
RULES FOR MARINE POLLUTION PREVENTION SYSTEMS

RULES

2016 AMENDMENT NO.1

Rule No.83 27th December 2016

Resolved by Technical Committee on 27th July 2016

Approved by Board of Directors on 20th September 2016

An asterisk (*) after the title of a requirement indicates that there is also relevant information in the corresponding Guidance.

“Rules for marine pollution prevention systems” has been partly amended as follows:

Part 2 SURVEYS

Chapter 3 REGISTRATION MAINTENANCE SURVEYS

3.1 Annual Surveys

3.1.2 Inspections of Construction and Equipment*

1 The following inspections are to be carried out on the equipment for the prevention of pollution by oil from machinery spaces of all ships:

- (1) Equipment to control discharge of oily bilge from machinery spaces (*Regulation 14 of Annex I*)
 - (a) Visual inspections of the oily-water separating equipment, oil filtering system, processing system and oil content meters
 - (b) Visual inspection of the oil discharge monitoring and control system
 - (c) It is to be ensured of satisfactory operations of the automatic or manual means to stop discharge of effluent fitted to the oil discharge monitoring and control system.
 - (d) It is to be ensured of satisfactory operations of the indicating and recording devices of the oil discharge monitoring and control system or the oil filtering system, and sufficient provisions of consumables for the recording devices on board the ship.
 - (e) Alarm test of the oil filtering system
 - (f) Test of the automatic stopping device of the oil filtering system

Sub-paragraph (g) has been added as follows.

(g) Verification of the calibration certificates of the oil filtering equipment to which Res. MEPC.107(49), as amended, applies (if a 15 ppm alarm is fitted)

3.2 Intermediate Surveys

3.2.2 Inspections of Construction and Equipment*

1 In addition to inspections specified in **3.1.2-1** of the Rules on the equipment for the prevention of pollution by oil from machinery spaces of all ships, inspections are to be carried out on the following items:

Sub-paragraph (4) has been amended as follows.

- (4) ~~Where inspections~~ Examining the oil content meters (15ppm alarm and oil discharge monitoring and control equipment for bilge) on the for obvious defects, or deterioration or

~~damage of oil content meters (15ppm alarm and oil discharge monitoring and control equipment for bilge); and confirmation on corrections of the calibration of the oil content meters (excluding 15 ppm alarms of the oil filtering equipment to which Res. MEPC.107(49), as amended, applies) in the presence of the Surveyor or checking the record of calibration of such meters when done are carried out in accordance with the manufacturer's operational and service instruction manuals, the records of corrections are to be confirmed.~~

Part 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL

Chapter 2 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL FROM MACHINERY SPACES

2.2 Storage and Discharge of Oily Residues (Sludge) (Regulations 12 and 13 of Annex I)

Paragraph 2.2.2 has been amended as follows.

2.2.2 Construction of Oil Residue (Sludge) Tanks and Piping Arrangements*

1 The construction and piping arrangements of sludge tanks required under the requirements of the preceding 2.2.1 are to meet the following requirements (1) to ~~(36)~~:

