

# TÜRK LOYDU



## Chapter 12 – Oil Recovery Vessels July 2024

This latest edition incorporates all rule changes. The latest revisions are shown with a vertical line. The section title is framed if the section is revised completely. Changes after the publication of the rule are written in red colour.

Unless otherwise specified, these Rules apply to ships for which the date of contract for construction as defined in TL- PR 29 is on or after 1<sup>st</sup> of July 2024. New rules or amendments entering into force after the date of contract for construction are to be applied if required by those rules. See Rule Change Notices on TL website for details.

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## Oil Recovery Vessels

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## SECTION 1

### GENERAL, CHARACTER OF CLASSIFICATION, DOCUMENTS FOR APPROVAL, SURVEYS

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| A. Scope .....                       | 1-1 |
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#### A. Scope

1. These Rules apply to seagoing and inland waterway steel vessels with and without their own means of propulsion which are intended for service in the event of accidental oil spills.

They may be engaged in connection with oil spills (e.g. for the recovery of oil floating on the water) or generally for combating oil pollution.

For special duties, e.g. lightening damaged oil tankers with cargo spillage and for ships of specialized types, measures beyond the scope of these Regulations may be necessary.

For vessels intended for restricted services, materials other than steel may be used for construction.

2. These Rules apply where oil with a flashpoint of 60°C (closed cup test) or less and a Reid vapour pressure below atmospheric pressure is intended to be handled. For oils with flashpoints above 60°C, see B.4.

3. These Rules may also analogously be applied to oil recovery equipment which does not fall within the scope of ship classification.

4. In addition to these Rules, the current TL Rules, Part A (Chapter 1 – Hull, Chapter 2 – Material, Chapter 3 Welding) and Part B (Chapter 4 – Machinery, Chapter 4-1 – Automation, Chapter 5 Electrical Installation) are also applicable.

#### Guidance:

*It is assumed that the provisions of Annex I to the*

*"International Convention for the Prevention of Pollution from Ships; 1973" including the 1978 Protocol (MARPOL 73/78), as amended are complied with, where this is required by the authorities.*

*On request, a certificate may be issued confirming the compliance of the ship with the provisions of MARPOL 73/78, as amended.*

#### B. Character of Classification

1. Ships which comply with these Rules and which are equipped with means for recovering oil floating on the water as well as with tanks for storing the recovered oil will have the notation "**OIL RECOVERY VESSEL**" appended to the character of classification.

2. Ships complying with 1., however, without tanks for carrying the recovered oil will be assigned the notation "Without cargo tanks" to the character of classification.

3. Ships equipped neither with means for recovering oil floating on the water nor with tanks for storing recovered oil which, however, otherwise comply with these Rules and are suitable for operation in oil-covered waters will be assigned, in addition to the appropriate class notation, e.g. "Tug", "Supply Vessel" etc., the notation "Suitable for use in oil-covered waters".

4. Ships intended for oil with a flashpoint above 60°C (closed cup test) only will be assigned in addition to the character of classification, the notations "Oil Recovery Vessel" and "Not suitable for products with a flashpoint of 60°C and less.

In this case, **TL** Rules, Part A and B relating to tankers for the carriage of liquids with flashpoints above 60°C are applicable instead of requirements in this chapter.

### **C. Definitions**

The definitions provided in following sections will be applied in addition to those stipulated in the **TL** Rules, Chapter 1 - Hull, Section 28, B.

### **D. Documents for Approval**

1. Apart from the documents listed in the **TL** Rules, Chapter 1 - Hull, Section 1, G. the following documents are to be submitted in triplicate or electronic format:

- General arrangement plan showing the arrangement of equipment for oil recovery operations.
- Details of entrances (including air locks) and openings in use in normal operation or not fitted with gastight closures when the ship is engaged in oil recovery operations
- Details of entrances and openings gastight closed when the ship is engaged in oil recovery operations
- Details of arrangement and capacity of cargo tanks and of media to be carried.
- Drawings of cargo tanks and details of materials used.
- Details of cargo tank foundations and fastenings where tanks independent of the hull are fitted.

