Regulations of 27 January 2016 No. 67 on ballast systems on mobile offshore units (Ballast Regulations)

Legal basis: Laid down by the Norwegian Maritime Authority on 27 January 2016 under the Act of 16 February 2007 No. 9 relating to ship safety and security (Ship Safety and Security Act) sections 2, 7, 9 and 12, cf. Formal Delegation of 16 February 2007 No. 171 and Formal Delegation of 31 May 2007 No. 590.
EEA references: EEA Agreement Annex II Chapter XIX point 1 (Directive 98/34/EC as amended by Directive 98/48/EC).
Amendments: Amended by Regulations of 5 July 2016 No. 897, 19 December 2017 No. 2322, 14 February 2024 No. 280.

Section 1

Scope of application

These Regulations apply to ballast systems on Norwegian mobile offshore units.

Section 2

Location of pipe and control systems

Pipe and control systems which are connected to the ballast system shall be placed outside the extent of damage specified in sections 25 to 27 of the Regulations of 20 December 1991 No. 878 on stability, watertight subdivision and watertight/weathertight closing means on mobile offshore units (Stability Regulations).

Section 3

Redundancy and safeguarding of the ballast system

(1) The ballast system shall have at least two dedicated, independent pumps. The pumps shall be arranged so that ballasting can be carried out in the event of failure of any one pump. Other pumps than dedicated ballast pumps may be used for ballasting if they are readily available for such use at all times.

(2) In the event of loss of the main source of power, ballasting in accordance with the first paragraph of this section and the third paragraph of section 4 shall be possible. Ship-shaped units or units with cylindrical hull provided with ballast systems which are not considered critical to stability are exempt from this requirement.

(3) The ballast system should be arranged so as to prevent any single failure in the system or any single operator failure from causing unintentional flooding or emptying of tanks.

(4) In the event of flooding of any one compartment on self-elevating units or any one compartment in the columns or pontoons of semi-submersible units, ballasting in accordance with the second paragraph of section 4 shall still be possible.

Amended by Regulation of 5 July 2016 No. 897.

Section 4

Capacity requirements

(1) The ballast system shall have the capability of bringing the unit from any given operating or transit draught to the survival condition draught within three hours.

(2) The ballast system shall have the capability of restoring the unit to zero degrees heel within operational limitations within three hours after damage as specified in section 21 of the Stability Regulations.

(3) In the event of failure of any one pump, the ballast system shall have the capacity of restoring the unit to zero degrees heel within operational limitations after damage as specified in section 21 of the Stability Regulations. Ballast pumps and associated parts installed in compartments that are flooded after damage shall be assumed to be inoperable, except for components designed to withstand submersion into water and related pressures. Ship-shaped units or units with cylindrical hull, provided with ballast systems which are not considered critical to stability, and self-elevating units are exempt from this requirement.

(4) Semi-submersible units in operating draught shall comply with the requirements specified in the second and third paragraphs without taking on additional ballast. Counter-flooding may be considered, provided that there are procedures covering strength and stability.

Amended by Regulation of 5 July 2016 No. 897.

Section 5

Operation level

(1) Operation of the ballast system shall be divided into three levels:

a. highest level (automation system);

b. secondary level, which is independent of software-based control systems;

c. lowest level, which is locally on the pumps and valves. Ship-shaped units or units with cylindrical hull provided with ballast systems which are not considered critical to stability are exempt from this requirement.

(2) The lower levels must be capable of being used independently of higher levels.

(3) Ballast pumps and ballast valves to be locally operated, shall be located at easily accessible places.

(4) Equipment required for local operation shall be of a sufficient number and be suitably located for quick and easy use in an emergency.

Amended by Regulation of 5 July 2016 No. 897.

Section 6

Location of the highest level and secondary level

(1) The highest level and the secondary level shall be placed on different locations:

a. outside the extent of damage, cf. section 2;

b. above damage waterlines, cf. section 21 of the Stability Regulations;

c. in enclosed spaces that are well protected against environmental loads.

(2) The highest level shall, in addition to the requirement of the first paragraph, be placed over the freeboard deck and reserve buoyancy waterline, cf. section 22 of the Stability Regulations.

Section 7

Ballast control on the highest level

(1) The ballast control on the highest level shall be located in the central control station together with the system control for watertight closing means.

(2) The ballast control on the highest level shall be fitted with:

a. control system and indication system for ballast pump and ballast valves;

b. power availability indicating system (main and emergency power source);

c. ballast system hydraulic/pneumatic pressure-indicating system;

d. emergency stop device;

e. tank level indicating system;

f. draught indicating system;

g. two independent methods for indicating heel and trim.

Section 8

Control and indicating systems

(1) The control and indicating systems shall be connected to the main and emergency source of power.

(2) The control and indicating systems shall function independently of one another, or have redundancy that ensures that a failure in one system does not affect any of the other systems.

(3) Each valve shall be provided with local means to indicate whether the valve is open or closed, and such means shall also be provided at each location from which the valve can be operated. The indicators shall rely on movement of the valve spindle, or be otherwise arranged with equivalent reliability.