- (1) Manholes or access holes in a sufficient size are to be provided at such locations that each part of the tank can be cleaned without difficulties.
- (2) Appropriate means to facilitate drawing and discharge of oil residues (sludge) are to be provided.
- (3) Except for the standard discharge connection specified in ~~2.2.3 of the Rules~~, no direct overboard discharge connections are to be provided.
- (4) The piping may be so arranged that oil residue (sludge) may be disposed of directly from the oil residue (sludge) tank(s) to reception facilities through the standard discharge connection specified in 2.2.3, or to any other approved means of disposal of oil residue (sludge), such as an incinerator, auxiliary boiler suitable for burning oil residues (sludge) or other acceptable means.
- (5) The tank(s) are to be provided with a designated pump that is capable of taking suction from the oil residue (sludge) tank(s) for disposal of oil residue (sludge) by means as specified in the preceding (4).
- (6) The tank(s) are to have no discharge connections to the bilge system, oily bilge water holding tank(s), tank top or oily water separators, except as specified in the following (a) and (b). However, ships which were at the beginning stage of construction before 1 January 2017 are to be arranged to comply with this requirement not later than the first special survey carried out on or after that date.
 - (a) The tank(s) may be fitted with drains, with manually operated self-closing valves and arrangements for subsequent visual monitoring of the settled water, that lead to an oily bilge water holding tank or bilge well, or an alternative arrangement, provided such arrangement does not connect directly to the bilge discharge piping system; and
 - (b) The sludge tank discharge piping and bilge-water piping may be connected to a common piping leading to the standard discharge connection specified in 2.2.3; the connection of both systems to the possible common piping leading to the standard discharge connection specified in 2.2.3 is not to allow for the transfer of sludge to the bilge system.

2 For ~~S~~ships which were at beginning stage of construction on or after 31 December 1990 ~~are to meet the following requirements~~, in addition to the preceding -1-

- ~~(1) Except for the following cases, the tank discharge pipeline and bilge pipeline are not to be connected each other.~~
 - ~~(a) A common pipeline with the standard discharge connection specified in 2.2.3.~~

~~(b) Pipeline for discharging the water which has been settled from the tank. However, this is limited to cases in which discharge is done through manually operated automatic closing valve or equivalent closing appliances.~~

~~(2) The pumps specified in the preceding -1(5) are to meeting the following requirements(1) to (3) are to be provided for discharging oil residues from the tank:~~

~~(a)(1) The pumps are not to serve in common with the oily bilge pump.~~

~~(b)(2) The pumps are to be of the type suitable type for discharging oil residues (sludge) ashore.~~

~~(c)(3) The pumping rate is to be the following Q or greater. However, ships whose building contract is placed before 1 July 2010 are to comply with provisions specified elsewhere. Notwithstanding this requirement, in ships not engaged in international voyages, the pumping rate may be $0.5 (m^3/h)$~~

$$Q = V/t (m^3/h)$$

where

V : V_1 or V_2 specified in **2.2.1-1**

t : 8 hours

2.4 Requirements for Installation (Regulation 14 of Annex I)

2.4.2 Modifications

Sub-paragraph -2 has been amended as follows.

2 Notwithstanding the requirements in the preceding **2.4.1**, for ships listed below where all of the oily bilge water is intended to be discharged exclusively to reception facilities, oil filtering system may be substituted with oily bilge water holding tanks.

- (1) Ships exclusively engaged in voyages in special areas or arctic waters (defined in **1.2.1(27)**, **Part I of the Rules for the Survey and Construction of Steel Ships**, hereinafter the same in this Part).
- (2) Ships of less than 400 *gross tonnage* and exclusively engaged in voyage within 12 *nautical miles* from the territorial base line of any one state.
- (3) Ships subject to the **Rules for High Speed Craft** 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.
- (4) Ships, such as hotel ships, storage vessels, etc., which are stationary except for non-cargo-carrying relocation voyages.
- (5) Ships not provided with a propulsion engine, and considered to be appropriate by the Society.

Table 3-4 has been amended as follows.

Table 3-4 Installation Requirements for Oil Filtering System

Trade area and type of ship		Gross tonnage			
		Less than 100	100 and above but less than 400	400 and above but less than 10,000	10,000 and above
Ships exclusively engaged in voyages in special area	Oil tankers				
	Ships other than oil tankers	**	(I)*	(II)*	
Ships other than above	Oil tankers				
	Ships other than oil tankers	**	(I)		(II)

Remarks:

Symbols in the table signify the following equipment;

(I) Oil filtering system specified in **2.3.2-1(1)**

(II) Oil filtering system specified in **2.3.2-1(3)**

* : For ships exclusively engaged in voyages in antarctic area or arctic waters, the system may be replaced by oily bilge water storage arrangements.

