

**PART II RULES FOR THE CONSTRUCTION
AND CLASSIFICATION OF VESSELS
IDENTIFIED BY THEIR MISSIONS**

**TITLE 35 OIL RECOVERY SHIPS (AUXILIARY
SHIPS FOR POLLUTION PREVEN-
TION AND CONTROL)**

SECTION 1 NAVAL ARCHITECTURE

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CHAPTER A APPROACH

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A1. APPLICATION

A2. DEFINITIONS

A1. APPLICATION

100. Cargo types

101. The present Title applies to all vessels intended Ships for the removal of oil floating on the sea surface, as defined in the Regulation 1 of Annex 1 of MARPOL 73/78, handling, storage on board, transportation and subsequent discharge, as defined in Regulation 1 of Annex 1 of the International Convention MARPOL 73/78,.

102. The provisions of Title 35 cover the following aspects:

- a. Protection against fire and explosion during operations involving the removal, storage on board, transportation and discharge of spilled oil on the sea surface;
- b. Structural strength in relation to efforts imposed by the equipment intended for oil removal.

102. Ships in conformity with the regulations of the present Title 35 will be assigned the following Class Notations:

RecOil class 1: ships covered by Title 35 designed and built for the collection of oils with unknown flash point.

RecOil class 2: ships covered by Title 35 designed and built for the collection of oils with flash point greater than 60°C

200. Case of ships where the removal of oil floating on the sea surface is not the main mission

201. Ships in compliance with the requirements of Title 35, but whose primary mission is different, being occasionally used for collecting oil. Will be assigned the “**Rec-Oil Class 1**” or “**Rec-Oil Class 2**” notation as an additional to class notation assigned notation according to the main mission of the vessel.

A2. DEFINITIONS

100. Terms

101. In addition to the definitions given in Part II, Title 11, Section 1, Chapter A, A.2, the following terms are employed in this Title:

102. **Cargo:** within the scope of the present Title 35, the word "cargo" is used to indicate "recovered oil".

114. **Cargo pump rooms:** compartments containing pumps to transfer the recovered oil, communication box, separators or other handling equipment for recovered oil.

103. **Cargo tanks:** tanks intended for storage aboard of the oil recovered from the sea surface;

104. **Control rooms:** compartments containing the major equipment of radio and navigation or where the source of power or firefighting control is located.

105. **Flash point:** the lowest temperature at which a liquid fuel emits vapor in sufficient concentration to form a flammable mixture with air near the liquid surface. The flash points specified in this Title 35 are determined by the closed cup test.

106. **Hazardous area:** area in which an explosive gas atmosphere is or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of electrical apparatus;

a. **Zone 0:** area in which an explosive gas atmosphere is present continuously or is present for long periods;

a.1. Interior of storage tanks of cargo;

a.2. Inside the cargo pumps and piping

b. **Zone 1:** area in which an explosive gas atmosphere is likely to occur in normal operation;

b.1. Compartments enclosed or semi-closed containing cargo pumps, cargo piping or that are not of fully welded construction;

b.2. Zones or compartments on the open deck, or compartments partially closed on the open deck, within a range of 3 meters from the equipment to remove oil, scantlings or any other openings in the cargo tanks and of any pumps, valves, flanges for handling of removed oil which are not in the pump room;

b.3. Any enclosed compartments that have a direct opening to the zones and compartments mentioned above.

c. **Zone 2:** area in which an explosive gas atmosphere is not likely to occur in normal operation and, if it does occur, is likely to do so only infrequently and will exist for a short period only;

c.1. Zones on open decks or semi-enclosed spaces on open decks on all cargo tanks, including ballast wing tanks, plus the areas situated 1.5 meters forward and aft, and 1.5 meters high from the deck.

c.2. Any compartments adjacent to cargo tanks, except in the cases for which:

c.3. The tank is made of welded steel construction;

c.4. The compartment is equipped with forced ventilation capable of providing at least 20 changes per hour, and

c.5. The ventilation system above has characteristics such that this ventilation can be maintained and ensure

d. **Extended hazardous area:** area in which an explosive atmosphere is not likely to occur in normal operation and, if it does occur, is likely to do so only infrequently and will exist for a short period only (and comparable with zone 2 as defined in IEC 60092-502).

d.1. that there is no formation of gas pockets.

107. **Oil:** the term "oil" refers to petroleum or petroleum derivatives having a flash point less than or equal to 60t °. C and specific gravity less than 1.05, except where specifically indicated as having a flash point greater than 60 °.C.