2. Apart from the documents listed in **TL** Rules, Chapter 4 - Machinery Section 20, A.3. the following documents are to be submitted in triplicate or electronic format:

- Operations and equipment manual for oil recovery operations.
- Schematic drawings of pipeline systems connected to the ship during oil recovery operations, including pumps.
- Drawings showing the disposition and arrangement of the oil recovery equipment connected to the ship during oil recovery operations or carried loose including all technical details and material specifications.
- Ventilation layout showing the spaces with overpressure ventilation and the arrangement of air locks.
- Plan of closing appliances for oil recovery operations (where necessary).

3. The documents listed in the **TL** Rules, Chapter 5 – Electrical Installation Section 1, C are to be submitted in triplicate or electronic format.

### **E. Surveys**

The relevant requirements are given the **TL** Rules, Classification and Surveys, Section 3, K.3

## SECTION 2

### SHIP ARRANGEMENTS

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#### A. Cargo Area

1. The segregation of tanks for recovered oil from all spaces outside the cargo area is governed by the TL Rules, Chapter 1 - Hull, Section 28,C.

2. The provisions of 1. also apply to tanks intended only for the interim storage of recovered oil or for use only as settling tanks.

#### B. Entrances and Openings

1. Entrances, ventilation openings (inlets and outlets) and other openings to non-hazardous locations such as accommodation, service and machinery spaces, control stations and the wheelhouse, which are in normal use or not provided with gastight closures during oil recovery operations, are to be located outside hazardous zones (see Section 4, B.3).

2. Entrances from hazardous zones to the non-hazardous locations referred to in 1. are to be arranged in such a way, e.g. by means of air locks according to C. that hazardous vapours can not penetrate.

Openings in those areas must be closed during oil recovery operations. (For overpressure ventilation see Section 3, B.3.)

3. Spaces are to be regarded as hazardous if entrances and openings are located in hazardous locations and do not comply with the provisions stipulated in 2.

#### C. Air Locks

1. An air lock is to consist of two steel doors substantially gastight which should be spaced not less than 1,5 m. apart. The doors are to be self-closing and without any holding back arrangements. The door sill is not to be less than 300 mm. in height. Any additional requirements of the competent authority are to be complied with.

2. The design of air locks shall be such that they are flushed with air from inside outwards in order to remove any vapours/gases which may have entered when using the air lock.

## SECTION 3

## MACHINERY INSTALLATIONS

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**A. General**

The exhaust lines of diesel engines, boilers and equipment containing sources of ignition and the vents of diesel engine crankcases are to be led to a position outside the hazardous zones as per Section 2, B.1.

For spark arresters, see the TL Rules Chapter 4 - Machinery Section 20, B.9.

**B. Mechanical Ventilation**

1. The design, type and construction of mechanical ventilation systems are subject to the TL Rules, Chapter 4 - Machinery Section 20, B.5.

2. Spaces with entrances and openings into hazardous zones in Zone 2 which are normally used during oil recovery operations must be mechanically ventilated from outside the hazardous zones as per Section 2, B.1. Provision is to be made for at least 8 changes of air per hour.

If the equipment in these spaces is not provided with Zone 2 type protection, ventilation in accordance with 3 is to be installed.

3. Spaces with entrances and openings into hazardous zones in Zone 1 which are normally used during oil recovery operations must be mechanically ventilated from outside the hazardous zones as per Section 2, B.1. and must be kept at overpressure.

The overpressure in these spaces should be approximately 0,5 - 1 mbar and is to be monitored.

4. Spaces in Zones 0 and 1 which are not normally used during oil recovery operations are not to be ventilated from hazardous Zones 0 and 1 even if their equipment is provided with the corresponding explosion protection. Spaces which must be accessible at all times for safety reasons, such as the steering gear compartment, are to be equipped with a ventilation system of the extraction type ensuring at least 8 changes of air per hour.