** : Ships are, as far as practicable, to be equipped to retain on board oil or oily mixtures.

Chapter 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL CARRIED IN BULK

3.3 Installations and Piping Arrangements

3.3.1 Installations for the Retention of Oil On Board (*Regulations 29, 31 and 32 of Annex I*)*

Sub-paragraph -11 has been amended as follows.

11 ~~For~~To any oil tanker engaged exclusively on voyages in special areas or arctic waters or ~~which~~ engaged exclusively on voyages within 50 *nautical miles* from the territorial base line of a state, the requirements in the preceding **3.3.1-6** to **3.3.1-9** ~~are not be applied~~~~do not apply~~, provided that the Society can afford such relaxation in consideration of the operating plan of the ship.

Chapter 4 TRANSITIONAL REQUIREMENTS

Table 3-13 has been amended as follows.

Table 3-13 Applicability of the Requirements in Chapter 1, Chapter 2, and Chapter 3
to Ships Defined by 4.1.1-1

○: Applied ×: Not applied -: Outside the scope of application

		Ships other than Oil tankers		Oil tankers		
		<i>N</i> ship	<i>E</i> ship	<i>NN</i> ship	<i>EN</i> ship	<i>EE</i> ship
Chapter 1 General	(Omitted)	(Omitted)				
Chapter 2 Equipment for the prevention of pollution by oil from machinery spaces	2.2.1-1	○	○	○	○	○
	(1) and (2) of 2.2.2-1	○	×	○	○	×
	2.2.2 except for (1) and (2) of 2.2.2-1	○	○	○	○	○
	2.2.3	○	○	○	○	○
	2.3.1	○	○	○	○	○
	2.3.2	○	×	○	○	×
	2.3.3	○	×	○	○	×
	2.4.1	○	○	○	○	○
2.4.2	○	○	○	○	○	
Chapter 3 Construction and equipment for the prevention of pollution by oil carried in bulk	(Omitted)	(Omitted)				

Notes:

(Omitted)

Part 9 has been added as follows.

Part 9 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION FROM SHIPS OPERATING IN POLAR WATERS

Chapter 1 GENERAL

1.1 General

1.1.1 Application*

1 In addition to applicable requirements of the Rules, ships operating in polar waters are to comply with the requirements of this Part.

2 For all hydrofoils, air cushion craft, and other new types of ships (ships proceeding near the sea surface, and ships proceeding under the sea surface, etc.) the application of the requirements in **2.2** concerning the construction and equipment to which is structurally not reasonable or impossible, they may not be applied. However, this relaxation is conditional that equivalent arrangements have been made on the construction and equipment for the prevention of pollution of these ships in consideration of the purpose of service.

1.2 Definitions

1.2.1 Terminology

The definitions of terms which appear in this Part are as specified in **(1) to (11) and (25) to (27) of 1.2.1, Part I of the Rules for the Survey and Construction of Steel Ships**, unless specified otherwise.

Chapter 2 PREVENTION OF POLLUTION BY OIL

2.1 Shipboard Oil Pollution Emergency Plan and Others

2.1.1 General (*Polar Code, Part II-A, 1.1.4*)

The documents in the following (1) to (5) are to be those where operation in polar waters is taken into account, as appropriate.

- (1) The Oil Record Books specified in **1.2.2, Part 3**;
- (2) The Procedures and Arrangements Manual for the approved crude oil washing system specified in **1.3.2-1(1)(b), Part 2**;
- (3) The operation manual for the oil discharge monitoring and control system specified in **3.3.1-9, Part 2**;
- (4) The clean ballast tank operations manual specified in **4.3.4-4, Part 3**; and
- (5) The shipboard oil pollution emergency plan specified in **Part 5** or the shipboard marine pollution emergency plan specified in **2.2.3, Part 6**.

