



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 313-68-1656c

dated 10.11.2021

Re:

amendments to the Rules for the Classification and Construction of Sea-Going Ships, 2021, ND No. 2-020101-138-E, considering the experience of technical supervision

Item(s) of supervision:

ships under construction

Entry-into-force date:

01.01.2022

~~Cancels / amends / adds Circular Letter No.~~

~~dated~~

Number of pages: 1 + 5

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Parts VIII "Systems and Piping", X "Boilers, Heat Exchangers and Pressure Vessels" and XII "Refrigerating Plants"

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Rules for the Classification and Construction of Sea-Going Ships shall be amended as specified in the Appendices to the Circular Letter.

It is necessary to do the following:

1. Bring the content of the Circular Letter to the notice of the RS surveyors, interested organizations and persons in the area of the RS Branch Offices' activity.
 2. Apply the provisions of the Circular Letter during review and approval of the technical documentation on ships contracted for construction or conversion on or after 01.01.2022, in the absence of a contract, the keels of which are laid or which are at a similar stage of construction on or after 01.01.2022.
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List of the amended and/or introduced paras/chapters/sections:

Part VIII: paras 1.2.1, 1.3.3, 4.3.2.6, 4.3.2.10, 5.1.9.2, 5.1.9.3, 7.3.2, 11.1.2 and 11.1.3

Part X: paras 2.1.2.1 and 3.3.6.4

Part XII: paras 2.3.3

and 2.3.5 — 2.3.12

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"Thesis" System No. 21-258943

**Information on amendments introduced by the Circular Letter
(for inclusion in the Revision History to the RS Publication)**

Nos.	Amended paras/chapters/ sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
1	Part VIII, para 1.2.1	New definition "Wet exhaust system" has been introduced	313-68-1656c of 10.11.2021	01.01.2022
2	Part VIII, para 1.3.3	Item of survey during manufacture has been specified	313-68-1656c of 10.11.2021	01.01.2022
3	Part VIII, para 4.3.2.6	Requirements have been introduced for wall thickness of discharge pipes made of aluminium alloys for ships with aluminium alloy hulls	313-68-1656c of 10.11.2021	01.01.2022
4	Part VIII, para 4.3.2.10	Requirements have been introduced for thickness of welded side branch pipes for ships with aluminium alloy hulls	313-68-1656c of 10.11.2021	01.01.2022
5	Part VIII, para 5.1.9.2	Requirements have been specified for testing of pipe penetration through the ship bulkhead	313-68-1656c of 10.11.2021	01.01.2022
6	Part VIII, para 5.1.9.3	Requirements have been specified for testing of pipe penetration through the ship bulkhead	313-68-1656c of 10.11.2021	01.01.2022
7	Part VIII, para 7.3.2	Requirements have been specified for laying of bilge system pipes	313-68-1656c of 10.11.2021	01.01.2022
8	Part VIII, para 11.1.2	Requirements have been introduced for arrangements precluding the possibility of sea water entering the engine	313-68-1656c of 10.11.2021	01.01.2022
9	Part VIII, para 11.1.3	Requirements have been specified for construction of spark arresters	313-68-1656c of 10.11.2021	01.01.2022
10	Part X, para 2.1.2.1	Term "design pressure" has been specified	313-68-1656c of 10.11.2021	01.01.2022
11	Part X, para 3.3.6.4	Requirements have been specified for safety valves of main and essential auxiliary boilers	313-68-1656c of 10.11.2021	01.01.2022
12	Part XII, para 2.3.3	Requirements have been specified for main and standby equipment	313-68-1656c of 10.11.2021	01.01.2022

Nos.	Amended paras/chapters/ sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
13	Part XII, paras 2.3.5 — 2.3.12	Paras 2.3.5 and 2.3.6 have been deleted; existing paras 2.3.7 — 2.3.12 have been renumbered 2.3.5 — 2.3.10, accordingly	313-68-1656c of 10.11.2021	01.01.2022

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SEA-GOING SHIPS, 2021,

ND No. 2-020101-138-E

PART VIII. SYSTEMS AND PIPING

1 GENERAL

1 **Para 1.2.1.** After the definition "Systems" the definition "Wet exhaust system" is introduced reading as follows:

"Wet exhaust system is a type of exhaust gas system where exhaust gases are mixed with water supplied into the exhaust gas pipe or special manifold for their cooling."