(4) In the event of loss of control power or control current, the valves shall automatically close. Upon reactivation, the valves shall remain closed until the operator assumes control of the system. Ship-shaped units or units with cylindrical hull, provided with ballast systems which are not considered critical to stability, are exempt from this requirement. This exemption does not apply to sea-suction valves.

Amended by Regulation of 5 July 2016 No. 897.

Section 9

Emergency stop device

(1) The ballast system shall be provided with an emergency stop device with a manual activation button.

(2) The emergency stop device shall isolate or disconnect the power supply to the control systems and to the pumps, so that the valves close and the pumps stop.

(3) The emergency stop system shall be separate from the ordinary control system.

(4) Ship-shaped units or units with cylindrical hull, provided with ballast systems which are not considered critical to stability, and self-elevating units are exempt from the requirement for emergency stop device.

Amended by Regulation of 5 July 2016 No. 897.

Section 10

Tank level indicating system

(1) The tank level indicating system shall indicate liquid levels in the ballast tanks and in other tanks which affect the stability of the unit when they are filled or emptied.

(2) An independent secondary tank level indicating system shall be provided.

Section 11

Draught indicating system

The draught indicating system shall show the draught at each corner of semi-submersible and self-elevating units, fore and aft for ship-shaped units, and in four radially opposite points for units with cylindrical hull.

Amended by Regulation of 5 July 2016 No. 897.

Section 12

Air pipes

(1) Air pipes shall be provided on each ballast tank sufficient in number and cross-sectional area to permit the efficient operation of the ballast system.

(2) Air pipe openings shall be located above the least favourable waterline specified in section 21 of the Stability Regulations.

Section 13

Suction lines and ballast lines

(1) The suction lines shall be positioned in such a way that as much ballast as possible can be pumped out at an angle of inclination.

(2) Special consideration shall be given to ballast lines passing through ballast tanks, taking into account effects of corrosion or other deterioration.

Section 14

Internal communication

(1) A two-way means of communication shall be provided between the central control station and spaces where ballast pumps, ballast valves, or other equipment necessary for the operation of the ballast system can be operated.

(2) The means of communication shall be provided with redundant power supply.

Section 15

Requirements for components

The strength, function and workmanship of the components of the ballast system shall satisfy the requirements stipulated by the MOU classification society with respect to pressures, capacities and loads specified in these Regulations.

Section 16

Marking

Control components, pumps, valves, ballast lines and air pipes shall be clearly marked to identify the function they serve. In addition, the marking shall provide a reference to the numbering in the control system (tag marking).

Section 17

Coating of ballast tanks

(1) Coating of ballast tanks shall be in accordance with IMO Resolution MSC.215(82) (Performance Standard for Protective Coatings for Water Ballast Tanks).

(2) Mobile offshore units initially certified before 1 February 2016 or for which the building contract has been placed before 1 February 2016, need not comply with the requirement of the first paragraph.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 18

Permanent means of access for ballast tanks

(1) Ballast tanks shall be provided with a permanent means of access in accordance with IMO Resolution MSC.133(76) (Technical provisions for means of access for inspections) as amended by MSC.158(78). Floating Production, Storage and Offloading (FPSO) units Floating Storage and Offloading (FSO) units shall comply with table 1.

(2) Mobile offshore units initially certified before 1 February 2016 or for which the building contract has been placed before 1 February 2016, need not comply with the requirement of the first paragraph.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018).

Section 19

Operating procedure

(1) An operating procedure shall be provided for the ballast system, and shall include:

a. normal operation;

b. operation of the ballast system after failure, including operation of the ballast system on the highest, secondary and lowest level;

c. operation of the emergency stop device.

(2) For semi-submersible units, the operating procedure shall, in addition to the requirement of the first paragraph, contain ballasting from transit condition to survival condition and from operating condition to survival condition.

(3) The emergency preparedness document shall include procedures for recovery after damage. For semi-submersible units, the document shall also include measures to be taken after damage in the waterline and any counter-flooding after damage, cf. section 4 fourth paragraph.

Section 20

Exemptions

(1) The Norwegian Maritime Authority may exempt a mobile offshore unit from one or more of the requirements of the Regulations if the company applies for an exemption in writing and one of the following requirements is met:

a. it is established that the requirement is not essential and that it is justifiable in terms of safety;

b. it is established that compensating measures will maintain the same level of safety as required by these Regulations;

c. it is established that the requirement hinders the development and use of innovative solutions when such solutions will maintain the same level of safety as required by these Regulations.

(2) Statement from safety representative shall be attached to the application for exemption.

Section 21

Transitional provision

Mobile offshore units may, until the next certificate issue, comply with the requirements that applied at the time of the last certificate issue, unless otherwise provided by the individual provision.

Amended by Regulation of 19 December 2017 No. 2322 (in force on 1 January 2018), 14 February 2024 No. 280.

Section 22

Entry into force

These Regulations enter into force on 1 February 2016. As from the same date, the Regulations of 20 December 1991 No. 879 on ballast systems on mobile offshore units are repealed.