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Technical regulation on the
construction and equipment, etc. of
passenger ships on domestic voyages

CHAPTER XXI

Prevention of pollution by oil

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CHAPTER XXI

Prevention of pollution by oil

Introduction

This chapter contains the provisions of annex I to the International Convention for the Prevention of Pollution from Ships – the 1973 MARPOL Convention – with the amendments and additions contained in the 1978 Protocol to MARPOL 73 (MARPOL 73/78), as amended.

In this set of regulations, provisions that apply only to oil tankers, chemical tankers and combination carriers have been left out. The provisions have been printed in their entirety in Notice B from the Danish Maritime Authority.

The administration of the regulations has been distributed so that the Danish Environmental Protection Agency is responsible for the regulations on discharge and the Danish Maritime Authority is responsible for the regulations on the technical installations on board the ships, including certificates, record books and plans. This distribution of the responsibility is indicated in the overview of the chapters and booklets in connection with each individual regulation by an “M” for the Danish Environmental Protection Agency and an “S” for the Danish Maritime Authority.

In connection with the implementation of the provisions of the MARPOL Convention in Denmark, the Danish Ministry of the Environment has issued some orders that must also be complied with in addition to the technical regulations issued by the Danish Maritime Authority.

Part I General

Regulation 1 Definitions

For the purpose of this chapter:

- 1 “Oil” means petroleum in any form, including crude oil, fuel oil, sludge, oil refuse and refined products (other than petrochemicals which are subject to the provisions of Annex II of the MARPOL Convention) and, without limiting the generality of the foregoing, includes the substances listed in appendix I.
- 2 “Crude oil” means any liquid hydrocarbon mixture occurring naturally in the earth whether or not treated to render it suitable for transportation and includes:
 - .1 crude oil from which certain distillate fractions may have been removed; and
 - .2 crude oil to which certain distillate fractions may have been added.
- 3 “Oily mixture” means a mixture with any oil content.
- 4 “Oil fuel” means any oil used as fuel in connection with the propulsion and auxiliary machinery of the ship in which such oil is carried.
- 5-8 *Not relevant for ships covered by these regulations.*
- 9 “Major conversion”:
 - .1 means a conversion of a ship:

- .1 which substantially alters the dimensions or carrying capacity of the ship; or
 - .2 which changes the type of the ship; or
 - .3 the intent of which in the opinion of the Administration is substantially to prolong its life; or
 - .4 which otherwise so alters the ship that, if it were a new ship, it would become subject to relevant provisions of the present chapter not applicable to it as an existing ship.
- .2 *Not relevant for ships covered by these regulations.*
- 10 “Nearest land”. The term “from the nearest land” means from the baseline from which the territorial sea of the territory in question is established in accordance with international law, except that, for the purposes of the present chapter “from the nearest land” off the north-eastern coast of Australia shall mean from a line drawn from a point on the coast of Australia in:
- latitude 11°00' S, longitude 142°08' E
- to a point in latitude 10°35' S, longitude 141°55' E,
- thence to a point latitude 10°00' S, longitude 142°00' E,
- thence to a point latitude 9°10' S, longitude 143°52' E,
- thence to a point latitude 9°00' S, longitude 144°30' E,
- thence to a point latitude 10°41' S, longitude 145°00' E,
- thence to a point latitude 13°00' S, longitude 145°00' E,
- thence to a point latitude 15°00' S, longitude 146°00' E,
- thence to a point latitude 17°30' S, longitude 147°00' E,
- thence to a point latitude 21°00' S, longitude 152°55' E,
- thence to a point latitude 24°30' S, longitude 154°00' E,
- thence to a point on the coast of Australia
- in latitude 24°42' S, longitude 153°15' E.
- 11 “Special area” means a sea area where for recognized technical reasons in relation to its oceanographical and ecological condition and to the particular character of its traffic the adoption of special mandatory methods for the prevention of sea pollution by oil is required. For the purposes of this chapter, the special areas are defined as follows:
- .1 the Mediterranean Sea area means the Mediterranean Sea proper including the gulfs and seas therein with the boundary between the Mediterranean and the Black Sea constituted by the 41° N parallel and bounded to the west by the Straits of Gibraltar at the meridian of 005°36' W;
 - .2 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;
 - .3 the Black Sea area means the Black Sea proper with the boundary between the Mediterranean Sea and the Black Sea constituted by the parallel 41° N;
 - .4 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°28.5' N, 043°19.6' E) and Husn Murad (12°40.4' N, 043°30.2' E);
- .5 the Gulfs area means the sea area located north-west of the rhumb line between Ras al Hadd (22°30' N, 059°48' E) and Ras al Fasteh (25°04' N, 061° 25' E);
 - .6 the Gulf of Aden area means that part of the Gulf of Aden between the Red Sea and the Arabian Sea bounded to the west by the rhumb line between Ras si Ane (12°28.5' N, 043°19.6' E) and Husn Murad (12°40.4' N, 043°30.2' E) and to the east by the rhumb line between Ras Asir (11°50' N, 051°16.9' E) and the Ras Fartak (15°35' N, 052°13.8' E);
 - .7 the Antarctic area means the sea area south of latitude 60°S; and
 - .8 the North West European waters include the North Sea and its approaches, the Irish Sea and its approaches, the Celtic Sea, the English Channel and its approaches and part of the North East Atlantic immediately to the west of Ireland. The area is bounded by lines joining the following points:
 - 48° 27' N on the French coast
 - 48° 27' N; 006° 25' W
 - 49° 52' N; 007° 44' W
 - 50° 30' N; 012° W
 - 56° 30' N; 012° W
 - 62° N; 003° W
 - 62° N on the Norwegian coast
 - 57° 44.8' N on the Danish and Swedish coasts
 - .9 the Oman area of the Arabian Sea means the sea area enclosed by the following coordinates:
 - 22° 30.00' N; 059° 48.00' E
 - 23° 47.27' N; 060° 35.73' E
 - 22° 40.62' N; 062° 25.29' E
 - 21° 47.40' N; 063° 22.22' E
 - 20° 30.37' N; 062° 52.41' E
 - 19° 45.90' N; 062° 25.97' E
 - 18° 49.92' N; 062° 02.94' E
 - 17° 44.36' N; 061° 05.53' E
 - 16° 43.71' N; 060° 25.62' E
 - 16° 03.90' N; 059° 32.24' E
 - 15° 15.20' N; 058° 58.52' E
 - 14° 36.93' N; 058° 10.23' E
 - 14° 18.93' N; 057° 27.03' E
 - 14° 11.53' N; 056° 53.75' E
 - 13° 53.80' N; 056° 19.24' E
 - 13° 45.86' N; 055° 54.53' E
 - 14° 27.38' N; 054° 51.42' E

14° 40.10' N; 054° 27.35' E
14° 46.21' N; 054° 08.56' E
15° 20.74' N; 053° 38.33' E
15° 48.69' N; 053° 32.07' E
16° 23.02' N; 053° 14.82' E
16° 39.06' N; 053° 06.52' E

.10 the southern South African Sea means the sea area enclosed by the following coordinates (applies from 1 March 2008):

31° 14' S; 017° 50' E
31° 30' S; 017° 12' E
32° 00' S; 017° 06' E
32° 32' S; 016° 52' E
34° 06' S; 017° 24' E
36° 58' S; 020° 54' E
36° 00' S; 022° 30' E
35° 14' S; 022° 54' E
34° 30' S; 026° 00' E
33° 48' S; 027° 25' E
33° 27' S; 027° 12' E

12 “Instantaneous rate of discharge of oil content” means the rate of discharge of oil in litres per hour at any instant divided by the speed of the ship in knots at the same instant.

13 “Tank” means an enclosed space which is formed by the permanent structure of a ship and which is designed for the carriage of liquid in bulk.

14 “Wing tank” means any tank adjacent to the side shell plating.

15 “Centre tank” means any tank inboard of a longitudinal bulkhead.

16-18 *Not relevant for ships covered by these regulations.*

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

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

21 “Amidships” is at the middle of the length (L).

