirements of the present Protocol or the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973,[1] shall not be deemed to constitute an alteration or modification of a major character.

Regulation 2. DEFINITIONS

The following paragraphs are added to the existing text:

(*k*) The remote steering gear control system is the means by which required rudder movements are transmitted from the navigating bridge to the steering gear power unit controls.

(*l*) The main steering gear is the machinery, the steering gear power units, if any, and ancillary equipment and the means of applying torque to the rudder stock (e.g., tiller or quadrant) necessary for effecting movement of the rudder for the purpose of steering the ship under normal service conditions.

(*m*) The steering gear power unit is:

(i) In the case of electric steering gear, an electric motor and its associated electrical equipment;

(ii) In the case of electro-hydraulic steering gear, an electric motor and its associated electrical equipment and connected pump;

(iii) In the case of other hydraulic steering gear, a driving engine and connected pump.

(*n*) The auxiliary steering gear is that equipment which is provided for effecting movement of the rudder for the purpose of steering the ship in the event of failure of the main steering gear.

PART C. MACHINERY AND ELECTRICAL INSTALLATIONS

Regulation 29. STEERING GEAR

The following paragraph is added to the existing text:

(d) *Tankers only*

(i) The following shall apply to every new tanker of 10,000 tons gross tonnage and upwards and, not later than two years from the date of entry into force of the present Protocol, to every existing tanker of 10,000 tons gross tonnage and upwards:

(1) Two remote steering gear control systems shall be provided, each of which shall be operable separately from the navigating bridge; this does not require duplication of the steering wheel or steering lever; in the event of failure of the remote steering gear control system in operation, the other system shall be capable of being brought into immediate operation from a position on the navigating bridge; each remote steering gear control system, if electric, shall be served by its own separate circuit supplied from the steering gear power circuit from a point within the steering gear compartment; in the event of failure of electrical power supply to a remote steering gear control system an alarm shall be given on the navigating

[1] United Nations, *Treaty Series*, vol. 1342, No. I-22484.

bridge; the alarms required in this sub-paragraph shall be both audible and visual and situated in a position on the navigating bridge where they can be readily observed;

(2) Control of the main steering gear shall also be provided in the steering gear compartment;

(3) Means shall be provided in the steering gear compartment to disconnect the remote steering gear control system from the power circuit;

(4) A means of communication shall be provided between the navigating bridge and the steering gear compartment;

(5) The exact angular position of the rudder shall be indicated on the navigating bridge; the rudder angle indication shall be independent of the remote steering gear control system; and

(6) The angular position of the rudder shall be recognizable in the steering gear compartment.

(ii) In every new tanker of 10,000 tons gross tonnage and upwards, in addition to the requirements of paragraph (*a*) and sub-paragraph (*d*)(i) of this regulation, the following shall apply:

(1) The main steering gear shall comprise two or more identical power units and it shall be capable of operating the rudder as required by sub-paragraph (*d*)(ii)(2) of this regulation while operating with one or more power units; as far as reasonable and practicable, the main steering gear shall be so arranged that a single failure in its piping or in one of the power units will not impair the integrity of the remaining part of the steering gear; all mechanical couplings which are part of the steering gear and the mechanical connexion with any remote steering gear control system, if any, shall be of sound and reliable construction to the satisfaction of the Administration;

(2) The main steering gear shall, with the ship at its deepest sea-going draught, be capable of putting the rudder over from 35 degrees on one side to 35 degrees on the other side with the ship running ahead at maximum service speed; the rudder shall be capable of being put over from 35 degrees on either side to 30 degrees on the other side in not more than 28 seconds, under the same conditions;

(3) The main steering gear shall be operated by power where necessary to fulfil the requirements of sub-paragraph (*d*)(ii)(2) of this regulation;

(4) The main steering gear power units shall be arranged to start automatically when power is restored after a power failure;

(5) In the event of failure of any of the steering gear power units an alarm shall be given on the navigating bridge; every steering gear power unit shall be capable of being brought into operation either automatically or manually from a position on the navigating bridge; and

(6) An alternative power supply, at least sufficient to supply a steering gear power unit so as to enable it to move the rudder as specified below, and also to supply its associated remote steering gear control system and the rudder angle indicator, shall be provided, automatically, within 45 seconds, either from the emergency source of electrical power, or from another independent source of power located in the steering gear compartment; this independent source of power shall be used only for this purpose and shall have a capacity sufficient for half an hour of continuous operation; the steering gear power unit, when being supplied by the alternative power supply, shall at least be capable of putting the rudder over from 15 degrees on one side to 15 degrees on the other side in not more than 60 seconds with the ship at its deepest sea-going draught while running at one half of its maximum service speed ahead or 7 knots, whichever is the greater.

CHAPTER II-2. CONSTRUCTION—FIRE PROTECTION, FIRE DETECTION AND FIRE EXTINCTION

PART A. GENERAL

Regulation 1. APPLICATION

The following sub-paragraphs are added to the existing text of paragraph (*a*):

(iv) Notwithstanding the provisions of sub-paragraphs (ii) and (iii) of this paragraph, for the purposes of paragraph (*a*)(ii) of regulation 55 and of regulation 60 of this chapter, a new tanker means a tanker:

(1) For which the building contract is placed after 1 June 1979; or

(2) 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

(3) The delivery of which is after 1 June 1982; or

(4) Which has undergone an alteration or modification of a major character:

(*a*) For which the contract is placed after 1 June 1979; or

(*b*) In the absence of a contract, the construction work of which is begun after 1 January 1980; or

(*c*) Which is completed after 1 June 1982.

(v) For the purposes of paragraph (*a*)(ii) of regulation 55 and of regulation 60 of this chapter, an existing tanker is a tanker which is not a new tanker as defined in sub-paragraph (iv) of this paragraph.

(vi) For the purposes of sub-paragraph (iv) of this paragraph, conversion of an existing tanker of 20,000 metric tons deadweight and upwards to meet the requirements of the present Protocol or the Protocol of 1978 Relating to the International Convention for the Prevention of Pollution from Ships, 1973, shall not be deemed to constitute an alteration or modification of a major character.

Regulation 3. DEFINITIONS

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

(v) "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.