2.2 Structural requirements

2.2.1 Fuel Tanks (*Polar Code, Part II-A, 1.2.1*)

For category *A* and *B* ships constructed on or after 1 January 2017 with an aggregate oil fuel capacity of less than 600 m^3 , all oil fuel tanks are to be separated from the outer shell by a distance of not less than 0.76 m . This provision does not apply to small oil fuel tanks with a maximum individual capacity not greater than 30 m^3 .

2.2.2 Cargo Tanks Holding Oil (*Polar Code, Part II-A, 1.2.2*)

For category *A* and *B* ships other than oil tankers constructed on or after 1 January 2017, all cargo tanks constructed and utilized to carry oil are to be separated from the outer shell by a distance of not less than 0.76 m .

2.2.3 Cargo Tank Length (*Polar Code, Part II-A, 1.2.3*)

For category *A* and *B* oil tankers of less than 5,000 tonnes deadweight constructed on or after 1 January 2017, the entire cargo tank length is to be protected with:

- (1) double bottom tanks or spaces complying with the applicable requirements of **3.2.4(2)(a), Part 3**; and
- (2) wing tanks or spaces arranged in accordance with **3.2.4(1)(a)i), Part 3** and complying with the applicable requirements for distance w referred to in **3.2.4(2)(b), Part 3**.

2.2.4 Oil Residue (Sludge) Tanks and Oily Bilge Water Holding Tanks (*Polar Code, Part II-A, 1.2.41*)

For category *A* and *B* ships constructed on or after 1 January 2017 all oil residue (sludge) tanks and oily bilge water holding tanks are to be separated from the outer shell by a distance of not less than 0.76 m . This provision does not apply to small tanks with a maximum individual capacity not greater than 30 m^3 .

Chapter 3 PREVENTION OF POLLUTION BY NOXIOUS LIQUID SUBSTANCES

3.1 Shipboard Marine Pollution Emergency Plan and Others

3.1.1 General (*Polar Code, Part II-A, 2.1.2*)

The documents in the following (1) to (3) are to be those where operation in polar waters is taken into account, as appropriate.

- (1) The Cargo Record Book specified in **2.2.1-6, Part 4**;
- (2) The Manual for procedures and arrangements for discharge of noxious liquid substance specified in **2.2.1-5, Part 4**; and
- (3) The shipboard marine pollution emergency plan for noxious liquid substances specified in **Part 6** or the shipboard marine pollution emergency plan specified in **2.2.3, Part 6**

3.2 Construction and Equipment

3.2.1 Type of Ships (*Polar Code, Part II-A, 2.1.3*)*

For category *A* and *B* ships constructed on or after 1 January 2017, the carriage of products identified in **Table S17.1, Part S of the Rules for the Survey and Construction of Steel Ships**, column 'e', as type III ship or identified as products in **Table S18.1, Part S of the Rules for the Survey and Construction of Steel Ships** in cargo tanks of type III ships is to be subject to the approval of the Administration.

Appendix I GUIDANCE FOR THE DISCHARGE OF NOXIOUS LIQUID SUBSTANCES, ETC.

Section 1.3 has been amended as follows.

1.3 Discharge of Noxious Liquid Substances, etc. in ~~Antarctic Area~~Polar Waters

~~“Antarctic Area” means the sea area south of latitude 60°S.~~ In the ~~Antarctic area~~polar waters specified in **1.2.1(25), Part I of the Rules for the Survey and Construction of Steel Ships** any discharge into the sea of Noxious Liquid Substances or mixtures containing such substances is prohibited.

EFFECTIVE DATE AND APPLICATION

1. The effective date of the amendments is 1 January 2017.

GUIDANCE FOR MARINE POLLUTION PREVENTION SYSTEMS

GUIDANCE

2016 AMENDMENT NO.2

Notice No.84 27th December 2016

Resolved by Technical Committee on 27th July 2016

“Guidance for marine pollution prevention systems” has been partly amended as follows:

Amendment 2-1

Part 1 GENERAL

Chapter 2 TERMINOLOGY AND ABBREVIATIONS

2.1 General

Paragraph 2.1.1 has been amended as follows.