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

- 23 “Deadweight” (DW) means the difference in metric tonnes between the displacement of a ship in water of a relative density of 1.025 at the load waterline corresponding to the assigned summer freeboard and the lightweight of the ship.
- 24 “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.
- 25 “Permeability of a space” means the ratio of the volume within that space which is assumed to be occupied by water to the total volume of that space.
- 26 “Volumes and areas” in a ship shall be calculated in all cases to moulded lines.
- 27 “Anniversary date” means the day and the month of each year, which will correspond to the date of expiry of the International Oil Pollution Prevention Certificate.
- 28.1 “ship delivered on or before 31 December 1979” means a ship:
- .1 for which the building contract is placed on or before 31 December 1975; or
 - .2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on or before 30 June 1976; or
 - .3 the delivery of which is on or before 31 December 1979; or
 - .4 which has undergone a major conversion:
 - .1 for which the contract is placed on or before 31 December 1975; or
 - .2 in the absence of a contract, the construction work of which is begun on or before 30 June 1976; or
 - .3 which is completed on or before 31 December 1979.
- 28.2 “ship delivered after 31 December 1979” means a ship:
- .1 for which the building contract is placed after 31 December 1975; 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 30 June 1976; or
 - .3 the delivery of which is after 31 December 1979; or
 - .4 which has undergone a major conversion:
 - .1 for which the contract is placed after 31 December 1975; or
 - .2 in the absence of a contract, the construction work of which is begun after 30 June 1976; or
 - .3 which is completed after 31 December 1979.
- 28.3-.8 *Not relevant for ships covered by these regulations.*
- 28.9 “ship delivered on or after 1 August 2010” means a ship:
- .1 for which the building contract is placed on or after 1 August 2007; or
 - .2 in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction on 1 February 2008; or

- .3 the delivery of which is on or after 1 August 2010; or
- .4 which has undergone a major conversion:
 - .1 for which the contract is placed on or after 1 August 2007; or
 - .2 in the absence of a contract, the construction work of which is begun on or after 1 February 2008; or
 - .3 which is completed on 1 August 2010.
- 29 “Parts per million (ppm)” means parts of oil per million parts of water by volume.
- 30 “Constructed” means a ship the keel of which is laid or which is at a similar stage of construction.

S Regulation 2 Application

- 1 Unless expressly provided otherwise, the provisions of this chapter shall apply to all ships.
- 2 In ships other than oil tankers fitted with cargo spaces which are constructed and utilized to carry oil in bulk of an aggregate capacity of 200 cubic metres or more, the requirements of regulations 16, 26.4, 29, 30, 31, 32, 34 and 36 of this chapter for oil tankers shall also apply to the construction and operation of those spaces, except that where such aggregate capacity is less than 1,000 cubic metres the requirements of regulation 34.6 of this chapter may apply in lieu of regulations 29, 31 and 32.
- 3-6 *Not relevant for ships covered by these regulations.*

S Regulation 3 Exemptions

- 1 Any ship such as hydrofoil, air-cushion vehicle, near-surface craft and submarine craft etc. whose constructional features are such as to render the application of any of the provisions of parts 3 and 4 of this chapter relating to construction and equipment unreasonable or impracticable may be exempted by the Administration from such provisions, provided that the construction and equipment of that ship provides equivalent protection against pollution by oil, having regard to the service for which it is intended.
- 2 Particulars of any such exemption granted by the Administration shall be indicated in the Certificate referred to in regulation 7.
- 3 The Administration which allows any such exemption shall, as soon as possible, but not more than 90 days thereafter, communicate to the Organization particulars of same and the reasons therefore, which the Organization shall circulate to the Parties to the Convention for their information and appropriate action, if any.
- 4-5 *Not relevant for ships covered by these regulations.*

S Regulation 4 Exceptions

- 1 Regulations 15 and 34 shall not apply to:

- .1 the discharge into the sea of oil or oily mixture necessary for the purpose of securing the safety of a ship or saving life at sea; or
- .2 the discharge into the sea of oil or oily mixture resulting from damage to a ship or its equipment:
 - .1 provided that all reasonable precautions have been taken after the occurrence of the damage or discovery of the discharge for the purpose of preventing or minimizing the discharge; and
 - .2 except if the owner or the master acted either with intent to cause damage, or recklessly and with knowledge that damage would probably result; or
- .3 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.

S Regulation 5 Equivalents

- 1 The Administration may allow any fitting, material, appliance or apparatus to be fitted in a ship as an alternative to that required by this chapter if such fitting, material, appliance or apparatus is at least as effective as that required by this chapter. This authority of the Administration shall not extend to substitution of operational methods to effect the control of discharge of oil as equivalent to those design and construction features which are prescribed by regulations in this chapter.
- 2 The Administration which allows a fitting, material, appliance or apparatus, as an alternative to that required by this chapter shall communicate to the Organization for circulation to the Parties to the Convention particulars thereof, for their information and appropriate action, if any.

Part II Surveys and certification

S Regulation 6 Surveys

- 1 Every oil tanker of 150 gross tonnage and above, and every other ship of 400 gross tonnage and above shall be subject to the surveys specified below:
 - .1 an initial survey before the ship is put in service or before the Certificate required under regulation 7 is issued for the first time, which shall include a complete survey of its structure, equipment, systems, fittings, arrangements and material in so far as the ship is covered by this chapter. This survey shall be such as to ensure that the structure, equipment, systems, fittings, arrangements and material fully comply with the applicable requirements of this chapter;
 - .2 a renewal survey at intervals specified by the Administration, but not exceeding 5 years, except where regulation 10.2.2, 10.5, 10.6 or 10.7 of this chapter is applicable. The renewal survey shall be such as to ensure

- that the structure, equipment, systems, fittings, arrangements and material fully comply with applicable requirements of this chapter;
- .3 an intermediate survey within 3 months before or after the second anniversary date or within 3 months before or after the third anniversary date of the Certificate which shall take the place of one of the annual surveys specified in paragraph 1.4 of this regulation. The intermediate survey shall be such as to ensure that the equipment and associated pump and piping systems, including oil discharge monitoring and control systems, crude oil washing systems, oily-water separating equipment and oil filtering systems, fully comply with the applicable requirements of this chapter and are in good working order. Such intermediate surveys shall be endorsed on the Certificate issued under regulation 7 or 8 of this chapter;
 - .4 an annual survey within 3 months before or after each anniversary date of the Certificate, including a general inspection of the structure, equipment, systems, fittings, arrangements and material referred to in paragraph 1.1 of this regulation to ensure that they have been maintained in accordance with paragraphs 4.1 and 4.2 of this regulation and that they remain satisfactory for the service for which the ship is intended. Such annual surveys shall be endorsed on the Certificate issued under regulation 7 or 8 of this chapter; and
 - .5 an additional survey either general or partial, according to the circumstances, shall be made after a repair resulting from investigations prescribed in paragraph 4.3 of this regulation, 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 requirements of this chapter.
- 2 The Administration shall establish appropriate measures for ships which are not subject to the provisions of paragraph 1 of this regulation in order to ensure that the applicable provisions of this chapter are complied with.
 - 3.1 Surveys of ships as regards the enforcement of the provisions of this chapter shall be carried out by officers of the Administration. The Administration may, however, entrust the surveys either to surveyors nominated for the purpose or to organizations recognized by it. Such organizations shall comply with the guidelines adopted by the Organization by resolution A.739(18), as may be amended by the Organization, and the specifications adopted by the Organization by resolution A.789(19), as may be amended by the Organization, provided that such amendments are adopted, brought into force and take effect in accordance with the provisions of article 16 of the MARPOL Convention concerning the amendment procedures applicable to this chapter.
 - 3.2 An Administration nominating surveyors or recognizing organizations to conduct surveys as set forth in paragraph 3.1 of this regulation shall, as a minimum, empower any nominated surveyor or recognized organization to:
 - .1 require repairs to a ship; and

- .2 carry out 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 the nominated surveyors or recognized organizations, for circulation to Parties to the Convention for the information of their officers.