The following paragraph is added to the existing text:

(x) "Crude oil" means any oil occurring naturally in the earth whether or not treated to render it suitable for transportation and includes:

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

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

PART E. FIRE SAFETY MEASURES FOR TANKERS

Regulation 55. APPLICATION

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

(*a*) Unless expressly provided otherwise:

(i) This part shall apply to all new tankers carrying crude oil and petroleum products having a flashpoint not exceeding 60°C (140°F) (closed cup test) as determined by an approved flashpoint apparatus and a Reid vapour pressure which is below atmospheric pressure and other liquid products having a similar fire hazard; and

(ii) In addition, all ships covered by this part shall comply with the requirements of regulations 52, 53 and 54 of chapter II-2 of the Convention except that fixed gas fire-extinguishing systems for cargo spaces shall not be used for new tankers and for those existing tankers complying with regulation 60 of this chapter; for existing tankers not required to comply with regulation 60, the Administration, in applying the requirements of paragraph (*f*) of regulation 52, may accept a froth system capable of discharging froth internally or externally to the tanks; the details of the installation shall be to the satisfaction of the Administration.

(*b*) Where cargoes other than those referred to in sub-paragraph (*a*)(i) of this regulation which introduce additional fire hazards are intended to be carried, additional safety measures shall be required to the satisfaction of the Administration.

(*c*) Combination carriers shall not carry solid cargoes unless all cargo tanks are empty of oil and gas freed or unless, in each case, the Administration is satisfied with the arrangements provided.

Regulation 60. CARGO TANK PROTECTION

The existing text of this regulation is replaced by the following:

(*a*) For new tankers of 20,000 metric tons deadweight and upwards, the protection of the cargo tanks' deck area and cargo tanks shall be achieved by a fixed deck froth system and a fixed inert gas system in accordance with the requirements of regulations 61 and 62 of chapter II-2 of the Convention except that in lieu of the above installations the Administration, after having given consideration to the ship's arrangement and equipment, may accept other combinations of fixed installations if they afford protection equivalent to the above, in accordance with regulation 5 of chapter I of the Convention.

(*b*) To be considered equivalent, the system proposed in lieu of the deck froth system shall:

(i) Be capable of extinguishing spill fires and also preclude ignition of spilled oil not yet ignited; and

(ii) Be capable of combating fires in ruptured tanks.

(*c*) To be considered equivalent, the system proposed in lieu of the fixed inert gas system shall:

(i) Be capable of preventing dangerous accumulations of explosive mixtures in intact cargo tanks during normal service throughout the ballast voyage and necessary in-tank operations; and

(ii) Be so designed as to minimize the risk of ignition from the generation of static electricity by the system itself.

(*d*) Any existing tanker of 20,000 metric tons deadweight and upwards engaged in the trade of carrying crude oil shall be fitted with an inert gas system, complying with the requirements of paragraph (*a*) of this regulation, not later than a date:

(i) For a tanker of 70,000 metric tons deadweight and upwards, two years after the date of entry into force of the present Protocol; and

(ii) For a tanker of less than 70,000 metric tons deadweight, four years after the date of entry into force of the present Protocol, except that for tankers less than 40,000 tons deadweight not fitted with tank washing machines having an individual throughput of greater than 60 cubic metres per hour, the Administration may exempt existing tankers from the requirements of this paragraph, if it would be unreasonable and impracticable to apply these requirements, taking into account the ship's design characteristics.

(*e*) Any existing tanker of 40,000 metric tons deadweight and upwards engaged in the trade of carrying oil other than crude oil and any such tanker of 20,000 metric tons deadweight and upwards engaged in the trade of carrying oil other than crude oil fitted with tank washing machines having an individual throughput of greater than 60 cubic metres per hour shall be fitted with an inert gas system, complying with the requirements of paragraph (*a*) of this regulation, not later than a date:

(i) For a tanker of 70,000 metric tons deadweight and upwards, two years after the date of entry into force of the present Protocol; and

(ii) For a tanker of less than 70,000 metric tons deadweight, four years after the date of entry into force of the present Protocol.

(*f*) Any tanker operating with a cargo tank cleaning procedure using crude oil washing shall be fitted with an inert gas system complying with the requirements of regulation 62 of chapter II-2 of the Convention and with fixed tank washing machines.

(*g*) All tankers fitted with a fixed inert gas system shall be provided with a closed ullage system.

(*h*) Any new tanker of 2,000 tons gross tonnage and upwards not covered by paragraph (*a*) of this regulation shall be provided with a froth system, capable of discharging froth internally or externally, to the tanks. The details of such installation shall be to the satisfaction of the Administration.

CHAPTER V. SAFETY OF NAVIGATION

Regulation 12. SHIPBORNE NAVIGATIONAL EQUIPMENT

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

(*a*) All ships of 1,600 tons gross tonnage and upwards but less than 10,000 tons gross tonnage shall be fitted with at least one radar. All ships of 10,000 tons gross tonnage and upwards shall be fitted with at least two radars, each capable of operating independently of the other. All radars fitted in compliance with this regulation shall be of a type approved by the Administration and shall conform to operational standards not inferior to those adopted by the Organization. Facilities for plotting radar readings shall be provided on the bridge in those ships.

Regulation 19. USE OF THE AUTOMATIC PILOT

The following paragraph is added to the existing text:

(*d*) The manual steering shall be tested after prolonged use of the automatic pilot, and before entering areas where navigation demands special caution.

The following new regulations are added to this chapter:

Regulation 19-1. OPERATION OF STEERING GEAR

In areas where navigation demands special caution, ships shall have more than one steering gear power unit in operation when such units are capable of simultaneous operation.

Regulation 19-2. STEERING GEAR—TESTING AND DRILLS

(*a*) Within 12 hours before departure, the ship's steering gear shall be checked and tested by the ship's crew. The test procedure shall include, where applicable, the operation of the following:

(i) The main steering gear;

(ii) The auxiliary steering gear;

(iii) The remote steering gear control systems;

(iv) The steering positions located on the navigating bridge;

(v) The emergency power supply;

(vi) The rudder angle indicators in relation to the actual position of the rudder;

(vii) The remote steering gear control system power failure alarms; and

(viii) The steering gear power unit failure alarms.

(*b*) The checks and tests shall include:

(i) The full movement of the rudder according to the required capabilities of the steering gear;

(ii) A visual inspection of the steering gear and its connecting linkage; and

(iii) The operation of the means of communication between the navigating bridge and steering gear compartment.

(*c*) (i) Simple operating instructions with a block diagram showing the change-over procedures for remote steering gear control systems and steering gear power units shall be permanently displayed on the navigating bridge and in the steering gear compartment.

(ii) All officers concerned with the operation and/or maintenance of steering gear shall be familiar with the operation of the steering systems fitted on the ship and with the procedures for changing from one system to another.

(*d*) In addition to the routine checks and tests prescribed in paragraphs (*a*) and (*b*) of this regulation, emergency steering drills shall take place at least once every three months in order to practise emergency steering procedures. These drills shall include direct control from within the steering gear compartment, the communications procedure with the navigating bridge and, where applicable, the operation of alternative power supplies.

