INTER-GOVERNMENTAL MARITIME
CONSULTATIVE ORGANIZATION

MP/CONF/DI/2
24 October 1973
Original: ENGLISH

IMCO

INTERNATIONAL CONFERENCE ON
MARINE POLLUTION, 1973
Committee II

DRAFT TEXT OF THE INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS, 1973

Text of Regulations of Annex I as agreed by the Committee

ANNEX I

CHAPTER II

REQUIREMENTS FOR CONTROL OF OPERATIONAL POLLUTION

Regulation 9

Control of Discharge of Oil

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

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

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

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

(iii) the tanker is proceeding en route;

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

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

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

(b) from a ship of 400 tons gross tonnage and above other than an oil tanker and from machinery space bilges excluding cargo pump room bilges of an oil tanker unless they are mixed with oil cargo residue in which case the provisions of sub-paragraph (a) of this paragraph apply:

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

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

(iii) the ship is proceeding en route;

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

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

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

(3) Whenever visible traces of oil are observed on or below the surface of the water in the immediate vicinity of a ship or its wake, Contracting States should, to the extent they are reasonably able to do so, promptly investigate the facts

bearing on the issue of whether there has been a violation of the provisions of this Regulation or Regulation 10 of this Annex. The investigation should include, in particular, the wind and sea conditions, the track and speed of the ship, other possible sources of the visible traces in the vicinity, and any relevant oil discharge records.

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

(5) The discharge shall not contain chemicals or other substances in quantities or concentrations which are hazardous to the marine environment. The discharge shall not contain chemicals or other substances introduced for the purpose of circumventing the conditions of discharge specified in this Regulation.

(6) The oil residues which cannot be discharged into the sea as permitted by paragraphs (1), (2), (3) and (4) of this Regulation shall be stored and kept on board or discharged to reception facilities.

Regulation 10

Methods for the Prevention of Oil Pollution from Ships While Operating in Special Areas

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

(a) The Mediterranean Sea area means the Mediterranean Sea proper including the Gulfs and Seas therein with the boundary between the Mediterranean and the Black Sea constituted by the [41°N] parallel and bounded to the west by the Straits of Gibralter at the meridian of 5°36'W.

(b) The Baltic Sea area means the Baltic Sea proper with the Gulf of Bothnia the Gulf of Finland and the entrance to the Baltic Sea bounded by the parallel of the Skaw in the Skagerrak at 57°44'.8 N.

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

(d) The Red Sea area means the Red Sea proper including the Gulfs of Suez and Aqaba bounded at the south by the rhumb line between Ras si Ane (12°8'.5N, 43°19'.6E) and Husn Murad (12°40'.4N, 43°30'.2E.).

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

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

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

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

(i) the ship is proceeding en route;

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

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

(b) The discharge shall not contain chemicals or other substances in quantities or concentrations which are hazardous to the marine environment. The discharge shall not contain chemicals or other substances introduced for the purpose of circumventing the conditions of discharge specified in this Regulation.

(c) the oil residues which cannot be discharged into the sea as permitted by sub-paragraph (a) of this paragraph shall be stored on board and discharged to reception facilities.

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

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

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* Plenary is invited to consider the suitability of the term "Gulfs Area" as defined in paragraph 1(e)

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

(7) Reception facilities within special areas:

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

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

(ii) Each Contracting Government having under its jurisdiction entrances to seawater courses with low depth contour which could require a reduction of draught by the discharge of ballast undertakes to ensure the provision of the facilities referred to in sub-paragraph (1) of this paragraph but with the proviso that ships required to discharge slops or dirty ballast could be subject to some delay.

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

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

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

(iv) After 1 January 1977 or the date established in accordance with sub-paragraph (iii) of this sub-paragraph, if earlier, each Contracting Government shall report to the organization for transmission to the Contracting Governments concerned all cases where the facilities are alleged to be inadequate.

(b) Red Sea area and "Gulf area"

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

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

(iii) Each Contracting Government concerned shall notify the Organization of the measures taken. Upon receipt of a sufficient number of such notifications the Organization shall establish a date from which the requirements of this Regulation in respect of the area in question shall take effect. The Organization shall notify all Contracting Governments of the date so established no less than twelve months in advance of that date.

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

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

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

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

Regulation 11

Exception

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

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

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

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

(ii) except if [the owner or]* the master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result, [provided that in the case of such act or omission of the master it is also proved that he was acting within the scope of his employment];* or

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

Regulation 12

Reception Facilities

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

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

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

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

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* Plenary is requested to consider the wording in square brackets as these matters are of a legal nature.