108. **Oil recovery area:**

the oil recovery area is the part of the ship that contains the oil recovery tanks, oil recovery pumps rooms, cofferdams, ballast or void spaces surrounding the integral tanks and hold spaces in which independent tanks are located, and the following deck areas:

a. the deck area above the oil recovery tanks

b. the deck area extending transversely and longitudinally from the oil recovery tanks over a distance of 3 m, when the rule length is greater than 50 m.

109. **Oil recovery pump room:** an oil recovery pump room is a space containing the pumps and their accessories for the handling of recovered oil.

110. **Recovered oil :**is the top layers of polluted water recovered by means of skimmers, rotating disk, floating pumps or equivalent systems together with sweeping arms, booms or similar devices

111. **Safe area:** compartments, spaces or zones free of explosive gases and / or flammable gases in dangerous concentration (ie, spaces that are " gas free ").

112. **Service rooms:** compartments used as kitchen, pantry containing cooking utensils, storerooms, workshops and others who are part of the machinery spaces and similar spaces.

CHAPTER B

DOCUMENTS, REGULATIONS AND STANDARDS

CHAPTER CONTENTS

B1. DOCUMENTS TO RBNA

B2. REGULATIONS

B3. TECHNICAL STANDARDS – See Title 11

B1. DOCUMENTS TO RBNA

100. **Documents for reference**

– See Part II, Title 11, Section 1, Chapter B.

200. **Documents for approval**

201. In addition to the requirements of the Part II, Title 11, Section 1, Section B the following documents are to be submitted do RBNA for approval:

a. General arrangement of the oil recovery equipment;

b. General arrangement of the cargo tanks;

c. Schematic diagram of the oil recovery piping lines and pumping systems;

d. Diagram of the tank vent system;

e. Specifications of the equipment for the measurement of the flash point and gas concentration;

f. Plans of the hazardous zones, including the specification and location of electrical equipment within the cargo zone;

g. Plans and specifications of fixed and portable fire fighting systems;

h. Ventilation systems of the cargo pump room or other compartments of the cargo zone, as well as the ventilation of accommodation and machinery compartments;

- i. Operations Manual concerning to operation of the vessel in the oil recovery area.

202. For ships converted, or not originally intended for collecting oil, RBNA may accept different arrangements, provided they are equivalent to those herein required.

B2. REGULATION

100. National Administration regulations

101. For ships having less than 500 GT under the Brazilian flag, the requirements of NORMAM 01 (Standards of Brazilian Maritime Authority for vessels engaged in navigation at sea) Item 522 and NORMAM 02 (Standards of Brazilian Maritime Authority for vessels employed in inland navigation) item 522, for oil tankers, apply. The RBNA may, by agreement, ensure compliance with other national regulations.

Guidance

Vessels transporting more than 200 cubic metres of flammable oil cargo are considered as "oil tankers" by the NORMAM 01 and 02 regulations and, therefore, item 522 of those regulations apply.

End of guidance

200. Other regulations

201. For ships of less than 500 GT under foreign flags, National Regulations apply or, in the absence of those, the relevant IMO requirements as far as possible.

300. International regulation

301. For ships having GT equal to or larger than 500, IMO regulations apply as relevant.

CHAPTER E CONFIGURATIONS

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E1. ADEQUACY OF THE HULL
See Part II, Title 11, Section 1, Chapter E

E2. BASIC ARRANGEMENT

E2. BASIC ARRANGEMENT

100. Arrangement of the cargo tanks

101. The tanks for storage of recovered oil may be located either forward or aft of the machinery spaces, service compartments, control rooms or accommodation compartments, but are to be located aft of the forward collision bulkhead.

The cargo tanks are to be isolated from these compartments by means of a cofferdam.

102. For the purposes of this Title 35, empty compartments, cargo pump rooms, fuel oil tanks and compartments intended only for ballast may be regarded as cofferdams.

103. The cofferdam referred in item E2.102 above may be omitted, however, between the mentioned compartments and tanks for the collection of wastewater and their subsequent separation (settling tanks).

104. where the installation of cofferdams in tanks destined to the recovered oil adjacent to the Engine Room, on ships where the oil collection is occasional, the cofferdams may be waived provided that the bulkhead between the engine room and the cofferdam or the service compartment is insulated to class A-60 as per the International Convention SOLAS II-2 regulation 3.

Guidance

The above requirement E2.104 does not apply to vessels RecOil Class 2

End of guidance

The tanks are to be tested at times to be determined by RBNA at the time of the assignment of the notation of Class.

105. The oil recovery tanks are typically of the closed type. However, the RBNA may accept open or semi-open tanks by special consideration after analysis and approval.

Where the tanks have exposed tops and in open decks, the hazardous zone extends for 3 meters around the tank, along both sides and forward and aft, and up to a height of 1.50 meters.