(*e*) The Administration may waive the requirement to carry out the checks and tests prescribed in paragraphs (*a*) and (*b*) of this regulation for ships which regularly ply on voyages of short duration. Such ships shall carry out these checks and tests at least once every week.

(*f*) The date upon which the checks and tests prescribed in paragraphs (*a*) and (*b*) of this regulation are carried out and the date and details of emergency steering drills carried out under paragraph (*d*) of this regulation, shall be recorded in the log book as may be prescribed by the Administration.

APPENDIX

FORM OF SAFETY CONSTRUCTION CERTIFICATE FOR CARGO SHIPS

The following form of Supplement is added to the existing form:

SUPPLEMENT TO THE CARGO SHIP SAFETY CONSTRUCTION CERTIFICATE

(OFFICIAL SEAL) (COUNTRY)

Issued under the provisions of the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974

Name of ship	*Distinctive number or letters*	*Port of registry*	*Deadweight of ship (metric tons)*	*Year of build*

Type of ship:

Tanker engaged in the trade of carrying crude oil*
Tanker engaged in the trade of carrying oil other than crude oil*
Tanker engaged in the trade of carrying crude/other oil*
Cargo ship other than a tanker engaged in the trade of carrying oil*

Date of contract for building or alteration or modification of a major character .....

Date on which keel was laid or ship was at a similar stage of construction or on which an alteration or modification of a major character was commenced .....

Date of delivery or completion of an alteration or modification of a major character ....

* Delete as appropriate.

This Supplement shall be permanently attached to the Cargo Ship Safety Construction Certificate.

This is to certify:

That the ship has been surveyed in accordance with regulation 10 of chapter I of the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974; and

That the survey showed that the condition of the hull, machinery and equipment as defined in the above regulation was in all respects satisfactory and that the ship complied with the requirements 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 issuing the certificate)

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

INTERMEDIATE SURVEY

This is to certify that at an intermediate survey required by regulation 10 of chapter I of the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974, this ship was 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)

FORM OF SAFETY EQUIPMENT CERTIFICATE FOR CARGO SHIPS

The following form of Supplement is added to the existing form:

SUPPLEMENT TO THE CARGO SHIP SAFETY EQUIPMENT CERTIFICATE

(OFFICIAL SEAL) (COUNTRY)

Issued under the provisions of the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974

Name of ship	*Distinctive number or letters*	*Port of registry*	*Deadweight of ship (metric tons)*	*Year of build*

Type of ship:

Tanker engaged in the trade of carrying crude oil*
Tanker engaged in the trade of carrying oil other than crude oil*
Tanker engaged in the trade of carrying crude/other oil*
Cargo ship other than a tanker engaged in the trade of carrying oil*

Date of contract for building or alteration or modification of a major character .....

Date on which keel was laid or ship was at a similar stage of construction or on which an alteration or modification of a major character was commenced .....

Date of delivery or completion of an alteration or modification of a major character ....

* Delete as appropriate.

This Supplement shall be permanently attached to the Cargo Ship Safety Equipment Certificate.

This is to certify:

That the ship has been surveyed in accordance with regulation 8 of chapter I of the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974; and

That the survey showed that the condition of the safety equipment as defined in the above regulation was in all respects satisfactory and that the ship complied with the requirements 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 issuing the certificate)

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

INTERMEDIATE SURVEY

This is to certify that at an intermediate survey required by regulation 8 of chapter I of the Protocol of 1978 relating to the International Convention for the Safety of Life at Sea, 1974, the ship was 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 .....

(Seal or stamp of the Authority, as appropriate)

Under the provisions of regulation 14 of chapter I of the Protocol the validity of this Certificate is extended until .....

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

Place .....

Date .....

(Seal or stamp of the Authority, as appropriate)

阿富汗：
For Afghanistan:
Pour l'Afghanistan :
За Афганистан:
Por el Afganistán:

阿尔巴尼亚：
For Albania:
Pour l'Albanie :
За Албанию:
Por Albania:

阿尔及利亚：
For Algeria:
Pour l'Algérie :
За Алжир:
Por Argelia:

安哥拉：
For Angola:
Pour l'Angola :
За Анголу:
Por Angola:

阿根廷：
For Argentina:
Pour l'Argentine :
За Аргентину:
Por la Argentina:

澳大利亚：
For Australia:
Pour l'Australie :
За Австралию:
Por Australia:

奥地利：
For Austria:
Pour l'Autriche :
За Австрию:
Por Austria:

巴 哈 马：
For the Bahamas:
Pour les Bahamas :
За Багамские О-ва:
Por las Bahamas:

巴 林：
For Bahrain:
Pour Bahreïn :
За Бахрейн:
Por Bahrein:

孟 加 拉：
For Bangladesh:
Pour le Bangladesh :
За Бангладеш:
Por Bangladesh:

巴巴多斯：
For Barbados:
Pour la Barbade :
За Барбадос:
Por Barbados:

比 利 时：
For Belgium:
Pour la Belgique :
За Бельгию:
Por Bélgica:

[ROBERT VAES][1]

Sous réserve d'approbation et de ratification
Londres, le 8 septembre 1978[2]

贝 宁：
For Benin:
Pour le Bénin :
За Бенин:
Por Benin:

[1] Names of signatories appearing between brackets were not legible and have been supplied by the Inter-Governmental Maritime Consultative Organization — Les noms des signataires donnés entre crochets étaient illisibles et ont été fournis par l'Organisation intergouvernementale consultative de la navigation maritime.

[2] Subject to approval and ratification, London, 8 September 1978.