- 3.3 When a nominated surveyor or recognized organization determines that the condition of the ship or its equipment does not correspond substantially with the particulars of the Certificate or is such that the ship is not fit to proceed to sea without presenting an unreasonable threat of harm to the marine environment, such surveyor or organization shall immediately ensure that corrective action is taken and shall in due course notify the Administration. If such corrective action is not taken the Certificate shall be withdrawn and the Administration shall be notified immediately; and if the ship is in a port of another Party, the appropriate authorities of the port State shall also be notified immediately. When an officer of the Administration, a nominated surveyor or a recognized organization has notified the appropriate authorities of the port State, the Government of the port State concerned shall give such officer, surveyor or organization any necessary assistance to carry out their obligations under this regulation. When applicable, the Government of the port State concerned shall take such steps as will ensure that the ship shall not sail until it can proceed to sea or leave the port for the purpose of proceeding to the nearest appropriate repair yard available without presenting an unreasonable threat of harm to the marine environment.
- 3.4 In every case, the Administration concerned shall fully guarantee the completeness and efficiency of the survey and shall undertake to ensure the necessary arrangements to satisfy this obligation.
- 4.1 The condition of the ship and its equipment shall be maintained to conform with the provisions of this chapter to ensure that the ship in all respects will remain fit to proceed to sea without presenting an unreasonable threat of harm to the marine environment.
- 4.2 After any survey of the ship under paragraph 1 of this regulation has been completed, no change shall be made in the structure, equipment, systems, fittings, arrangements or material covered by the survey, without the sanction of the Administration, except the direct replacement of such equipment and fittings.
- 4.3 Whenever an accident occurs to a ship or a defect is discovered which substantially affects the integrity of the ship or the efficiency or completeness of its equipment covered by this chapter the master or owner of the ship shall report at the earliest opportunity to the Administration, the recognized organization or the nominated surveyor responsible for issuing the relevant Certificate, who shall cause investigations to be initiated to determine whether a survey as required by paragraph 1 of this regulation is necessary. If the ship is in a port of another Party, the master or owner shall also report immediately to the appropriate authorities of the port State and the

nominated surveyor or recognized organization shall ascertain that such report has been made.

S Regulation 7 Issue or endorsement of Certificate

- 1 An International Oil Pollution Prevention Certificate shall be issued, after an initial or renewal survey in accordance with the provisions of regulation 6, to any oil tanker of 150 gross tonnage and above and any other ships of 400 gross tonnage and above which are engaged in voyages to ports or offshore terminals under the jurisdiction of other Parties to the Convention.
- 2 Such Certificate shall be issued or endorsed either by the Administration or by any other persons or organizations duly authorized by it. In every case the Administration assumes full responsibility for the Certificate.

S Regulation 8 Issue or endorsement of a Certificate by another Government

- 1 The Government of a Party to the Convention may, at the request of the Administration, cause a ship to be surveyed and, if satisfied that the provisions of this chapter are complied with, shall issue or authorize the issue of an International Oil Pollution Prevention Certificate to the ship, and where appropriate, endorse or authorize the endorsement of that Certificate on the ship, in accordance with this chapter.
- 2 A copy of the Certificate and a copy of the survey report shall be transmitted as soon as possible to the requesting Administration.
- 3 A Certificate so issued shall contain a statement to the effect that it has been issued at the request of the Administration and it shall have the same force and receive the same recognition as the Certificate issued under regulation 7.
- 4 No International Oil Pollution Prevention Certificate shall be issued to a ship which is entitled to fly the flag of a State which is not a Party.

S Regulation 9 Form of Certificate

The International Oil Pollution Prevention Certificate shall be drawn up in the form corresponding to the model given in appendix II to this chapter¹ and shall be at least in English, French or Spanish. If an official language of the issuing country is also used, this shall prevail in case of a dispute or discrepancy.

S Regulation 10 Duration and validity of Certificate

- 1 An International Oil Pollution Prevention Certificate shall be issued for a period specified by the Administration, which shall not exceed five years.
- 2.1 Notwithstanding the requirements of paragraph 1 of this regulation, when the renewal survey is completed within 3

¹ Reference is made to appendix 1C of Notice B.

- months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding 5 years from the date of expiry of the existing certificate.
- 2.2 When the renewal survey is completed after the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding 5 years from the date of expiry of the existing certificate.
 - 2.3 When the renewal survey is completed more than 3 months before the expiry date of the existing certificate, the new certificate shall be valid from the date of completion of the renewal survey to a date not exceeding 5 years from the date of completion of the renewal survey.
 - 3 If a certificate is issued for a period of less than 5 years, the Administration may extend the validity of the certificate beyond the expiry date to the maximum period specified in paragraph 1 of this regulation, provided that the surveys referred to in regulations 6.1.3 and 6.1.4 of this chapter applicable when a certificate is issued for a period of 5 years are carried out as appropriate.
 - 4 If a renewal survey has been completed and a new certificate cannot be issued or placed on board the ship before the expiry date of the existing certificate, the person or organization authorized by the Administration may endorse the existing certificate and such a certificate shall be accepted as valid for a further period which shall not exceed 5 months from the expiry date.
 - 5 If a ship at the time when a certificate expires is not in a port in which it is to be surveyed, the Administration may extend the period of validity of the certificate but this extension shall be granted only for the purpose of allowing the ship to complete its voyage to the port in which it is to be surveyed, and then only in cases where it appears proper and reasonable to do so. No certificate shall be extended for a period longer than 3 months, and a ship to which an extension is granted shall not, on its arrival in the port in which it is to be surveyed, be entitled by virtue of such extension to leave that port without having a new certificate. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding 5 years from the date of expiry of the existing certificate before the extension was granted.
 - 6 A certificate issued to a ship engaged on short voyages which has not been extended under the foregoing provisions of this regulation may be extended by the Administration for a period of grace of up to one month from the date of expiry stated on it. When the renewal survey is completed, the new certificate shall be valid to a date not exceeding 5 years from the date of expiry of the existing certificate before the extension was granted.
 - 7 In special circumstances, as determined by the Administration, a new certificate need not be dated from the date of expiry of the existing certificate as required by paragraphs 2.2, 5 or 6 of this regulation. In these special circumstances, the new certificate shall be valid to a date not exceeding 5 years from the date of completion of the renewal survey.

- 8 If an annual or intermediate survey is completed before the period specified in regulation 6, then:
- .1 the anniversary date shown on the certificate shall be amended by endorsement to a date which shall not be more than 3 months later than the date on which the survey was completed;
 - .2 the subsequent annual or intermediate survey required by regulation 8 shall be completed at the intervals prescribed by that regulation using the new anniversary date; and
 - .3 the expiry date may remain unchanged provided one or more annual or intermediate surveys, as appropriate, are carried out so that the maximum intervals between the surveys prescribed by regulation 6.1 are not exceeded.
- 9 A certificate issued under regulation 7 or 8 shall cease to be valid in any of the following cases:
- .1 if the relevant surveys are not completed within the periods specified under regulation 6.1;
 - .2 if the certificate is not endorsed in accordance with regulation 6.1.3 or 6.1.4; or
 - .3 upon transfer of the ship to the flag of another State. A new certificate shall only be issued when the Government issuing the new certificate is fully satisfied that the ship is in compliance with the requirements of regulations 6.4.1 and 6.4.2. In the case of a transfer between Parties, if requested within 3 months after the transfer has taken place, the Government of the Party whose flag the ship was formerly entitled to fly shall, as soon as possible, transmit to the Administration copies of the certificate carried by the ship before the transfer and, if available, copies of the relevant survey reports.

S Regulation 11 Port State control on operational requirements²

- 1 A ship when in a port or an offshore terminal of another Party is subject to inspection by officers duly authorized by such Party concerning operational requirements under this chapter, where there are clear grounds for believing that the master or crew are not familiar with essential shipboard procedures relating to the prevention of pollution by oil.
- 2 In the circumstances given in paragraph 1 of this regulation, the Party shall take such steps as will ensure that the ship shall not sail until the situation have been brought to order in accordance with the requirements of this chapter.
- 3 Procedures relating to the port State control prescribed in article 5 of the MARPOL Convention shall apply to this regulation.
- 4 Nothing in this regulation shall be construed to limit the rights and obligations of a Party carrying out control over operational requirements specifically provided for in the MARPOL Convention.

² Refer to the Procedures for port State control, adopted by the Organization by resolution A.787(19) as amended by resolution A.882(21).

Part III Requirements for machinery spaces on all ships

Part A Construction

S Regulation 12 Tanks for oil residues (sludge)

- 1 Every ship of 400 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 oil residues (sludge) which cannot be dealt with otherwise in accordance with the requirements of this chapter, such as those resulting from the purification of fuel and lubricating oils and oil leakages in the machinery spaces.
- 2 Piping to and from sludge tanks shall have no direct connection overboard, other than the standard discharge connection referred to in regulation 13.
- 3 In ships delivered after 31 December 1979, as defined in regulation 1.28.2, tanks for oil residues shall be designed and constructed so as to facilitate their cleaning and the discharge of residues to reception facilities. Ships delivered on or before 31 December 1979, as defined in regulation 1.28.1, shall comply with this requirement as far as is reasonable and practicable.