106. There are to be no openings in the external bulkheads of the superstructure or deck houses facing the recovery oil area, nor in the bulkheads which do not face the oil recovery area within a radius of 3 meters from the front bulkhead facing the cargo zone, except as follows:

- a. Doors and windows of the Bridge: the doors and windows of the Bridge may be located within the limits above provided that they can be quickly closed and have efficient gas tightness.
- b. Access to accommodations: doors located above the first level of the main deck may be installed within the limits above provided they are located at a minimum distance of 3 meters from the cargo tanks. Doors, including the ones of the first deck level, may also be installed within the limits above if they are provided with an air chamber.
- c. Portholes: portholes may be located within the spaces above provided that they are fixed (cannot be opened). Where such portholes are so installed on the first level of the main deck they are to be fitted with combat covers of steel or other equivalent material.

107. When it is not possible to comply with the requirements above due to the size of the vessel, the openings in the side bulkheads may be permitted within the above limits if they are located as far as possible and practicable from the cargo tanks and outside the limits of all hazardous zones described in section A2.106.

200. Cargo pump rooms

201. The bulkheads of the cargo pump rooms are to be gas-tight to isolate such compartments from others containing stoves, boilers, internal combustion engines, propulsion machinery, electrical equipment or other compartments where there are ignition sources.

300. Engine Room and machinery compartments

301. The direct access between Engine Room and hazardous zones (different from cofferdams and tanks) are to be done through gas-tight doors with automatic self-closing devices. The Engine Room shall be fitted with a mechanical ventilation system to keep the machinery compartment at a pressure greater than that at the hazardous zone.

400. Accommodations

401. Direct access between the accommodations and the hazardous zones shall not be permitted.

402. Indirect access with gas-tight doors and mechanical ventilation to maintain overpressure in relation to the hazardous zone are, however, acceptable.

CHAPTER H LOADING CONDITIONS, BUOYANCY AND STABILITY

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- H1. FREEBOARD
- See Part II, Title 11, Section 1, Chapter H
- H2. LIGHTSHIP WEIGHT
- See Part II, Title 11, Section 1, Chapter H
- H3. LOADING CONDITIONS
- H4. BUOYANCY, HULL SUBDIVISION
- See Part II, Title 11, Section 1, Chapter H
- H5. STABILITY
- H6. DAMAGE STABILITY
- See Part II, Title 32, Section 1, H6
- H7. OPERATIONS MANUAL

H3. LOADING CONDITIONS

100. Additional loading conditions for ships covered by the present Title 35

101. In addition to the provisions of Part II, Title 11, Section 1, Chapter H, H3, oil recovery vessels are to consider the following loading conditions:

- a. Ship in the fully loaded departure condition to the oil recovery area, with the oil recovery equipment installed on board
- b. Ship in the fully loaded departure condition to the oil recovery area, with the oil recovery equipment installed on board, in the worst operating conditions, e.g., the most severe free surface effects, the recovery equipment arms extended and swiping.

H5. STABILITY

100. Intact Stability

101. The ship is to have adequate intact stability in all relevant operating conditions.

102. The intact stability and damage stability are to be in conformity with Part II, Title 32, Section 1, Chapter H, Sub-chapters H5 and H6 of the Rules.

H7. OPERATIONS MANUAL

100. Operations Manual

101. In addition of the Trim and Stability Manual, the ship shall be provided with an Operations Manual in accordance with the requirements of this Chapter H7.

102. The vessel is to operate at a safe distance from the source of the oil leak so as to minimize the risk of fire or explosion. Sampling of the oil at regular intervals to determine the flash point and measuring the concentration of flammable gases in the atmosphere around the ship may be considered appropriate to meet the above requirement

103. The Operations Manual is to provide information about the safe operation of the ship as follows:

- a. Operational limits;
- b. Procedures for flash point analysis of the recovered samples and the concentration of flammable gases in the atmosphere;
- c. How to establish and maintain a safe atmosphere in any compartment or hazardous zone, which may become dangerous during operation of collection, transportation and disposal of the recovered oil;
- d. How to isolate, if necessary, the electrical equipment in areas considered dangerous during the ship's operations;
- e. How to proceed in case of failure of the devices that keep the atmosphere safe in the various compartments;
- f. Detailed instructions about the type of equipment and procedures for fire-fighting;
- g. How to properly use the equipment for measuring gas;
- h. Procedures for recovery, storage and transfer of oil;
- i. How to properly execute the operations of ballasting and de-ballasting the vessel;
- j. Instructions for tank cleaning, degassing and gas measurement, providing details of the most critical points of pockets of gas, as under horizontal structures, horizontal brackets, etc.; and
- k. Provide information on how and who to contact: organizations, people, etc., in cases of emergency.

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