不 丹：
For Bhutan:
Pour le Bhoutan :
За Бутан:
Por Bhután:

玻利维亚：
For Bolivia:
Pour la Bolivie :
За Боливию:
Por Bolivia:

博茨瓦纳：
For Botswana:
Pour le Botswana :
За Ботсвану:
Por Botswana:

巴 西：
For Brazil:
Pour le Brésil :
За Бразилию:
Por el Brasil:

保加利亚：
For Bulgaria:
Pour la Bulgarie :
За Болгарию:
Por Bulgaria:

缅 甸：
For Burma:
Pour la Birmanie :
За Бирму:
Por Birmania:

布隆迪：
For Burundi:
Pour le Burundi :
За Бурунди:
Por Burundi:

白俄罗斯苏维埃社会主义共和国：
For the Byelorussian Soviet Socialist Republic:
Pour la République socialiste soviétique de Biélorussie :
За Белорусскую Советскую Социалистическую Республику:
Por la República Socialista Soviética de Bielorrusia:

加拿大：
For Canada:
Pour le Canada :
За Канаду:
Por el Canadá:

佛得角：
For Cape Verde:
Pour le Cap-Vert :
За О-ва Зеленого Мыса:
Por Cabo Verde:

中非共和国：
For the Central African Republic:
Pour la République centrafricaine :
За Центральноафриканскую Республику:
Por la República Centroafricana:

乍得：
For Chad:
Pour le Tchad :
За Чад:
Por el Chad:

智利：
For Chile:
Pour le Chili :
За Чили:
Por Chile:

中国：
For China:
Pour la Chine :
За Китай:
Por China:

哥伦比亚：
For Colombia:
Pour la Colombie :
За Колумбию:
Por Colombia:

科摩罗：
For the Comoros:
Pour les Comores :
За Коморские О-ва:
Por las Comoras:

刚　果：
For the Congo:
Pour le Congo :
За Конго:
Por el Congo:

哥斯达黎加：
For Costa Rica:
Pour le Costa Rica :
За Коста-Рику:
Por Costa Rica:

古巴：
For Cuba:
Pour Cuba :
За Кубу:
Por Cuba:

塞浦路斯：
For Cyprus:
Pour Chypre :
За Кипр:
Por Chipre:

捷克斯洛伐克：
For Czechoslovakia:
Pour la Tchécoslovaquie :
За Чехословакию:
Por Checoslovaquia:

民主柬埔寨：
For Democratic Kampuchea:
Pour le Kampuchea démocratique :
За Демократическую Кампучию:
Por Kampuchea Democrática:

朝鲜民主主义人民共和国：
For the Democratic People's Republic of Korea:
Pour la République populaire démocratique de Corée :
За Корейскую Народно-Демократическую Республику:
Por la República Popular Democrática de Corea:

民主也门：
For Democratic Yemen:
Pour le Yémen démocratique :
За Демократический Йемен:
Por el Yemen Democrático:

丹　麦：
For Denmark:
Pour le Danemark :
За Данию:
Por Dinamarca:

吉布提：
For Djibouti:
Pour Djibouti :
За Джибути:
Por Djibouti:

多米尼加共和国：
For the Dominican Republic:
Pour la République dominicaine :
За Доминиканскую Республику:
Por la República Dominicana:

厄瓜多尔：
For Ecuador:
Pour l'Equateur :
За Эквадор:
Por el Ecuador:

埃及：
For Egypt:
Pour l'Egypte :
За Египет:
Por Egipto:

萨尔瓦多：
For El Salvador:
Pour El Salvador :
За Сальвадор:
Por El Salvador:

赤道几内亚：
For Equatorial Guinea:
Pour la Guinée équatoriale :
За Экваториальную Гвинею:
Por Guinea Ecuatorial:

埃塞俄比亚：
For Ethiopia:
Pour l'Ethiopie :
За Эфиопию:
Por Etiopía:

斐济：
For Fiji:
Pour Fidji :
За Фиджи:
Por Fiji:

芬兰：
For Finland:
Pour la Finlande :
За Финляндию:
Por Finlandia:

法国：
For France:
Pour la France :
За Францию:
Por Francia:

[G. MARCHAND]
Sous réserve d'approbation ultérieure[1]

[1] Subject to further approval.

加蓬：
For Gabon:
Pour le Gabon :
За Габон:
Por el Gabón:

冈比亚：
For the Gambia:
Pour la Gambie :
За Гамбию:
Por Gambia:

德意志民主共和国：
For the German Democratic Republic:
Pour la République démocratique allemande :
За Германскую Демократическую Республику:
Por la República Democrática Alemana:

德意志联邦共和国：
For the Federal Republic of Germany:
Pour la République fédérale d'Allemagne :
За Федеративную Республику Германии:
Por la República Federal de Alemania:

[RUETE]

[Dr. BREUER]
Subject to ratification[1]

加纳：
For Ghana:
Pour le Ghana :
За Гану:
Por Ghana:

希　腊：
For Greece:
Pour la Grèce :
За Грецию:
Por Grecia:

格林纳达：
For Grenada:
Pour la Grenade :
За Гренаду:
Por Granada:

[1] Sous réserve de ratification.

危地马拉：
For Guatemala:
Pour le Guatemala :
За Гватемалу:
Por Guatemala:

几内亚：
For Guinea:
Pour la Guinée :
За Гвинею:
Por Guinea:

几内亚（比绍）
For Guinea-Bissau:
Pour la Guinée-Bissau :
За Гвинею -Бисау:
Por Guinea-Bissau:

圭亚那：
For Guyana:
Pour la Guyane :
За Гайану:
Por Guyana:

海　地：
For Haiti:
Pour Haïti :
За Гаити:
Por Haití:

梵蒂冈：
For the Holy See:
Pour le Saint-Siège :
За Святейший Престол:
Por la Santa Sede:

洪都拉斯：
For Honduras:
Pour le Honduras :
За Гондурас:
Por Honduras:

匈牙利：
For Hungary:
Pour la Hongrie :
За Венгрию:
Por Hungría:

冰　岛：
For Iceland:
Pour l'Islande :
За Исландию:
Por Islandia:

印　度：
For India:
Pour l'Inde :
За Индию:
Por la India:

印度尼西亚：
For Indonesia:
Pour l'Indonésie :
За Индонезию:
Por Indonesia:

伊朗：
For Iran:
Pour l'Iran :
За Иран:
Por el Irán:

伊拉克：
For Iraq:
Pour l'Irak :
За Ирак:
Por el Iraq:

爱尔兰：
For Ireland:
Pour l'Irlande :
За Ирландию:
Por Irlanda:

以色列：
For Israel:
Pour Israël :
За Израиль:
Por Israel:

意大利：
For Italy:
Pour l'Italie :
За Италию:
Por Italia:

象牙海岸：
For the Ivory Coast:
Pour la Côte d'Ivoire :
За Берег Слоновой Кости:
Por la Costa de Marfil:

牙买加：
For Jamaica:
Pour la Jamaïque :
За Ямайку:
Por Jamaica:

日本：
For Japan:
Pour le Japon :
За Японию:
Por el Japón:

約旦：
For Jordan:
Pour la Jordanie :
За Иорданию:
Por Jordania:

肯尼亚：
For Kenya:
Pour le Kenya :
За Кению:
Por Kenya:

科威特：
For Kuwait:
Pour le Koweït :
За Кувейт:
Por Kuwait:

老挝人民民主共和国：
For the Lao People's Democratic Republic:
Pour la République démocratique populaire lao :
За Народно-Демократическую Республику Лаос:
Por la República Democrática Popular Lao:

黎巴嫩：
For Lebanon:
Pour le Liban :
За Ливан:
Por el Líbano:

莱索托：
For Lesotho:
Pour le Lesotho :
За Лесото:
Por Lesotho:

利比里亚：
For Liberia:
Pour le Libéria :
За Либерию:
Por Liberia:

[G. F. B. COOPER]
Subject to ratification[1]

阿拉伯利比亚民众国：
For the Libyan Arab Jamahiriya:
Pour la Jamahiriya arabe libyenne :
За Ливийскую Арабскую Джамахирию:
Por la Jamahiriya Arabe Libia:

列支敦士登：
For Liechtenstein:
Pour le Liechtenstein :
За Лихтенштейн:
Por Liechtenstein:

[1] Sous réserve de ratification.