4 *Minimum capacity of sludge tanks.*

- .1 *On ships that do not carry ballast water in oil fuel tanks, the capacity of sludge tanks shall be calculated in accordance with the following formula:*

$$V_1 = K_1 \times C \times D \text{ (m}^3\text{)}$$

K₁ = 0.01 for ships using heavy oil fuel for propulsion that is centrifuged on board or 0.005 for ships using diesel oil for propulsion or where the heavy oil fuel is not centrifuged on board.

C = Daily oil fuel consumption.

D = Maximum time of operation expressed in days between ports where reception facilities are available if this is known, minimum 30.

- .2 *On ships fitted with equipment on board that has been approved by the Danish Maritime Authority for the removal of oil sludge, the capacity V₁ of the sludge tank may be stipulated as 1 m³ for ships with a gross tonnage of 400 or more and 2 m³ for ships with a gross tonnage of 4,000 and more.*

- .3 *On ships carrying ballast water in oil fuel tanks, the capacity of the oil fuel tank shall be calculated in accordance with the following formula:*

$$V_2 = V_1 + K_2 \times B \text{ (m}^3\text{)}$$

V₁ = Capacity of oil fuel tank as specified in 1 or 2.

K₂ = 0.01 for ships using heavy oil fuel and 0.005 for ships using diesel oil.

B = Capacity of water ballast tanks that may also be used for oil fuel.

S Regulation 12A **Oil fuel tank protection**

- 1 This regulation shall apply to all ships with an aggregate oil fuel capacity of 600 m³ and above which are delivered on or after 1 August 2010, as defined in regulation 1.28.9 of this chapter.
- 2 *Not relevant for ships covered by these regulations.*
- 3 For the purpose of this regulation, the following definitions shall apply:
 - .1 “Oil fuel” means any oil used as fuel oil in connection with the propulsion and auxiliary machinery of the ship in which such oil is carried.
 - .2 “Load line draught (d_s)” is the vertical distance, in metres, from the moulded baseline at mid-length to the waterline corresponding to the summer freeboard draught to be assigned to the ship.
 - .3 “Light ship draught” is the moulded draught amidships corresponding to the lightweight.
 - .4 “Partial load line draught (d_p)” is the light ship draught plus 60% of the difference between the light ship draught and the load line draught (d_s). The partial load line draught (d_p) shall be measured in metres.
 - .5 “Waterline (d_B)” is the vertical distance, in metres, from the moulded baseline at mid-length to the waterline corresponding to 30% of the depth D_s.
 - .6 “Breadth (B_S)” is the greatest moulded breadth of the ship, in metres, at or below the deepest load line draught (d_s).
 - .7 “Breadth (B_B)” is the greatest moulded breadth of the ship, in metres, at or below the waterline (d_B).
 - .8 “Depth (D_S)” is the moulded depth, in metres, measured at mid-length to the upper deck at side. For the purpose of the application, “upper deck” means the highest deck to which the watertight transverse bulkheads except aft peak bulkheads extend.
 - .9 “Length (L)” means 96% of the total length on a waterline at 85% of the least moulded depth measured from the top of the keel, or the length from the foreside of the stem to the axis of the rudder stock on that waterline, if that be greater. In ships designed with a rake of keel the waterline on which this length is measured shall be parallel to the designed waterline. The length (L) shall be measured in metres.
 - .10 “Breadth (B)” means the maximum breadth of the ship, in metres, measured amidships to the moulded line of the frame in a ship with a metal shell and to the outer surface of the hull in a ship with a shell of any other material.
 - .11 “Oil fuel tank” means a tank in which oil fuel is carried, but excludes those tanks which would not contain oil fuel in normal operation, such as overflow tanks.
 - .12 “Small oil fuel tank” is an oil fuel tank with a maximum individual capacity not greater than 30 m³.

- .13 “C” is the ship’s total volume of oil fuel, including that of the small oil fuel tanks, in m³, at 98% tank filling.
- .14 “Oil fuel capacity” means the volume of a tank in m³, at 98% filling.
- 4 The provisions of this regulation shall apply to all oil fuel tanks except small oil fuel tanks, as defined in 3.12, provided that the aggregate capacity of such excluded tanks is not greater than 600 m³.
- 5 Individual oil fuel tanks shall not have a capacity of over 2,500 m³.
- 6 For ships, other than self-elevating drilling units, having an aggregate oil fuel capacity of 600 m³ and above, oil fuel tanks shall be located above the moulded line of the bottom shell plating nowhere less than the distance h as specified below:

$$h = B/20 \text{ m or,}$$

$$h = 2.0 \text{ m, whichever is the lesser.}$$

The minimum value of h = 0.76 m

In the turn of the bilge area and at locations without a clearly defined turn of the bilge, the oil fuel tank boundary line shall run parallel to the line of the midship flat bottom as shown in Figure 1.

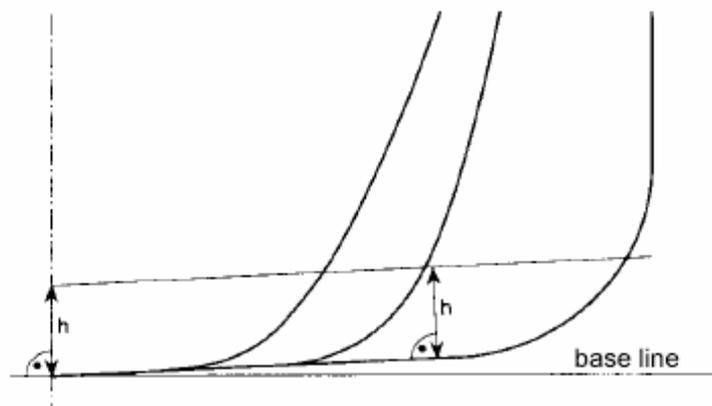


Figure 1 – Oil fuel tank boundary lines for the purpose of paragraph 6

- 7 For ships having an aggregate oil fuel capacity of 600 m³ or more but less than 5,000 m³, oil fuel tanks shall be located inboard of the moulded line of the side shell plating, nowhere less than the distance w which, as shown in Figure 2, is measured at any cross-section at right angles to the side shell, as specified below:

$$w = 0.4 + 2.4 C/20,000 \text{ m}$$

The minimum value of w = 1.0 m, however for individual tanks with an oil fuel capacity of less than 500 m³ the minimum value is 0.76 m.
- 8 For ships having an aggregate oil fuel capacity of 5,000 m³ and over, oil fuel tanks shall be located inboard of the moulded line of the side shell plating, nowhere less than the distance w

which, as shown in Figure 2, is measured at any cross-section at right angles to the side shell, as specified below:

$$w = 0.5 + C/20,000 \text{ m or}$$

$w = 2.0 \text{ m}$, whichever is the lesser.

The minimum value of $w = 1.0 \text{ m}$

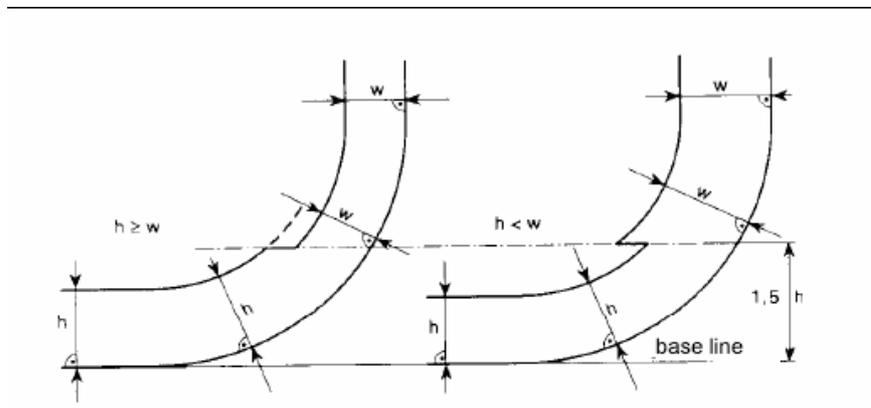


Figure 2 – Oil fuel tank boundary lines for the purpose of paragraphs 7 and 8

- 9 Lines of oil fuel piping located at a distance from the ship's bottom of less than h , as defined in paragraph 6, or from the ship's side less than w , as defined in paragraphs 7 and 9 shall be fitted with valves or similar closing devices within or immediately adjacent to the oil fuel tank. These valves shall be capable of being brought into operation from a readily accessible enclosed space the location of which is accessible from the navigation bridge or propulsion machinery control position without traversing exposed freeboard or superstructure decks.

The valves shall close in case of remote control system failure (fail in a closed position) and shall be kept closed at sea at any time when the tank contains oil fuel except that they may be opened during oil fuel transfer operations.