2.1.1 Terminology

1 “Segregated ballast system” specified in **2.1.1(9) in Part 1 of the Rules** means a system completely separated from the cargo pipelines and fuel oil pipelines. Notwithstanding this requirement, however, the segregated ballast water in oil tankers may be discharged in an emergency by connecting the line to the cargo oil pump through a portable spool piece. In this case, a screwed check valve (or combination of a non-screwed check valve and a stop valve) and a stop valve are to be provided at the connection of the segregated ballast tank for preventing the oil from flowing into the segregated ballast tank. The portable spool piece is to be fitted at a conspicuous place of the pump room, where a permanent sign restricting its use is to be fitted at the conspicuous place of the piece (*see Fig. 1.2.1-1*)

2 With respect to the provisions of **2.1.1(15) in Part 1 of the Rules**, the weight of mediums on board for the fixed firefighting systems (e.g. freshwater, CO₂, dry chemical powder, foam concentrate, etc.) is to be included in the lightweight.

Part 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL

Chapter 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL CARRIED IN BULK

3.2 Hull Construction

Paragraph 3.2.2 has been amended as follows.

3.2.2 Subdivision and Stability

(-1 to -6 are omitted.)

7 In applying the requirements of **3.2.2-3(3) in Part 3 of the Rules**, “other openings which can be closed with a weathertight cover” do not include ventilators provided with weathertight closing appliances in accordance with the requirements of **23.6.5-2, Part C of the Rules** or **21.6.5-2, Part CS of the Rules** that for operational reasons have to remain open to supply air to the engine room or emergency generator room (if the same is considered buoyant in the stability calculation or protecting openings leading below) for the effective operation of the ship.

~~78~~ (Omitted)

~~89~~ (Omitted)

910 Notwithstanding the provisions of ~~89~~, the confirmation of a ship complying with the requirements of **3.2.2-6(1) and (2) in Part 3 of the Rules** in every condition as given by the following **(1) to (5)**, may be regarded as a ship complying with the intact stability requirements under the worst possible conditions of cargo and ballast loading during the liquid transfer operations as required in **3.2.2-6 in Part 3 of the Rules**. Sufficient and appropriately varied steps between all limits as given in the following **(1), (3) and (4)** are to be examined to ensure that the worst conditions are identified. For the draughts as specified in **(1)**, a minimum of 20 steps for the range of cargo and ballast content, between 1% and 99% of total capacity, is to be examined. Where deemed necessary by the Society, more closely spaced steps near critical parts of the range may be required.

((1) to (5) are omitted.)

~~101~~ (Omitted)

~~112~~ (Omitted)

~~123~~ (Omitted)

EFFECTIVE DATE AND APPLICATION (Amendment 2-1)

1. The effective date of the amendments is 1 January 2017.
2. Notwithstanding the amendments to the Guidance, the current requirements apply to ships for which the date of contract for construction* is before the effective date.
* “contract for construction” is defined in the latest version of IACS Procedural Requirement (PR) No.29.

IACS PR No.29 (Rev.0, July 2009)