卢森堡：
For Luxembourg:
Pour le Luxembourg :
За Люксембург:
Por Luxemburgo:

马达加斯加：
For Madagascar:
Pour Madagascar :
За Мадагаскар:
Por Madagascar:

马拉维：
For Malawi:
Pour le Malawi :
За Малави:
Por Malawi:

马来西亚：
For Malaysia:
Pour la Malaisie :
За Малайзию:
Por Malasia:

马尔代夫：
For Maldives:
Pour les Maldives :
За Мальдивы:
Por Maldivas:

马里：
For Mali:
Pour le Mali :
За Мали:
Por Malí:

马耳他：
For Malta:
Pour Malte :
За Мальту:
Por Malta:

毛里塔尼亚：
For Mauritania:
Pour la Mauritanie :
За Мавританию:
Por Mauritania:

毛里求斯：
For Mauritius:
Pour Maurice :
За Маврикий:
Por Mauricio:

墨西哥：
For Mexico:
Pour le Mexique :
За Мексику:
Por México:

[MANUEL TELLO]
ad referendum

摩纳哥：
For Monaco:
Pour Monaco :
За Монако:
Por Mónaco:

蒙　古：
For Mongolia:
Pour la Mongolie :
За Монголию:
Por Mongolia:

摩洛哥：
For Morocco:
Pour le Maroc :
За Марокко:
Por Marruecos:

莫桑比克：
For Mozambique:
Pour le Mozambique :
За Мозамбик:
Por Mozambique:

瑙 鲁：
For Nauru:
Pour Nauru :
За Науру:
Por Nauru:

尼泊尔：
For Nepal:
Pour le Népal :
За Непал:
Por Nepal:

荷 兰：
For the Netherlands:
Pour les Pays-Bas :
За Нидерланды:
Por los Países Bajos:

[R. FACK]
Subject to approval[1]

新 西 兰：
For New Zealand:
Pour la Nouvelle-Zélande :
За Новую Зеландию:
Por Nueva Zelandia:

尼加拉瓜：
For Nicaragua:
Pour le Nicaragua :
За Никарагуа:
Por Nicaragua:

尼日尔：
For the Niger:
Pour le Niger :
За Нигер:
Por el Níger:

尼日利亚：
For Nigeria:
Pour le Nigéria :
За Нигерию:
Por Nigeria:

[1] Sous réserve de ratification.

挪威：
For Norway:
Pour la Norvège :
За Норвегию:
Por Noruega:

阿曼：
For Oman:
Pour l'Oman :
За Оман:
Por Omán:

巴基斯坦：
For Pakistan:
Pour le Pakistan :
За Пакистан:
Por el Pakistán:

巴拿马：
For Panama:
Pour le Panama :
За Панаму:
Por Panamá:

巴布亚新几内亚：
For Papua New Guinea:
Pour la Papouasie-Nouvelle-Guinée :
За Папуа Новую Гвинею:
Por Papua Nueva Guinea:

巴拉圭：
For Paraguay:
Pour le Paraguay :
За Парагвай:
Por el Paraguay:

秘鲁：
For Peru:
Pour le Pérou :
За Перу:
Por el Perú:

菲律宾：
For the Philippines:
Pour les Philippines :
За Филиппины:
Por Filipinas:

波　兰：
For Poland:
Pour la Pologne :
За Польшу:
Por Polonia:

[E. WISNIEWSKI]
Subject to ratification[1]

葡萄牙：
For Portugal:
Pour le Portugal :
За Португалию:
Por Portugal:

卡塔尔：
For Qatar:
Pour le Qatar :
За Катар:
Por Qatar:

大韩民国：
For the Republic of Korea:
Pour la République de Corée :
За Республику Корею:
Por la República de Corea:

罗马尼亚：
For Romania:
Pour la Roumanie :
За Румынию:
Por Rumania:

卢旺达：
For Rwanda:
Pour le Rwanda :
За Руанду:
Por Rwanda:

[1] Sous réserve de ratification.

萨摩亚：
For Samoa:
Pour le Samoa :
За Самоа:
Por Samoa:

圣马力诺：
For San Marino:
Pour Saint-Marin :
За Сан-Марино:
Por San Marino:

圣多美和普林西比：
For Sao Tome and Principe:
Pour Sao Tomé-et-Principe :
За Сан-Томе и Принсипи:
Por Santo Tomé y Principe:

沙特阿拉伯：
For Saudi Arabia:
Pour l'Arabie saoudite :
За Саудовскую Аравию:
Por la Arabia Saudita:

塞内加尔：
For Senegal:
Pour le Sénégal :
За Сенегал:
Por el Senegal:

塞舌尔：
For Seychelles:
Pour les Seychelles :
За Сейшельские О-ва:
Por las Seychelles:

塞拉利昂：
For Sierra Leone:
Pour la Sierra Leone :
За Сьерра-Леоне:
Por Sierra Leona:

新加坡：
For Singapore:
Pour Singapour :
За Сингапур:
Por Singapur:

索马里：
For Somalia:
Pour la Somalie :
За Сомали:
Por Somalia:

南　　非：
For South Africa:
Pour l'Afrique du Sud :
За Южную Африку:
Por Sudáfrica:

西班牙：
For Spain:
Pour l'Espagne :
За Испанию:
Por España:

斯里兰卡：
For Sri Lanka:
Pour Sri Lanka :
За Шри Ланку:
Por Sri Lanka:

苏　　丹：
For the Sudan:
Pour le Soudan :
За Судан:
Por el Sudán:

苏里南：
For Surinam:
Pour le Surinam :
За Суринам:
Por Surinam:

斯威士兰：
For Swaziland:
Pour le Souaziland :
За Свазиленд:
Por Swazilandia:

瑞　典：
For Sweden:
Pour la Suède :
За Швецию:
Por Suecia:

[OLOF RYDBECK]
Subject to ratification[1]

瑞　士：
For Switzerland:
Pour la Suisse :
За Швейцарию:
Por Suiza:

阿拉伯叙利亚共和国：
For the Syrian Arab Republic:
Pour la République arabe syrienne :
За Сирийскую Арабскую Республику:
Por la República Arabe Siria:

泰国：
For Thailand:
Pour la Thaïlande :
За Таиланд:
Por Tailandia:

多哥：
For Togo:
Pour le Togo :
За Того:
Por el Togo:

汤加：
For Tonga:
Pour les Tonga :
За Тонгу:
Por Tonga:

[1] Sous réserve de ratification.