- 10 Suction wells in oil fuel tanks may protrude into the double bottom below the boundary line defined by the distance h provided that such wells are as small as practicable and the distance between the well bottom and the bottom shell plating is not less than $0.5 h$.

- 11 Alternatively to paragraphs 6 and either 7 or 8, ships shall comply with the accidental oil fuel outflow performance standard specified below:

- .1 The level of protection against oil fuel pollution in the event of collision or grounding shall be assessed on the basis of the mean oil outflow parameter as follows:

$$OM < 0.0157 - 1.14E-6 \cdot C \quad 600 \text{ m}^3 \leq C < 5,000 \text{ m}^3$$

$$OM < 0.010 \quad C \geq 5,000 \text{ m}^3$$

Where OM = mean oil outflow parameter;

C = total oil fuel volume.

- .2 The following general assumption shall apply when calculating the mean oil outflow parameter:

- .1 the ship shall be assumed loaded to the partial load line draught d_p without trim or heel;
- .2 all oil fuel tanks shall be assumed loaded to 98% of their volumetric capacity;
- .3 the nominal density of the oil fuel (ρ_n) shall generally be taken as 1,000 kg/m³. If the density of the oil fuel is specifically restricted to a lesser value, the lesser value may be applied; and
- .4 for the purpose of these outflow calculations, the permeability of each oil fuel tank shall be taken as 0.99, unless proven otherwise.

.3 The following assumptions shall be used when combining the oil outflow parameters:

- .1 The mean oil outflow shall be calculated independently for side damage and for bottom damage and then combined into a non-dimensional oil outflow parameter O_M , as follows:

$$O_M = (0.4 O_{MS} + 0.6 O_{MB}) / C$$

where:

O_{MS} = mean outflow for side damage, in m³

O_{MB} = mean outflow for bottom damage, in m³

C = total oil fuel volume.

- .2 For bottom damage, independent calculations for mean outflow shall be done for 0 m and 2.5 m tide conditions, and then combined as follows:

$$O_{MB} = 0.7 O_{MB(0)} + 0.3 O_{MB(2.5)}$$

where:

$O_{MB(0)}$ = mean outflow for 0 m tide condition, and

$O_{MB(2.5)}$ = mean outflow for minus 2.5 m tide condition, in m³.

- .4 The mean outflow for side damage O_{MS} shall be calculated as follows:

$$O_{MS} = \sum_1^n P_{s(i)} O_{s(i)} [m^3]$$

where:

i = represents each oil fuel tank under consideration;

n = total number of oil fuel tanks;

$P_{s(i)}$ = the probability of penetrating oil fuel tank i from side damage, calculated in accordance with paragraph 11.6 of this regulation;

$O_{s(i)}$ = the outflow, in m³, from side damage to oil fuel tank i, which is assumed equal to the total volume in oil fuel tank i at 98% filling.

- .5 The mean outflow for bottom damage shall be calculated for each tidal condition as follows:

- .1 $O_{MB(0)} = \sum_1^n P_{B(i)} O_{B(i)} C_{DB8i} [m^3]$

where:

i = represents each oil fuel tank under consideration;

n = total number of oil fuel tanks;

$P_{B(i)}$ = the probability of penetrating oil fuel tank (i) from bottom damage, calculated in accordance with paragraph 11.7 of this regulation;

$O_{B(i)}$ = the outflow from oil fuel tank i , in m^3 , calculated in accordance with paragraph 11.5.3 of this regulation; and

$C_{DB(i)}$ = factor to account for oil capture as defined in paragraph 11.5.4.

$$.2 \quad O_{MB(2.5)} = \sum_1^n P_{B(i)} O_{B(i)} C_{DB(i)} [m^3]$$

where:

i , n , $P_{B(i)}$ and $C_{DB(i)}$ = as defined in paragraph 11.5.1 above

$O_{B(i)}$ = the outflow from oil fuel tank i , in m^3 , after tidal change.

.3 The oil outflow $O_{B(i)}$ for each oil fuel tank shall be calculated based on pressure balance principles, in accordance with the following assumptions:

.1 The ship shall be assumed stranded with zero trim and heel, with the stranded draught prior to tidal change equal to the partial load line draught d_p .

.2 The oil fuel level after damage shall be calculated as follows:

$$h_F = \{(d_p + t_c - z_i)(\rho_s)\} / \rho_n$$

where:

h_F = the height of the oil fuel surface above Z_i , in m;

t_c = the tidal change, in m. Reductions in tide shall be expressed as negative values;

Z_i = the height of the lowest point in the oil fuel tank above the baseline, in m;

ρ_s = density of seawater, to be taken as 1,025 kg/m³; and,

ρ_n = nominal density of the oil fuel, as defined in 11.2.3.

.3 The oil outflow $O_{B(i)}$ for any tank bounding the bottom shell plating shall be taken not less than the following formula, but no more than the tank capacity:

$$O_{B(i)} = H_w \cdot A$$

where:

$H_w = 1.0$ m, when $Y_B = 0$

$H_w = B_B/50$ but not greater than 0.4 m, when Y_B is greater than $B_B/5$ or 11.5 m, whichever is less

“ H_w ” is to be measured upwards from the midship flat bottom line. In the turn of the bilge area and at locations without a clearly defined turn of the bilge, H_w is to be measured from a line parallel to the midship flat bottom, as shown for distance “ h ” in Figure 1.

For Y_B values outboard $B_B/5$ or 11.5 m, whichever is less, H_w is to be linearly interpolated.

Y_B = the minimum value of Y_B over the length of the oil fuel tank, where at any given location, Y_B is the transverse distance between the side shell at waterline d_b and the tank at or below waterline d_b .

A = the maximum horizontal projected area of the oil fuel tank up to the level of H_w from the bottom of the tank.

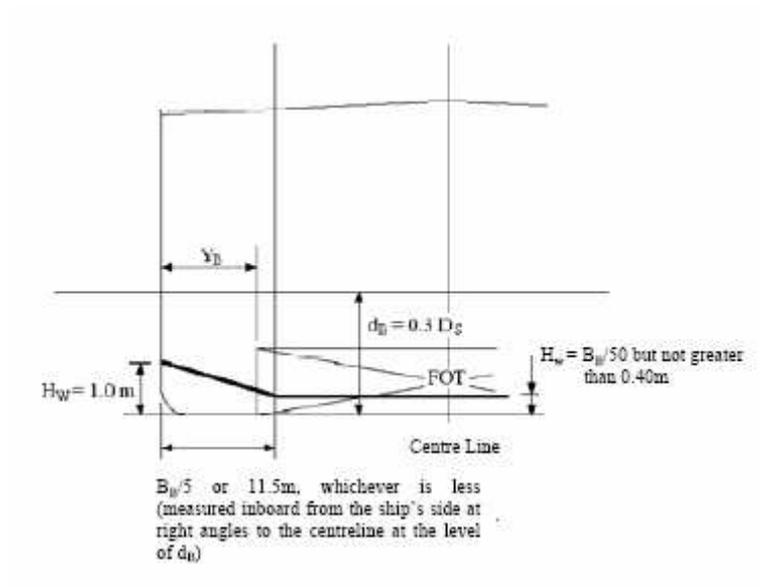


Figure 3 – Dimensions for calculation of the minimum oil outflow for the purpose of subparagraph 11.5.3.3

.4 In the case of bottom damage, a portion from the outflow from an oil fuel tank may be captured by non-oil compartments. This effect is approximated by application of the factor $C_{DB(i)}$ for each tank, which shall be taken as follows:

$C_{DB(i)} = 0.6$ for oil fuel tanks bounded from below by non-oil compartments;

$C_{DB(i)} = 1$ otherwise.

.6 The probability P_s of breaching a compartment from side damage shall be calculated as follows:

.1 $P_s = P_{SL} * P_{SV} * P_{ST}$

where:

$P_{SL} = (1 - P_{Sf} - P_{Sa})$ = probability the damage will extend into the longitudinal zone bounded by X_a and X_f ;

$P_{SV} = (1 - P_{Su} - P_{Si})$ = probability the damage will extend into the vertical zone bounded by Z_l and Z_u ;

$P_{ST} = (1 - P_{Sy})$ = probability the damage will extend transversely beyond the boundary defined by y ;

.2 P_{Sa} , P_{Sf} , P_{Su} and P_{Si} shall be determined by linear interpolation from the table of probabilities for side

damage provided in 11.6.3, and P_{sy} shall be calculated from the formulas provided in 11.6.3, where:

P_{sa} = the probability the damage will lie entirely aft of location X_a/L ;

P_{sf} = the probability the damage will lie entirely forward of location X_f/L ;

P_{sl} = probability the damage will lie entirely below the tank;

P_{su} = probability the damage will lie entirely above the tank; and

P_{sy} = probability the damage will lie entirely outboard the tank.