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

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

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

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

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

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

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

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

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

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

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

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

(5) As regards paragraph (1) of this Regulation, each Contracting Government shall report to the Organization for transmission to the Contracting Governments concerned all cases where the facilities are alleged to be inadequate.

Regulation 13

Segregated Ballast Oil Tankers

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

(2) The capacity of the segregated ballast tanks shall be so determined that the ship may operate safety on ballast voyages without recourse to the use of oil tanks for water ballast except as provided for in paragraph (3) of this Regulation. In all cases, however, the capacity of segregated ballast tanks shall be at least such that in any ballast condition at any part of the voyage, including the conditions consisting of lightweight plus segregated ballast only, the ship's draughts and trim can meet each of the following requirements:

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

$$dm = 2.0 + 0.02\ L,$$

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

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

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

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

Regulation 14

Segregation of Oil and Water Ballast

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

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

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

Regulation 15

Retention of Oil on Board

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

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

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

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

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

(3) (a) An oil discharge monitoring and control system approved by the Administration shall be fitted. In considering the design of the oil content meter to be incorporated in the system, the Administration shall have regard to the specification recommended by the Organization.* The monitor shall be fitted with a recording device to provide a continuous record of the discharge in litres per mile and total quantity discharged, or the oil content and rate of discharge. This record shall be identifiable as to time and date and shall be kept for at least three years. The oil discharge monitor and control system shall come into operation when there is any discharge of effluent into the sea and shall be such as will ensure that any discharge of oily mixture is automatically stopped when the instantaneous rate of discharge of oil exceeds that permitted by Regulation 9(1)(a) of this Annex. Any failure of this monitoring and control system shall stop the discharge and be noted in the Oil Record Book. A manually operated alternative method shall be provided and may be used, but the defective unit shall be made operable before the oil tanker commences its next ballast voyage unless it is proceeding to a repair port. Existing oil tankers shall comply with all of the provisions specified above except that the stopping of the discharge may be performed manually and the rate of discharge may be estimated from the pump characteristic..

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

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

(The above footnote is for inclusion in the Convention)

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

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

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

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

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

(This footnote is the text for inclusion in the Convention)

Regulation 16

Oil Discharge Monitoring System and Oily Water Separating Equipment

(1) Any ship of 400 tons gross tonnage and above shall be fitted with an oily water separating or filtering system complying with the provisions of paragraph (5) of this Regulation. Any such ship which has to carry large quantities of oil fuel shall comply with paragraph (2) of this Regulation or paragraph (1) of Regulation 14.

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

(a) in addition to the requirements of paragraph (1) of this Regulation, with oil discharge monitoring system to comply with paragraph (4) of this Regulation; or

(b) as an alternative to the requirements of paragraph (1) and sub-paragraph (2)(a) of this Regulation, with an oily water separating system complying with paragraph (5) of this Regulation and an effective filtering system, complying with paragraph (6) of this Regulation.

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

(4) An oily discharge monitoring and control system shall be of a design approved by the Administration. In considering the design of the oil content meter to be incorporated into the system, the Administration shall have regard to the specification recommended by the Organization.* The monitor shall be fitted with a recording device to provide a continuous record of the oil content in parts per million. This record shall be identifiable as to time and date and shall be kept for at least three years. The monitor and control system shall come into operation when there is any discharge of effluent into

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

(This footnote is the text for inclusion in the Convention)

the sea and shall be such as will ensure that any discharge of oily mixture is automatically stopped when the instantaneous rate of discharge of oil exceeds that permitted by Regulation 9(1)(b) of this Annex. Any failure of this monitoring and control system shall stop the discharge and be noted in the Oil Record Book. The defective unit shall be made operable before the vessel commences its next voyage unless it is proceeding to a repair port. Existing ships shall comply with all of the provisions specified above except that the stopping of the discharge may be performed manually.