特立尼达和多巴哥：
For Trinidad and Tobago:
Pour la Trinité-et-Tobago :
За Тринидад и Тобаго:
Por Trinidad y Tabago:

突尼斯：
For Tunisia:
Pour la Tunisie :
За Тунис:
Por Túnez:

土耳其：
For Turkey:
Pour la Turquie :
За Турцию:
Por Turquía:

乌干达：
For Uganda:
Pour l'Ouganda :
За Уганду:
Por Uganda:

乌克兰苏维埃社会主义共和国：
For the Ukrainian Soviet Socialist Republic:
Pour la République socialiste soviétique d'Ukraine :
За Украинскую Советскую Социалистическую Республику:
Por la República Socialista Soviética de Ucrania:

苏维埃社会主义共和国联盟：
For the Union of Soviet Socialist Republics:
Pour l'Union des Républiques socialistes soviétiques :
За Союз Советских Социалистических Республик:
Por la Unión de Repúblicas Socialistas Soviéticas:

阿拉伯联合酋长国：
For the United Arab Emirates:
Pour les Emirats arabes unis :
За Объединенные Арабские Эмираты:
Por los Emiratos Arabes Unidos:

大不列颠及北爱尔兰联合王国：
For the United Kingdom of Great Britain and Northern Ireland:
Pour le Royaume-Uni de Grande-Bretagne et d'Irlande du Nord :
За Соединенное Королевство Великобритании и Северной Ирландии:
Por el Reino Unido de Gran Bretaña e Irlanda del Norte:

[J. N. ARCHER]
Subject to ratification[1]

喀麦隆联合共和国：
For the United Republic of Cameroon:
Pour la République-Unie du Cameroun :
За Объединенную Республику Камерун:
Por la República Unida del Camerún:

坦桑尼亚联合共和国：
For the United Republic of Tanzania:
Pour la République-Unie de Tanzanie :
За Объединенную Республику Танзания:
Por la República Unida de Tanzanía:

美利坚合众国：
For the United States of America:
Pour les Etats-Unis d'Amérique :
За Соединенные Штаты Америки:
Por los Estados Unidos de América:

[WILLIAM M. BENKERT]
[SIDNEY A. WALLACE]
Subject to ratification[1]

上沃尔特：
For the Upper Volta:
Pour la Haute-Volta :
За Верхнюю Вольту:
Por el Alto Volta:

乌拉圭：
For Uruguay:
Pour l'Uruguay :
За Уругвай:
Por el Uruguay:

[1] Sous réserve de ratification.

委内瑞拉：
For Venezuela:
Pour le Venezuela :
За Венесуэлу:
Por Venezuela:

越　南：
For Viet Nam:
Pour le Viet Nam :
За Вьетнам:
Por Viet Nam:

也门：
For Yemen:
Pour le Yémen :
За Йемен:
Por el Yemen:

南斯拉夫：
For Yugoslavia:
Pour la Yougoslavie :
За Югославию:
Por Yugoslavia:

[M. SIKIC]
Subject to ratification[1]

扎伊尔：
For Zaire:
Pour le Zaïre :
За Заир:
Por el Zaire:

赞比亚：
For Zambia:
Pour la Zambie :
За Замбию:
Por Zambia:

[1] Sous réserve de ratification.

RESERVATION AND UNDERSTANDING MADE UPON RATIFICATION OR ACCESSION (*a*)

FEDERAL REPUBLIC OF GERMANY

"The Government of the Federal Republic of Germany declares that the provisions of the second sentence of chapter I, regulation 19(*f*), of the annex to the Protocol cannot be applied in the Federal Republic of Germany at present."

With the following explanatory remarks:

"The Government of the Federal Republic of Germany wishes to point out the following in connexion with the declaration it has made:

"Any claims for compensation are met in accordance with the provisions of existing national law which correspond in essence to the liability provision of the annex to the Protocol. The liability provision of the annex to the Protocol is not quite as precise as national law requires normative liability to be.

"Furthermore, the provisions obtaining in the Federal Republic of Germany are constantly being updated, which must also be seen in the light of the results of the Third United Nations Conference on the Law of the Sea and possible future membership of the MARPOL Convention of 1973 and the Protocol thereto of 1978."

RÉSERVE ET DÉCLARATION INTERPRÉTATIVE FAITES LORS DE LA RATIFICATION OU DE L'ADHÉSION (*a*)

RÉPUBLIQUE FÉDÉRALE D'ALLEMAGNE

[TRADUCTION — TRANSLATION]

Le Gouvernement de la République fédérale d'Allemagne déclare que les dispositions de la deuxième phrase du paragraphe *f* de la règle 19 du chapitre I de l'annexe du Protocole ne peuvent à l'heure actuelle être appliquées en République fédérale d'Allemagne.

Avec les explications suivantes :

Le Gouvernement de la République fédérale d'Allemagne souhaite présenter les observations suivantes à propos de la déclaration qu'il a faite :

Toute demande de réparation est réglée conformément aux dispositions de la législation nationale existante qui correspondent, dans leur essence, aux dispositions de l'annexe du Protocole relatives à la responsabilité. Ces dispositions de l'annexe du Protocole n'ont pas la précision requise par la législation nationale pour ce qui est de la responsabilité normative.

En outre, les dispositions prévues en République fédérale d'Allemagne sont constamment mises à jour, ce qui doit également être considéré dans le contexte des résultats de la Troisième Conférence des Nations Unies sur le droit de la mer et des futures Parties éventuelles à la Convention MARPOL de 1973 et au Protocole y relatif.