Compartment boundaries X_a , X_f , Z_l , Z_u and y shall be developed as follows:

X_a = the longitudinal distance from aft terminal of L to the aft most point on the compartment being considered, in m;

X_f = the longitudinal distance from aft terminal of L to the foremost point on the compartment being considered, in m;

Z_l = the vertical distance from the moulded baseline to the lowest point on the compartment being considered, in m.

Z_u = the vertical distance from the moulded baseline to the highest point on the compartment being considered, in m. Where Z_u is greater than D_s , Z_u shall be taken as D_s ; and,

y = the minimum horizontal distance measured at right angles to the centreline between the compartment under consideration and the side shell, in m.³

In way of the turn of the bilge, y need not to be considered below a distance h above baseline, where h is lesser of $B/10$, 3 m or the top of the tank.

³ For symmetrical tank arrangements, damages are considered for one side of the ship only, in which case all "y" dimensions are to be measured from that side. For asymmetrical arrangements reference is made to the Explanatory Notes on matters related to the accidental oil outflow performance, adopted by the Organization by resolution MEPC.122(52).

.3 Table of Probabilities for side damage

X_a/L	P_{Sa}	X_f/L	P_{Sf}	Z_1/D_s	P_{S1}	Z_u/D_s	P_{Su}
0.00	0.000	0.00	0.967	0.00	0.000	0.00	0.968
0.05	0.023	0.05	0.917	0.05	0.000	0.05	0.952
0.10	0.068	0.10	0.867	0.10	0.001	0.10	0.931
0.15	0.117	0.15	0.817	0.15	0.003	0.15	0.905
0.20	0.167	0.20	0.767	0.20	0.007	0.20	0.873
0.25	0.217	0.25	0.717	0.25	0.013	0.25	0.836
0.30	0.267	0.30	0.667	0.30	0.021	0.30	0.789
0.35	0.317	0.35	0.617	0.35	0.034	0.35	0.733
0.40	0.367	0.40	0.567	0.40	0.055	0.40	0.670
0.45	0.417	0.45	0.517	0.45	0.085	0.45	0.599
0.50	0.467	0.50	0.467	0.50	0.123	0.50	0.525
0.55	0.517	0.55	0.417	0.55	0.172	0.55	0.452
0.60	0.567	0.60	0.367	0.60	0.226	0.60	0.383
0.65	0.617	0.65	0.317	0.65	0.285	0.65	0.317
0.70	0.667	0.70	0.267	0.70	0.347	0.70	0.255
0.75	0.717	0.75	0.217	0.75	0.413	0.75	0.197
0.80	0.767	0.80	0.167	0.80	0.482	0.80	0.143
0.85	0.817	0.85	0.117	0.85	0.553	0.85	0.092
0.90	0.867	0.90	0.068	0.90	0.626	0.90	0.046
0.95	0.917	0.95	0.023	0.95	0.700	0.95	0.013
1.00	0.967	1.00	0.000	1.00	0.775	1.00	0.000

P_{Sy} shall be calculated as follows:

$$P_{Sy} = (24.96 - 199.6 y/B_s) (y/B_s) \text{ for } y/B_s \leq 0.05$$

$$P_{Sy} = 0.749 + \{5 - 44.4 (y/B_s - 0.05)\} \{(y/B_s) - 0.05\}$$

for $0.05 < y/B_s < 0.1$

$$P_{Sy} = 0.888 + 0.56 (y/B_s - 0.1) \text{ for } y/B_s \geq 0.1$$

P_{Sy} is not to be taken greater than 1.

.7 The probability P_B of breaching a compartment from bottom damage shall be calculated as follows:

.1 $P_B = P_{BL} * P_{BT} * P_{BV}$

where:

$P_{BL} = (1 - P_{Bf} - P_{Ba}) =$ probability the damage will extend into the longitudinal zone bounded by X_a and X_i ;

$P_{BT} = (1 - P_{Bp} - P_{Bs}) =$ probability the damage will extend into transverse zone bounded by Y_p and Y_s ; and

$P_{BV} = (1 - P_{Bz}) =$ probability the damage will extend vertically above the boundary defined by z ;

.2 P_{Ba} , P_{Bf} , P_{Bp} and P_{Bs} shall be determined by linear interpolation from the table of probabilities for bottom damage provided in 11.7.3, and P_{Bz} shall be calculated from the formulas provided in 11.7.3, where:

P_{Ba} = the probability the damage will lie entirely aft of location X/L ;

P_{Bf} = the probability the damage will lie entirely forward of location X/L ;

P_{Bp} = probability the damage will lie entirely to port of the tank;

P_{Bs} = probability the damage will lie entirely to starboard the tank; and

P_{Bz} = probability the damage will lie entirely below the tank.

Compartment boundaries X_a , X_f , Y_p , Y_s , and z shall be developed as follows:

X_a and X_f as defined in 11.6.2;

Y_p = the transverse distance from the port-most point on the compartment located at or below the waterline d_B , to a vertical plane located $B_B/2$ to starboard of the ship's centreline;

Y_s = the transverse distance from the starboard-most point on the compartment located at or below the waterline d_B , to a vertical plane located $B_B/2$ to starboard of the ship's centreline; and

z = the minimum value of z over the length of the compartment, where, at any given longitudinal location, z is the vertical distance from the lower point of the bottom shell at that longitudinal location to the lower point of the compartment at that longitudinal location.

.3 Table of probabilities for bottom damage

X_a/L	P_{Ba}	X_p/L	P_{Bf}	Y_p/B_B	P_{BP}	Y_s/B_B	P_{Bu}
0,00	0,000	0,00	0,969	0,00	0,844	0,00	0,000
0,05	0,002	0,05	0,953	0,05	0,794	0,05	0,009
0,10	0,008	0,10	0,936	0,10	0,744	0,10	0,032
0,15	0,017	0,15	0,916	0,15	0,694	0,15	0,063
0,20	0,029	0,20	0,894	0,20	0,644	0,20	0,097
0,25	0,042	0,25	0,870	0,25	0,594	0,25	0,133
0,30	0,058	0,30	0,842	0,30	0,544	0,30	0,171
0,35	0,076	0,35	0,810	0,35	0,494	0,35	0,211
0,40	0,096	0,40	0,775	0,40	0,444	0,40	0,253
0,45	0,119	0,45	0,734	0,45	0,394	0,45	0,297
0,50	0,143	0,50	0,687	0,50	0,344	0,50	0,344
0,55	0,171	0,55	0,630	0,55	0,297	0,55	0,394
0,60	0,203	0,60	0,563	0,60	0,253	0,60	0,444
0,65	0,242	0,65	0,489	0,65	0,211	0,65	0,494
0,70	0,289	0,70	0,413	0,70	0,171	0,70	0,544
0,75	0,344	0,75	0,333	0,75	0,133	0,75	0,594
0,80	0,409	0,80	0,252	0,80	0,097	0,80	0,644
0,85	0,482	0,85	0,170	0,85	0,063	0,85	0,694
0,90	0,565	0,90	0,089	0,90	0,032	0,90	0,744
0,95	0,658	0,95	0,026	0,95	0,009	0,95	0,794
1,00	0,761	1,00	0,000	1,00	0,000	1,00	0,844

P_{Bz} shall be calculated as follows:

$$P_{Bz} = (14.5 - 67 z/D_s) (z/D_s) \text{ for } z/D_s \leq 0.1$$

$$P_{Bz} = 0.78 + 1.1 \{(z/D_s - 0.1)\} \text{ for } z/D_s > 0.1$$

P_{Bz} is not to be taken greater than 1.

- .8 For the purpose of maintenance and inspection, any oil fuel tanks that do not border the outer shell plating shall be located no closer to the bottom shell plating than the minimum value of h in paragraph 6 and no closer to the side shell plating than the applicable minimum value of w in paragraph 7 or 8.
- 12 In approving the design and construction of ships to be built in accordance with this regulation, Administrations shall have due regard to the general safety aspects, including the need for maintenance and inspection of wing and double bottom tanks or spaces.