1. The date of “contract for construction” of a vessel is the date on which the contract to build the vessel is signed between the prospective owner and the shipbuilder. This date and the construction numbers (i.e. hull numbers) of all the vessels included in the contract are to be declared to the classification society by the party applying for the assignment of class to a newbuilding.
2. The date of “contract for construction” of a series of vessels, including specified optional vessels for which the option is ultimately exercised, is the date on which the contract to build the series is signed between the prospective owner and the shipbuilder. For the purpose of this Procedural Requirement, vessels built under a single contract for construction are considered a “series of vessels” if they are built to the same approved plans for classification purposes. However, vessels within a series may have design alterations from the original design provided:
 - (1) such alterations do not affect matters related to classification, or
 - (2) If the alterations are subject to classification requirements, these alterations are to comply with the classification requirements in effect on the date on which the alterations are contracted between the prospective owner and the shipbuilder or, in the absence of the alteration contract, comply with the classification requirements in effect on the date on which the alterations are submitted to the Society for approval.The optional vessels will be considered part of the same series of vessels if the option is exercised not later than 1 year after the contract to build the series was signed.
3. If a contract for construction is later amended to include additional vessels or additional options, the date of “contract for construction” for such vessels is the date on which the amendment to the contract, is signed between the prospective owner and the shipbuilder. The amendment to the contract is to be considered as a “new contract” to which **1.** and **2.** above apply.
4. If a contract for construction is amended to change the ship type, the date of “contract for construction” of this modified vessel, or vessels, is the date on which revised contract or new contract is signed between the Owner, or Owners, and the shipbuilder.

Note:

This Procedural Requirement applies from 1 July 2009.

Part 2 SURVEYS

Chapter 1 GENERAL

1.1 General

1.1.3 Intervals of Surveys

Sub-paragraph -5 has been added as follows.

5 Oil Residues (Sludge) Tank Piping

For ships subject to 2.2.2, Part 3 of the Rules which were at the beginning stage of construction before 1 January 2017, a survey is to be carried out to verify compliance with the requirements of 3.2.2-1, Part 3 of the Rules by the first Special Survey carried out on or after 1 January 2017.

Chapter 3 REGISTRATION MAINTENANCE SURVEYS

3.1 Annual Surveys

3.1.2 Inspections of Construction and Equipment

Sub-paragraph -1 has been amended as follows.

1 Surveys of equipment for the prevention of marine pollution by oils from machinery spaces of all ships are to be carried out specifically in accordance with the following requirements **(1)** ~~through to (45)~~:

- (1) Functions of an automatic stopping device of oil discharge monitoring and control equipment are to be confirmed by dummy signals.
- (2) In alarming tests of an oil filtering system, functions of buzzers are to be confirmed by energizing the circuit.
- (3) Functions of the automatic stopping device of an oil filtering system are to be confirmed by 15 ppm dummy signals.
- (4) Functions of homogenizers or approved sludge control equipment are to be confirmed by visual inspection.
- (5) Verification of the calibration certificates of the oil filtering equipment is to be in accordance with the following (a) to (c):
 - (a) The validity of calibration certificate is to be checked.
 - (b) It is to be verified that the accuracy of 15 ppm alarms is checked by calibration and testing of the equipment conducted by a manufacturer or persons authorized by the manufacturer.
 - (c) It is to be verified that the calibration and testing specified in (b) above are done at intervals not exceeding five years or within the term specified in the manufacturer's instructions, whichever is shorter.

Part 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL

Chapter 2 EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL FROM MACHINERY SPACES

2.2 Storage and Discharge of Oil Residues (Sludge)

2.2.2 Construction of Sludge Tanks and Piping Arrangements

Sub-paragraph -1 has been amended as follows.

1 In applying ~~2.2.2-2(1)(6)(b)~~, **Part 3 of the Rules**, ~~interconnection piping between bilge systems and sludge systems connected~~ a screw-down non-return valve is to be provided in lines connecting to common piping leading to standard discharge connections specified in **2.2.3, Part 3 of the Rules** ~~that are fitted with screw-down non-return valves to prevent sludge from discharging into bilge systems may be regarded as the “common piping” specified in 2.2.2-2(1)(a), Part 3 of the Rules.~~

2.3 Oily-water Separating Equipment, Oil Filtering System, Oil Discharge Monitoring and Control System for Oily Bilge Water, and Oily Bilge Water Holding Tanks

2.3.2 Oil Filtering System

1 The wording “a design approved by the Society” in **2.3.2-1(1) in Part 3 of the Rules**, and “an approved type of audible and visible alarm devices” in **2.3.2-1(2) in Part 3 of the Rules** mean to comply with the following standards and to have a copy of type approval certificate issued by the Society, the Administration or a competent organization.