KUWAIT (a)

"It is understood that the Accession of the State of Kuwait to . . . the Protocol of 1978 [relating to the International Convention for the Safety of Life at Sea, 1974], done at London on the 17th of February 1978, does not in any way mean recognition of Israel by the State of Kuwait. Furthermore, no treaty relations will arise between the State of Kuwait and Israel."[1]

KOWEÏT (a)

« Il est entendu que l'adhésion de l'Etat du Koweït au . . . Protocole de 1978 [relatif à la Convention internationale de 1974 pour la sauvegarde de la vie humaine en mer], adopté à Londres le 17 février 1978, ne saurait en aucun cas impliquer la reconnaissance d'Israël par l'Etat du Koweït. En outre, aucune relation conventionnelle ne sera établie entre l'Etat du Koweït et Israel[1]. »

[1] The depositary received the following communication dated 3 December 1979 from the Ambassador of Israel in London:

"The Instrument of Accession deposited by the Government of the State of Kuwait was accompanied by a statement of a political character in respect of Israel. In the view of the Government of Israel, this Convention is not the proper place for making such political pronouncements. Moreover, the said declaration cannot in any way affect whatever obligations are binding upon Kuwait under general international law or under particular conventions. The Government of Israel will, so far as concerns the substance of the matter, adopt towards the Government of the State of Kuwait an attitude of complete reciprocity."

[1] Le dépositaire a reçu de l'Ambassadeur d'Israël à Londres la communication suivante, en date du 3 décembre 1979 :

[TRADUCTION — TRANSLATION]

L'instrument d'adhésion déposé par le Gouvernement de l'Etat du Koweït était accompagné d'une déclaration de caractère politique concernant Israël. De l'avis du Gouvernement israélien, la Convention ne prête pas à des propos politiques de cette nature. En outre, ladite déclaration ne peut en aucune façon modifier les obligations qui incombent à l'Etat du Koweït aux termes du droit international en général ou de traités particuliers. En ce qui concerne le fond de la question, le Gouvernement israélien adoptera à l'égard du Gouvernement de l'Etat du Koweït une attitude de complète réciprocité.

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

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;

—The International Convention for the Safety of Life at Sea, 1974;[1]

—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.

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

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, 1974, and Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973.

The above Protocols constitute attachments 1 and 2[1] 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 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.

[1] United Nations, *Treaty Series*, vol. 1342, No. I-22484.

President:
Président :
Председатель:
Presidente:

[MANUEL TELLO][1]

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

[C. P. SRIVASTAVA]

Executive Secretaries of the Conference:
Secrétaires exécutifs de la Conférence :
Исполнительный Секретарь Конференции:
Secretarios Ejecutivos de la Conferencia:

[G. P. KOSTYLEV]
[Y. SASAMURA]

For Algeria:
Pour l'Algérie :
За Алжир:
Por Argelia:

[M. A. CHOUAKI]

For Argentina:
Pour l'Argentine :
За Аргентину:
Por la Argentina:

[A. L. PADILLA]

For Australia:
Pour l'Australie :
За Багамские О-ва:
Por Australia:

[R. M. TAYLOR]

[1] Names of signatories appearing between brackets were not legible and have been supplied by the Inter-Governmental Maritime Consultative Organization — Les noms des signataires donnés entre crochets étaient illisibles et ont été fournis par l'Organisation intergouvernementale consultative de la navigation maritime.

For the Bahamas:
Pour les Bahamas :
За Багамские О-Ва:
Por las Bahamas:

[R. F. A. ROBERTS]
[A. L. MORRIS]

For Bahrain:
Pour Bahreïn :
За Бахрейн:
Por Bahrein:

[W. H. AL-NIMER]

For Barbados:
Pour la Barbade :
За Барбадос:
Por Barbados:

For Belgium:
Pour la Belgique :
За Бельгию:
Por Bélgica:

[L. VAN DE VEL]

For Brazil:
Pour le Brésil :
За Бразилию:
Por el Brasil:

[J. O. RACHE DE ALMEIDA]

For Bulgaria:
Pour la Bulgarie :
За Болгарию:
Por Bulgaria:

[K. IVANOV]

For Canada:
Pour le Canada :
За Канаду:
Por el Canadá:

[W. A. O'NEIL]
[G. W. R. GRAVES]
[R. E. HAGE]
[D. J. KINGHAM]
[R. W. PARSONS]
[J. H. BIRTWHISTLE]
[A. WALTON]

For Chile:
Pour le Chili :
За Чили:
Por Chile:

[J. BERGUNO BARNES]
[G. S. SANTA-CRUZ]
[F. ABREGO]

For Colombia:
Pour la Colombie :
За Колумбию:
Por Colombia:

[F. CORREDOR]

For Cuba:
Pour Cuba :
За Кубу:
Por Cuba:

[D. P. VILLEGAS LENA]

For Cyprus:
Pour Chypre :
За Кипр:
Por Chipre :

[R. LEWIS]
[O. BEHA]
[J. M. BATES]

For Denmark:
Pour le Danemark :
За Данию:
Por Dinamarca:

[T. MADSEN]
[T. R. FUNDER]

For Egypt:
Pour l'Egypte :
За Египет:
Por Egipto:

[M. M. FAWZI]
[M. EL-GHAMRY]

For Finland:
Pour la Finlande :
За Финляндию:
Por Finlandia:

[E. HELANIEMI]

For France:
Pour la France :
За Францию:
Por Francia:

[M. M. JACQUIER]
[X. DUCLAUX]

For the German Democratic Republic:
Pour la République démocratique allemande :
За Германскую Демократическую Республику:
Por la República Democrática Alemana:

[G. BOSSOW]

For the Federal Republic of Germany:
Pour la République fédérale d'Allemagne :
За Федеративную Республику Германии:
Por la República Federal de Alemania:

[F. STELTER]

For Ghana:
Pour le Ghana :
За Гану:
Por Ghana:

[J. A. KUNTOH]
[Y. N. OHENE-AKRASI]

For Greece:
Pour la Grèce :
За Грецию:
Por Grecia:

[V. TZAVARAS]

For India:
Pour l'Inde :
За Индию:
Por la India:

[P. G. GAVAI]
[P. S. VANCHISWAR]
[R. C. MOHAN]
[T. V. RAJARAM]
[HARBANS SINGH]

For Indonesia:
Pour l'Indonésie :
За Индонезию:
Por Indonesia:

[S. TARDANA]

For Iran:
Pour l'Iran :
За Иран:
Por el Irán:

[A. FARID]

For Iraq:
Pour l'Irak :
За Ирак:
Por el Iraq:

[T. N. AL-OMARI]

For Ireland:
Pour l'Irlande :
За Ирландию:
Por Irlanda:

[T. GORMAN]

For Israel:
Pour Israël :
За Израиль:
Por Israel:

[P. MUNCH]