S Regulation 13 Standard discharge connection

To enable pipes of reception facilities to be connected with the ship's discharge pipeline for residues from machinery bilges and from sludge tanks, both lines shall be fitted with a

standard discharge connection in accordance with the following table:

Standard dimensions of flanges for discharge connections

Description	Dimensions
Outside diameter	215 mm
Inside diameter	According to pipe outside diameter
Bolt circle diameter	183 mm
Slots in flange	6 holes 22 mm in diameter equidistantly placed on a bolt circle of the above diameter, slotted to the flange periphery. The slot width to be 22 mm
Flange thickness	20 mm
Bolts and nuts: Quantity, diameter	6, each of 20 mm in diameter and of suitable length
The flange is designed to accept pipes up to a maximum internal diameter of 125 mm and shall be of steel or other equivalent material having a flat face. This flange, together with a gasket of oil-proof material, shall be suitable for a service pressure of 600 kPa.	

Part B Equipment

S Regulation 14 Oil filtering equipment

- 1 Except as specified in paragraph 3 of this regulation any ship of 400 gross tonnage and above but less than 10,000 gross tonnage shall be fitted with oil filtering equipment complying with paragraph 6 of this regulation. Any such ship which may discharge into the sea ballast water retained in fuel oil tanks in accordance with regulation 16.2 shall comply with paragraph 2 of this regulation.
- 2 Except as specified in paragraph 3 of this regulation any ship of 10,000 gross tonnage and above shall be fitted with oil filtering equipment complying with paragraph 7 of this regulation.
- 3 Ships, such as hotel ships, storage vessels, etc., which are stationary except for non-cargo-carrying relocation voyages need not be provided with oil filtering equipment. Such ships shall be provided with a holding tank having a volume adequate, to the satisfaction of the Administration, for the total retention on board of the oily bilge water. All oily bilge water shall be retained on board for subsequent discharge to reception facilities.
- 4 The Administration shall ensure that ships of less than 400 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 15.6.

Ships with a gross tonnage of less than 400 shall be fitted with:

- .1 *a shore connection with a pump and an oil/water separation system as well as alarm equipment making it possible to treat the oily water from the machinery space bilges and to discharge this in accordance with the provisions of regulation 15 or with*
- .2 *a holding tank of at least 1 m³ as well as a pump and shore connection so that the oily water from the machinery space bilges can be stored on board for later discharge to reception facilities ashore or with*
- .3 *other systems that are acceptable to the Danish Maritime Authority as well as a shore connection with a pump.*

Ships with a gross tonnage of less than 400 that use centrifuges or the like to treat oil fuel and lubricating oils shall be fitted with sludge tanks in accordance with regulation 12, paragraphs 1 and 2.

- 5 The Administration may waive the requirements of paragraphs 1 and 2 of this regulation for:
 - .1 any ship engaged exclusively on voyages within special areas, or
 - .2 any ship certified under the International Code of Safety for High-Speed Craft (or otherwise within the scope of this Code with regard to size and design) engaged on a scheduled service with a turn-around time not exceeding 24 hours and covering also non-passenger/cargo-carrying relocation voyages for these ships,
 - .3 with regard to the provision of subparagraphs .1 and .2 above, the following conditions shall be complied with:
 - .1 the ship is fitted with a holding tank having a volume adequate, to the satisfaction of the Administration, for the total retention on board of the oily bilge water;
 - .2 all oily bilge water is retained on board for subsequent discharge to reception facilities;
 - .3 the Administration has determined that adequate reception facilities are available to receive such oily bilge water in a sufficient number of ports or terminals the ship calls at;
 - .4 the International Oil Pollution Prevention Certificate, when required, is endorsed to the effect that the ship is exclusively engaged on the voyages within special areas or has been accepted as a high-speed craft for the purpose of this regulation and the service is identified; and
 - .5 the quantity, time, and port of the discharge are recorded in the Oil Record Book Part I.
- 6 Oil filtering equipment referred to in paragraph 1 of this regulation 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 system has an oil content not exceeding 15 parts per million. In considering the design of such equipment, the Administration shall have regard to the specification recommended by the Organization.⁴

⁴ Refer to the Recommendation on International Performance and Test Specification for Oily-Water Separating Equipment and Oil Content Meters, adopted by the Organization by Assembly resolution A.393(X), or the Guidelines and specifications

- 7 Oil filtering equipment referred to in paragraph 2 of this regulation shall comply with paragraph 6 of this regulation. In addition, it shall be provided with alarm arrangement to indicate when this level cannot be maintained. The system shall also be provided with arrangements to ensure that any discharge of oily mixtures is automatically stopped when the oil content of the effluent exceeds 15 parts per million. In considering the design of such equipment and approvals, the Administration shall have regard to the specification recommended by the Organization.
- 8 *Guidelines on the minimum capacities of oil separators for the treatment of bilge water from machinery spaces:*

<i>Gross tonnage</i>	<i>Minimum capacity (m³)/hour</i>
<i>200-400</i>	<i>0.25</i>
<i>400-1,600</i>	<i>0.5</i>
<i>1,600-4,000</i>	<i>1.0</i>
<i>4,000-15,000</i>	<i>2.5</i>
<i>15,000 and above</i>	<i>5.0</i>

Greater separator capacities may be necessary in ships with large, complex machinery spaces.

The capacity of oil separators that are also used to treat ballast water shall be approved by the Danish Maritime Authority in each individual case.

Part C Control of operational discharge of oil

M Regulation 15 Control of discharge of oil

Attention is drawn to the fact that the following is merely the Danish Maritime Authority's translation of MARPOL. As regards Danish legislation in force, reference is made to Consolidated Act no. 925 of 28 September 2005 on protection of the marine environment, chapter 2.

- 1 Subject to the provisions of regulation 4 and paragraphs 2, 3, and 6 of this regulation, any discharge into the sea of oil or oily mixtures from ships shall be prohibited.

A Discharges outside special areas

- 2 Any discharge into the sea of oil or oily mixtures from ships of 400 gross tonnage and above shall be prohibited except when all the following conditions are satisfied:

- .1 the ship is proceeding en route;
- .2 the oily mixture is processed through an oil filtering equipment meeting the requirements of regulation 14;
- .3 the oil content of the effluent without dilution does not exceed 15 parts per million;
- .4 the oily mixture does not originate from cargo pump room bilges on oil tankers; and

for Pollution Prevention equipment for Machinery space Bilges of Ships, adopted by the Marine Environment Protection Committee by resolution MEPC.60(33), or the revised guidelines and specification for pollution prevention equipment for machinery space bilges of ships, adopted by the Marine Environment Protection Committee by resolution MEPC.107(49).

- .5 the oily mixture, in case of oil tankers, is not mixed with oil cargo residues.

B Discharges in special areas

- 3 Any discharge into the sea of oil or oily mixtures from ships of 400 gross tonnage and above shall be prohibited except when all of the following conditions are satisfied:
 - .1 the ship is proceeding en route;
 - .2 the oily mixture is processed through an oil filtering equipment meeting the requirements of regulation 14.7;
 - .3 the oil content of the effluent without dilution does not exceed 15 parts per million;
 - .4 the oily mixture does not originate from cargo pump room bilges on oil tankers; and
 - .5 the oily mixture, in case of oil tankers, is not mixed with oil cargo residues.
- 4 In respect of the Antarctic area, any discharge into the sea of oil or oily mixtures from any ship shall be prohibited.
- 5 Nothing in this regulation shall prohibit a ship on a voyage only part of which is in a special area from discharging outside a special area in accordance with paragraphs 2 of this regulation.

C Requirements for ships of less than 400 gross tonnage in all areas except the Antarctic area

- 6 In the case of a ship of less than 400 gross tonnage, oil and all oily mixtures shall either be retained on board for subsequent discharge to reception facilities or discharged into the sea in accordance with the following provisions:
 - .1 the ship is proceeding en route;
 - .2 the ship has in operation equipment of a design approved by the Administration that ensures that the oil content of the effluent without dilution does not exceed 15 parts per million;
 - .3 the oily mixture does not originate from cargo pump room bilges on oil tankers; and
 - .4 the oily mixture, in case of oil tankers, is not mixed with oil cargo residues.

D General requirements

- 7 Whenever visible traces of oil are observed on or below the surface of the water in the immediate vicinity of a ship or its wake, Governments of Parties to the Convention should, to the extent they are reasonably able to do so, promptly investigate the facts bearing on the issue of whether there has been a violation of the provisions of this regulation. 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.
- 8 No discharge into the sea shall contain chemicals or other substances in quantities or concentrations which are hazardous to the marine environment or chemicals or other substances

introduced for the purpose of circumventing the conditions of discharge specified in this regulation.