Sub-paragraph (1) has been amended as follows.

- (1) For ships at beginning stage of construction on or after 1 January 2005 and for ships which undergo alteration on or after that date: *IMO Res. MEPC.107(49), as amended*

Chapter 3 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION BY OIL CARRIED IN BULK

3.3 Installations and Piping Arrangements

3.3.1 Installations for the Retention of Oil On Board

Sub-paragraph -5 has been amended as follows.

5 The operation manual for the oil discharge monitoring and control system prescribed in **3.3.1-9 in Part 3 of the Rules** contain all the details necessary to operate and maintain the system and include at least the following information. The information may be grouped as indicated, or in an equivalent manner.

Introduction : Particulars of the ship, together with the date on which the system was/is to be installed and index to remainder of manual. Text of Regulations ~~15(3)(a) and 9(1)~~31 and 34 to be quoted in full.

Section 1: Manufacturer's equipment manuals for major components of the system. These may include installation, commissioning, operating and fault finding procedures for the oil content monitor.

Section 2: Operations manual comprising a description of the ship's cargo ballast systems, designated overboard discharges with sampling points, normal operational procedures, automatic inputs, manual inputs (as applicable), starting interlock and discharge valve control (as applicable), override system, audible and visual alarms, outputs recorded and, where required for manual input, flow rate when discharging by gravity and when pumping ballast overboard. It is also to include instructions for the discharge of oily water following mal-function of the equipment. The above information is supported by copies of relevant approved diagrams. Reference may be made to Section 1, where applicable.

Section 3: Technical manual comprising fault finding schedules, maintenance record and electrical, pneumatic and hydraulic schematic diagrams and descriptions of the complete system. Reference may be made to Section 1, where applicable.

Section 4: Test and check-out procedures to include a functional test at installation and guidance notes for the Surveyors carrying out initial and in-service surveys. Reference may be made to Section 1, where applicable.

Appendix I: Technical installation specification including location and mounting of components, arrangements for maintaining integrity of 'safe' zones, safety requirements for electrical equipment installed in hazardous zones supported by copies of approved drawings, sample piping layout and sample delay calculations, design and arrangements of sampling probes, flushing arrangements and zero setting. Reference may be made to Section 1, where applicable.

Appendix II: Copy of Type Approval Certificate and Workshop Certificates for major components.

Part 9 has been added as follows.

Part 9 CONSTRUCTION AND EQUIPMENT FOR THE PREVENTION FROM SHIPS OPERATING IN POLAR WATERS

Chapter 1 GENERAL

1.1 General

1.1.1 Application (Related to *Polar Code*, Part II-B, 1)

In applying **Chapter 2, Part 9 of the Rules**, the following (1) and (2) are to be applied.

- (1) It is recommended that the requirements of **1.2.5, Part 3 of the Rules** apply to ships when operating in Arctic waters.
- (2) Non-toxic biodegradable lubricants or water-based systems are to be considered in lubricated components located outside the underwater hull with direct seawater interfaces, like shaft seals and slewing seals.

Chapter 3 PREVENTION OF POLLUTION BY NOXIOUS LIQUID SUBSTANCES

3.2 Construction and Equipment

3.2.1 Type of Ships (Related to *Polar Code*, Part II-B, 2)

In applying 3.2.1, Part 9 of the Rules, tanks containing products identified in Table S17.1, Part S of the Rules for the Survey and Construction of Steel Ships, column 'e', as type III ship or products identified in Table S18.1, Part S of the Rules for the Survey and Construction of Steel Ships are to be separated from the outer shell by a distance of not less than 760 mm.

EFFECTIVE DATE AND APPLICATION (Amendment 2-2)

1. The effective date of the amendments is 1 January 2017.