**C. Gas Detection and Alarm Systems**

1. For the purposes of explosion protection, ships are to be equipped with permanently installed gas detection systems which actuate an audible and a visual alarm when a concentration equal to 30 % **(1)** of the lower explosion limit (LEL) is exceeded.

Detection points are to be sited as follows:

Close to the ventilation inlets in accordance with B.2.

- In air locks
  - On the main deck
- } (to be situated at a low level)

Further detection points may be made necessary by special structural features and conditions of service.

**(1)** *If no other data are available, propane may be used as reference.*

2. The equipment is to be type-tested by **TL**.
3. A portable instrument for detecting explosive atmospheres must also be provided. Any additional regulations issued by the competent authority are to be complied with.

#### **D. Fire Extinguishing Equipment**

1. In addition to the general fire extinction and protection equipment stipulated in the **TL** Rules, Chapter 4 - Machinery Section 18, vessels with the class notation "**OIL RECOVERY VESSEL**" must also be equipped with a foam extinguishing system. The design and construction of this equipment is to comply with the **TL** Rules, Chapter 4 - Machinery Section 18, K.
2. In the case of ships with class notation "**OIL RECOVERY VESSEL**" "Without cargo tanks" in accordance with Section 1, B.2., a foam extinguishing system may be required if, during oil recovery operations, equipment for

the storage of oil or parts thereof (pumps, pipelines, hoses etc.) are located on board.

#### **E. Equipment and Systems in Hazardous Zones**

1. Oil recovery equipment is to comply with the Rules referred to in Section 1, A.4, wherever applicable. Such equipment must be suitable for the intended application and must be electrically bonded to the ship's hull.
2. Hoses must have adequate electrical conductivity.
3. By selecting suitable materials and by appropriate protective measures, steps are to be taken to ensure that no sparks capable of causing ignition can be produced by the use of oil recovery equipment.
4. Surface temperatures of appliances and equipment are not to exceed 200°C.



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| <b>SECTION 4</b> |
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**ELECTRICAL INSTALLATIONS**

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**A. Power Supply Systems**

1. Systems complying with the **TL** Rules, Chapter 5 – Electrical Installation Section 1, G are permitted on ships without cargo tanks according to Section 1, B.2. and on ships according to Section, 1, B.3 and B.4.

2. Only systems conforming to **TL** Rules, Chapter 5 - Electric Section 15, A.4, are permitted on ships with class notation "**OIL RECOVERY VESSEL**" according to Section 1, B.1.

**B. Electrical Equipment in Hazardous Zones**

1. Hazardous zones are zones in which combustible or explosive gases or vapours are liable to accumulate in dangerous concentration.

Hazardous zones are divided into Zones 0,1 and 2 according to the likelihood of a dangerous explosive atmosphere occurring there. See also IEC 60092-502.

2. Equipment in hazardous zones which is of non-certified safe type must be capable of being disconnected in service by cutting off the main power supply at a central point. These switches must be safeguarded against unintentional re-connection and must be appropriately marked to that effect.

3. The use of electrical appliances in hazardous zones is to be restricted to operationally essential equipment.

For effect of ventilation on hazardous zones, see IEC 60092-502 Table 1 and Annexes.

**3.1 Zone 0**

- The interiors of cargo tanks, slop tanks, any pipework of pressure-relief or other venting systems for cargo and slop tanks, pipes and equipment containing the cargo or developing flammable gases or vapours.

**3.1.1 The followings are permitted in Zone 0:**

- Intrinsically safe (EEx ia) or for Zone 0 approved intrinsically safe equipment/ circuits
- Other explosion-proof appliances with special approval of the Society and embodying a combination of two types of protection e.g. EEx d + EEx e, provided that their use in this area is indispensable.