- 9 The oil residues which cannot be discharged into the sea in compliance with this regulation shall be retained on board for subsequent discharge to reception facilities.

S Regulation 16 Segregation of oil and water ballast and carriage of oil in forepeak tanks

- 1 Except as provided in paragraph 2 of this regulation, in ships delivered after 31 December 1979, as defined in regulation 1.28.2, of 4,000 gross tonnage and above other than oil tankers, and in oil tankers delivered after 31 December 1979, as defined in regulation 1.28.2, of 150 gross tonnage and above, no ballast water shall be carried in any oil fuel tank.
- 2 Where the need to carry large quantities of oil fuel render it necessary to carry ballast water which is not a clean ballast in any oil fuel tank, such ballast water shall be discharged to reception facilities or into the sea in compliance with regulation 15 using the equipment specified in regulation 14.2, and an entry shall be made in the Oil Record Book to this effect.
- 3 In a ship of 400 gross tonnage and above, for which the building contract is placed after 1 January 1982 or, in the absence of a building contract, the keel of which is laid or which is at a similar stage of construction after 1 July 1982, oil shall not be carried in a forepeak tank or a tank forward of the collision bulkhead.
- 4 All ships other than those subject to paragraphs 1 and 3 of this regulation shall comply with the provisions of those paragraphs as far as is reasonable and practicable.

Regulation 17 Oil Record Book, Part I - Machinery space operations

- 1 Every oil tanker of 150 gross tonnage and above and every ship of 400 gross tonnage and above other than an oil tanker shall be provided with an Oil Record Book Part I (Machinery Space Operations). The Oil Record Book, whether as a part of the ship's official log-book or otherwise, shall be in the Form specified in appendix III to this chapter.⁵ *The record books shall be kept in accordance with the instruction provided in the record books.*
- 2 The Oil Record Book Part I shall be completed on each occasion, on a tank-to-tank basis if appropriate, whenever any of the following machinery space operations takes place in the ship:
 - .1 ballasting or cleaning of oil fuel tanks;
 - .2 discharge of dirty ballast or cleaning water from oil fuel tanks;
 - .3 collection and disposal of oil residues (sludge and other oil residues);
 - .4 discharge overboard or disposal otherwise of bilge water which has accumulated in machinery spaces; and

⁵ Reference is made to Appendix III of MARPOL, Annex I.

- .5 bunkering of fuel or bulk lubricating oil.
- 3 In the event of such discharge of oil or oily mixture as is referred to in regulation 4 or in the event of accidental or other exceptional discharge of oil not excepted by that regulation, a statement shall be made in the Oil Record Book Part I of the circumstances of, and the reasons for, the discharge.
- 4 Each operation described in paragraph 2 of this regulation shall be fully recorded without delay in the Oil Record Book Part I, so that all entries in the book appropriate to that operation are completed. Each completed operation shall be signed by the officer or officers in charge of the operations concerned and each completed page shall be signed by the master of ship. The entries in the Oil Record Book Part I, for ships holding an International Oil Pollution Prevention Certificate, shall be at least in English, French or Spanish. Where entries in an official national language of the State whose flag the ship is entitled to fly are also used, this shall prevail in case of a dispute or discrepancy.
- 5 Any failure of the oil filtering equipment shall be recorded in the Oil Record Book Part I.
- 6 The Oil Record Book Part I, shall be kept in such a place as to be readily available for inspection at all reasonable times and, except in the case of unmanned ships under tow, shall be kept on board the ship. It shall be preserved for a period of three years after the last entry has been made.
- 7 The competent authority of the Government of a Party to the Convention may inspect the Oil Record Book Part I on board any ship to which this chapter applies while the ship is in its port or offshore terminals and may make a copy of any entry in that book and may require the master of the ship to certify that the copy is a true copy of such entry. Any copy so made which has been certified by the master of the ship as a true copy of an entry in the ship's Oil Record Book Part I shall be made admissible in any judicial proceedings as evidence of the facts stated in the entry. The inspection of an Oil Record Book Part I and the taking of a certified copy by the competent authority under this paragraph shall be performed as expeditiously as possible without causing the ship to be unduly delayed.
- 8 *The Oil Record Book shall be kept in legible writing and pages may not be torn out. Entries that have been made, may not be erased, crossed out or made illegible in any other way. Should it be necessary to make alterations in the record book, they shall be in the form of remarks.*

Part IV requirements for the cargo area of oil tankers

18-36 *Not relevant for ships covered by these regulations.*

Part 5 Prevention of pollution arising from an oil pollution incident

S Regulation 37 Shipboard oil pollution emergency plan

- 1 Every oil tanker of 150 gross tonnage and above and every ship other than an oil tanker of 400 gross tonnage and above

shall carry on board a shipboard oil pollution emergency plan approved by the Administration.

- 2 Such a plan shall be prepared based on guidelines⁶ developed by the Organization and written in the working language of the master and officers.

The plan shall consist at least of:

- .1 the procedure to be followed by the master or other persons having charge of the ship to report an oil pollution incident, as required in article 8 and Protocol I of the Convention, based on the guidelines developed by the Organization;⁷
 - .2 the list of authorities or persons to be contacted in the event of an oil pollution incident;
 - .3 a detailed description of the action to be taken immediately by persons on board to reduce or control the discharge of oil following the incident; and
 - .4 the procedures and point of contact on the ship for co-ordinating shipboard action with national and local authorities in combating the pollution.
- 3 Such a plan may be combined with the shipboard marine pollution emergency plan for noxious liquid substances required under regulation 17 of chapter XXII. In this case, the title of such a plan shall be “Shipboard marine pollution emergency plan”.
- 4 All oil tankers of 5,000 tons deadweight or more shall have prompt access to computerised, shore-based damage stability and residual structural strength calculation programs.

Part VI Reception facilities

M Regulation 38 Reception facilities

A Reception facilities outside special areas

- 1 The Government of each Party to the present Convention undertakes to ensure the provision at oil loading terminals, repair ports, and in other ports in which ships have oily residues to discharge, of facilities for the reception of such residues and oily mixtures as remain from oil tankers and other ships adequate to meet the needs of the ships using them without causing undue delay to ships.⁸
- 2 Reception facilities in accordance with paragraph 1 of this regulation shall be provided in:
- .1-.2 *Not relevant for ships covered by these regulations.*

⁶ Refer to the Guidelines for the development of shipboard oil pollution emergency plans adopted by the Organization by resolution MEPC.54(32) as amended by resolution MEPC.86(44).

⁷ Refer to the General Principles for Ship Reporting Systems and Ship Reporting Requirements, including Guidelines for Reporting Incidents Involving Dangerous Goods, Harmful Substances and/or Marine Pollutants adopted by the Organization by resolution A.851(20).

⁸ Reference is made to resolution MEPC.83(44), “Guidelines for ensuring the adequacy of port waste reception facilities.”

- .3 all ports having ship repair yards or tank cleaning facilities;
 - .4 all ports and terminals which handle ships provided with the sludge tank(s) required by regulation 12;
 - .5 all ports in respect of oily bilge waters and other residues, which cannot be discharged in accordance with regulation 15; and
 - .6 *Not relevant for ships covered by these regulations.*
- 3 The capacity for the reception facilities shall be as follows:
- .1-.2 *Not relevant for ships covered by these regulations.*
 - .3 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.
 - .4 All facilities provided in ports and terminals under paragraph 2.4 of this regulation shall be sufficient to receive all residues retained according to regulation 12 from all ships that may reasonably be expected to call at such ports and terminals.
 - .5 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 15.
 - .6 *Not relevant for ships covered by these regulations.*

B Reception facilities within special areas

- 4 The Government of each Party to the Convention the coastline of which borders on any given special area shall ensure that all oil loading terminals and repair ports within the special area are provided with facilities adequate for the reception and treatment of all the dirty ballast and tank washing water from oil tankers. In addition all ports within the special area shall be provided with adequate reception facilities for other residues and oily mixtures from all ships.⁹ Such facilities shall have adequate capacity to meet the needs of the ships using them without causing undue delay.
- 5 *Not relevant for ships covered by these regulations.*

C General requirements

- 8 Each Party shall notify the Organization for transmission to the Parties concerned of all cases where the facilities provided under this regulation are alleged to be inadequate.

Part 7 Special requirements for fixed or floating platforms

- 39 *Not relevant for ships covered by these regulations.*

⁹ Reference is made to resolution MEPC.83(44), "Guidelines for ensuring the adequacy of port waste reception facilities."