For Italy:
Pour l'Italie :
За Италию:
Por Italia:

[G. D'AGOSTINO]

For Japan:
Pour le Japon :
За Японию:
Por el Japón:

[K. KOMURA]
[T. AKAIWA]
[K. TODA]
[Y. KOSHIMURA]
[K. OGAWA]

For Kenya:
Pour le Kenya :
За Кению:
Por Kenya:

[R. O. ADERO]
[B. A. N. MUDHO]

For Kuwait:
Pour le Koweït :
За Кувейт:
Por Kuwait:

[A. M. AL YAGOUT]
[A. R. AL NAIBARI]
[N. A. AL NAKIB]

For Liberia:
Pour le Libéria :
За Либерию:
Por Liberia:

[G. F. B. COOPER]

For Malaysia:
Pour la Malaisie :
За Малайзию:
Por Malasia:

For Mexico:
Pour le Mexique :
За Мексику:
Por México:

[MANUEL TELLO]
[J. JARAMILLO-VÁZQUEZ]

For Morocco:
Pour le Maroc :
За Марокко:
Por Marruecos:

[A. NACIF]

For the Netherlands:
Pour les Pays-Bas :
За Нидерланды:
Por los Países Bajos:

[H. O. G. TEN RAA]
[A. VAN DER WOUDEN]
[P. J. M. DE BRUYN]
[R. A. VAN OTTERLOO]
[G. E. KULSDOM]

For New Zealand:
Pour la Nouvelle-Zélande :
За Новую Зеландию:
Por Nueva Zelandia:

[T. CAUGHLEY]

For Nigeria:
Pour le Nigéria :
За Нигерию:
Por Nigeria:

[A. S. WALI]
[E. O. AGBAKOBA]
[H. A. AGATE]

For Norway:
Pour la Norvège :
За Норвегию:
Por Noruega:

[M. HAREIDE]
[A. FRETHEIM]
[E. J. SALVESEN]
[G. STUBBERUD]
[T. STOLTENBERG]

For Oman:
Pour l'Oman :
За Оман:
Por Oman:

For Panama:
Pour le Panama :
За Панаму:
Por Panamá:

[J. A. STAGG]

For the Philippines:
Pour les Philippines :
За Филиппины:
Por Filipinas:

[P. T. BAUTISTA]
[J. M. CASILLAN]

For Poland:
Pour la Pologne :
За Польшу:
Por Polonia:

[E. WISNIEWSKI]

For Portugal:
Pour le Portugal :
За Португалию:
Por Portugal:

[L. M. ALEXANDRE]
[A. FERNANDES]

For the Republic of Korea:
Pour la République de Corée :
За Республику Корею:
Por la República de Corea:

[KYUNG-SUK SUH]
[SU-WHAN PARK]
[JAE SUNG KIM]

For Romania:
Pour la Roumanie :
За Румынию:
Por Rumania:

[G. MIHAIL]

For Saudi Arabia:
Pour l'Arabie saoudite :
За Саудовскую Аравию:
Por la Arabia Saudita:

[S. A. BARAYAN]
[M. W. GHALI]

For Senegal:
Pour le Sénégal :
За Сенегал:
Por el Senegal:

[S. N. BA]

For Singapore:
Pour Singapour :
За Сингапур:
Por Singapur:

[LIM TECK EE]

For Spain:
Pour l'Espagne :
За Испанию:
Por España:

[A. MATO]

For Sweden:
Pour la Suède :
За Швецию:
Por Suecia:

[G. K. LIND AF HAGEBY]
[P. ERIKSSON]

For Thailand:
Pour la Thaïlande :
За Таиланд:
Por Tailandia:

[P. WANNAMETHEE]
[P. BURANADILOK]
[K. SNIDVONGS]

For Trinidad and Tobago:
Pour la Trinité-et-Tobago :
За Тринидад и Тобаго:
Por Trinidad y Tabago:

For Tunisia:
Pour la Tunisie :
За Тунис:
Por Túnez:

[SAID BEN AMMAR]
[S. AZOUZ]
[H. BOUSSOFFARA]

For Turkey:
Pour la Turquie :
За Турцию:
Por Turquía:

[A. KESKEK]
[G. CANER]

For the Union of Soviet Socialist Republics:
Pour l'Union des Républiques Socialistes Soviétiques :
За Союз Советских Социалистических Республик:
Por la Unión de Repúblicas Socialistas Soviéticas:

[A. KOLESNITCHENKO]
[A. I. ANDREEV]

For the United Kingdom of Great Britain and Northern Ireland:
Pour le Royaume-Uni de Grande-Bretagne et d'Irlande du Nord :
За Соединенное Королевство Великобритании и Северной Ирландии:
Por el Reino Unido de Gran Bretaña e Irlanda del Norte:

[J. N. ARCHER]
[S. N. BURBRIDGE]
[J. COWLEY]

For the United States of America:
Pour les Etats-Unis d'Amérique :
За Соединенные Штаты Америки:
Por los Estados Unidos de América:

[WILLIAM M. BENKERT]
[SIDNEY A. WALLACE]

For Uruguay:
Pour l'Uruguay :
За Уругвай:
Por el Uruguay:

[R. PIRIZ]

For Venezuela:
Pour le Venezuela :
За Венесуэлу:
Por Venezuela:

[N. SÁNCHEZ LUNA]
[M. TIRADO]

For Yugoslavia:
Pour la Yougoslavie :
За Югославию:
Por Yugoslavia:

[M. SIKIĆ]
[M. DUNATOV]

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[1] which incorporates and modifies the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL Convention),[1] 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.

[1] United Nations, *Treaty Series*, vol. 1342, No. I-22484.

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 amendments[1] 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 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 1975 setting out procedures for the control of ships in respect of the International Convention for the Safety of Life at Sea, 1960,[3] and the International Convention on Load Lines, 1966,[4]

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.

[1] United Nations, *Treaty Series*, vol. 1140, p. 340.
[2] *Ibid.*, vol. 327, p. 3.
[3] *Ibid.*, vol. 536, p. 27.
[4] *Ibid.*, vol. 640, p. 133.

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, 1972[1] (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 wates;

(*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

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

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 Organization, 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,

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

INDEX OF SECTIONS

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 washing 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 Operations 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 satisfac-

tion 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 suctions 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 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 determinations shall exceed 8 per cent by volume. Where tanks have complete or partial wash bulkheads, 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

Paragraph number	*List of changes*
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. *Tankage to be crude oil washed*]. 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. *Filling of additional ballasting cargo tanks.* 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. *Discharge of oily water effluents on ballast voyage.* 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.