**3.2 Zone 1**

- Cofferdams and permanent (for example, segregated) ballast tanks adjacent to oil recovery tanks.
- Cargo pump rooms.
- Enclosed or semi-enclosed spaces containing recovered oil pipe flanges and valves
- Stowage spaces for cargo hoses and oil recovery equipment (oil skimmers).
- Spaces on the open deck including semi-enclosed spaces within a spherical radius of 3 m. of any recovered tank openings (e.g. cargo tank hatches, inspection holes, ventilation openings, access openings).
- Areas on open deck, or semi-enclosed spaces on open deck, within 1,5 m of cargo pump room entrances, cargo pump room ventilation inlet, openings into cofferdams or other zone 1 spaces.
- Areas on open deck within spillage coamings surrounding cargo manifold valves and 3 m beyond these up to a height of 2,4 m above the deck.

- Spaces without over pressure ventilation which can be entered directly (without air lock) from Zone 1 or which have openings to Zone 1.
- Areas on open deck, or semi-enclosed spaces on open deck above and in the vicinity of any cargo gas outlet intended for the passage of large volumes of gas or vapour mixture during cargo loading and ballasting or during discharging, within a vertical cylinder of unlimited height and 6 m radius centred upon the centre of the outlet, and within a hemisphere of 6 m radius below the outlet.

### 3.2.1 The following are permitted in Zone 1:.

- Flameproof enclosure EExd
- Pressurized enclosure EEx p
- Increased safety EExe
- Powder filling EExq
- Encapsulation EEx m
- Intrinsic safety EExi

### 3.3 Zone 2

- Cofferdams and spaces adjacent to tanks intended for storage of recovered oil, not containing pipe flanges or valves
- Spaces without overpressure ventilation which can be entered directly (without air lock) from Zone 2 or which have openings to Zone 2.
- Open deck over tanks intended for storage of recovered oil and 3 m forward and aft of this area, to the full width of the ship, on the open deck up to a height of 2.4 m above the deck. (With restricted ventilation on open deck it is evaluated as Zone 1)

- Areas of 1,5 m surrounding open or semi-enclosed spaces of zone 1

### 3.3.1 The following are permitted Zone 2:

- Explosion-proof equipment permitted in Zones 0 and 1.
- Equipment with EEx n type ignition protection.
- Equipment which cannot rise to temperatures above 200 °C and in which no sources of ignition occur when in service.
- Equipment with a housing conforming to minimum protection class IP55, the surface temperature of which does not exceed 200°C.

### 4. Non-hazardous zones

Non-hazardous zones are zones not included in Zones 0,1 and 2.

### 5. Temperature class/Apparatus group

Explosion-proof electrical equipment must meet at least the following requirements:

- Temperature class T3
- Apparatus group IIA.

## SECTION 5

### OPERATIONAL REQUIREMENTS

|  |     |
|--|-----|
| A. Operations and Equipment Manual ..... | 5-1 |
| B. Personnel Protection .....            | 5-1 |

#### A. Operations and Equipment Manual

An operations and equipment manual is to be submitted to **TL** for approval.

The manual is to contain a description of the safety precautions needed when preparing for and carrying out oil recovery operations. These include:

- Measures for effecting the closures necessary for explosion protection (see Section 2, B.2.) and for the protection of the personnel.
- A plan of the spaces with overpressure ventilation showing the arrangement of air locks.
- Measures for starting up the overpressure ventilation and gas detection systems.
- Disconnection according to Section 4, B.2 of all non-certified safe type electrical equipment in the hazardous zones.
- A list of appliances and equipment provided for oil recovery operations with instructions on their installation and operation.

- Plans showing the arrangement and disposition of the appliances and equipment used in oil recovery operations.
- A list of all electrical equipment to be disconnected when carrying out oil recovery operations.
- A checklist of the steps to be taken in preparation for oil recovery operations

#### B. Personnel Protection (1)

Zones in which vapours liable to injure health occur should be entered only with full protective clothing and wearing a self-contained breathing apparatus.

Protective clothing and approved self-contained breathing apparatus are to be provided.

The serviceability of breathing apparatus and gas detectors is to be checked by regular inspection.

Provisions should be made for the rescue of the personnel.

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(1) *Not part of the classification. The requirements of the competent authorities are to be observed.*