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

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

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

Regulation 17
Tanks for Oil Residues (Sludge)

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

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

* Reference is made to the Recommendation on International Performance Specifications for Oily-water Separating Equipment and Oil Content Meters adopted by the Organization by Resolution A.233(VII).
(This footnote is the text for inclusion in the Convention)

Regulation 18

Pumping, Piping and Discharge Arrangements for Oil Tankers

[to be submitted later]

Regulation 19

Standard Discharge Connection

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

Standard dimensions of flanges for discharge connections

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

Regulation 20

Oil Record Book

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

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

(a) For oil tankers

(i) loading of oil cargo;

(ii) internal transfer of oil cargo during voyage;

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

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

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

(vi) unloading of oil cargo;

(vii) ballasting of cargo tanks;

(viii) cleaning of cargo tanks;

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

(x) discharge of water from slop tanks;

(xi) disposal of residues;

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

(b) For ships other than oil tankers

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

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

(iii) disposal of residues;

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

(3) In the event of such discharge or escape of oil or oily mixture as is referred to in Regulation 12 of this Annex or in the event of accidental or other exceptional discharge of oil not contemplated by that Regulation, a statement shall be made in the Oil Record Book of the circumstances of, and the reasons for, the discharge or escape.

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

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

(6) Pursuant to Article 6(2) of the present Convention, the competent authorities of a Contracting Government may inspect on board any ship to which the present

Convention applies while in any port or off-shore terminal under its jurisdiction the Oil Record Book required to be carried in the ship in compliance with the provisions of this Regulation, and may make a true copy of any entry in that book and may require the Master of the ship to certify that the copy is a true copy of such entry. Any copy so made which has been certified by the Master of the ship as a true copy of an entry in the ship's Oil Record Book shall be made admissible in any judicial proceedings as evidence of the facts stated in the entry. Any action by the competent authorities under this paragraph shall be taken as expeditiously as possible and the ship shall not be unduly delayed.

Regulation 21

Special Requirements for Drilling Rigs and other Platforms

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

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

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

CHAPTER III

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

Regulation 22

Damage Assumptions

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

(a) Side damage

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

(b) Bottom damage

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

(iii) Vertical extent from the base line (v_s): $\frac{B}{15}$ or 6 metres, whichever is less

Regulation 23

Hypothetical Outflow of Oil

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

(a) for side damages:

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

(b) for bottom damages:

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

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

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

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

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

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

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

t_c = transverse extent of side damage as defined in Regulation 22 of this Annex,

v_s = vertical extent of bottom damage as defined in Regulation 22 of this Annex.

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

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

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

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

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

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

Piping serving such wells if installed within the double bottom shall be fitted with valves or other closing arrangements located at the point of connexion to the tank served to prevent oil outflow in the event of damage to the piping. Such piping shall be installed as high from the bottom shell as possible.

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

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

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

The Administration shall supply the Organization with the information concerning the arrangements accepted by it, for circulation to other Contracting Governments.

Regulation 24

Limitation of Size and Arrangement of Cargo Tanks

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

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

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

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

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

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

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

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

(a) where no longitudinal bulkhead is provided:

0.1L

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

0.15L

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

(i) for wing tanks:

0.2L

(ii) for centre tanks:

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

0.2L

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

- where no centreline longitudinal bulkhead is provided:

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

- where a centreline longitudinal bulkhead is provided:

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

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

(6) [to be submitted later]

Regulation 25

Subdivision and Stability

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

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

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

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

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

(3) The volume of any one wing cargo oil tank of an oil tanker shall not exceed seventy-five per cent of the limits of the hypothetical oil outflow referred to in paragraph (2) of this Regulation. The volume of any one centre cargo oil tank shall not exceed 50,000 cubic metres.

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

(a) where no longitudinal bulkhead is provided:

$0.1L$

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

$0.15L$

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

(i) for wing tanks:

$0.2L$

(ii) for centre tanks:

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

$0.2L$

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

- where no centreline longitudinal bulkhead is provided:

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

- where a centreline longitudinal bulkhead is provided:

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

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

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

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

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

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

or

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

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

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

(a) The final waterline taking into account sinkage, heel and trim shall be below the lower edge of any opening through which progressive flooding may take place. Such openings shall include air pipes and those which are closed by means of weathertight doors or hatch covers, and may exclude those openings closed by means of

watertight manhole covers and flush scuttles, small watertight cargo tank hatch covers which maintain the high integrity of the deck, remotely operated watertight sliding doors, and side scuttles of the non-opening type.

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

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

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

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

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

(b) The permeabilities are assumed as follows:

Spaces	Permeability
Appropriated to Stores	0.60
Occupied by Accommodation	0.95
Occupied by Machinery	0.85
Voids	0.95
Intended for consumable liquids	0 or 0.95*
Intended for other liquids	0 to 0.95**

* Whichever results in the more severe requirements.

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

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

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

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

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

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

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