2 **Para 1.3.3** is replaced by the following text:

"1.3.3 Class I and Class II pipelines valves, side and bottom valves, remote-controlled valves, venting valves, air pipe covers, flexible joints (including expansion joints), as well as the valves on the forepeak bulkhead, are subject to survey by the Register during manufacture."

4 ELEMENTS OF THE SYSTEMS AND PIPING

3 **Para 4.3.2.6** is replaced by the following text:

"4.3.2.6 The scuppers and overboard discharge pipes from open decks and spaces not specified in 4.3.2.4 either 450 mm below the freeboard deck or less than 600 mm above the summer load waterline shall be fitted with non-return valves (dampers) at the outer shell. In this case, the wall thickness of scuppers and discharge pipes shall not be less than stated in column 3 of Table 2.3.8.

No valves may be provided if the wall thickness of steel discharge pipes below the freeboard deck and in spaces within enclosed superstructures is less than:

7 mm for $d \leq 80$ mm;
10 mm for $d = 180$ mm;
12,5 mm for $d \geq 220$ mm

where d = external diameter of pipes.

Intermediate sizes shall be determined by linear interpolation.

For ships with aluminium alloy hulls, the wall thickness of discharge pipes made of aluminium alloys may be reduced but shall not be less than the thickness of the shell plating.

In open superstructures and deckhouses, overboard scuppers shall be provided.

In spaces intended for the carriage of motor vehicles with fuel in their tanks, overboard scupper pipes shall be provided to prevent accumulation of water during the operation of the water spraying system.

In floating docks, the overboard scuppers and discharge pipes below the margin line from spaces above the margin line and open decks shall have non-return valves at the outer shell. The valves may be omitted where the pipe thickness below the margin line is not less than that of the shell plating, however, it need not exceed 12 mm."

4 **Para 4.3.2.10** is supplemented by a new paragraph reading as follows:

"For ships with aluminium alloy hulls, the thickness of welded side branch pipes may be reduced but shall not be less than the thickness of the shell plating."

5 PIPING LAYING

5 **Paras 5.1.9.2 and 5.1.9.3** are replaced by the following text:

.2 the fire tested pipe penetration shall be tested for a period of at least 30 min under hydraulic pressure equal to the test pressure, but minimum 0,1 MPa. There shall be no leakage during this test;

.3 in accordance with 5.1.9.2, the fire tested pipe penetration shall continue to be tested for a further 30 min with the test pressure. The quantity of water leakage shall not exceed a total of 1 l;"

7 BILGE SYSTEM

6 **Para 7.3.2** is replaced by the following text:

"7.3.2 The system shall be arranged so as to prevent the possibility of sea water passing inside the ship, or from one watertight compartment into another, in case of pipe break or any other pipe damage in any other compartment because of collision or grounding. For this purpose, the requirements of 5.1.7 shall be met. In case the only general pipeline system for all pumps is available, the provision shall be made for the possibility to control the required valves servicing suction branch pipes from the places above the bulkhead deck. Other equivalent arrangements are allowed."

11 EXHAUST GAS SYSTEM

7 **Paras 11.1.2 and 11.1.3** are replaced by the following text:

"11.1.2 Where the exhaust gas pipes are laid through the shell plating in the vicinity of load waterline or below it, provision shall be made for arrangements precluding the possibility of sea water entering the engine. As a rule, this exhaust gas pipe shall be provided with a special side closure such as non-return or shut-off valve or damper. When laying gas exhaust pipes and attachments, additional temperature loads shall be taken into account or compensating measures shall be taken. Herewith, the wall thickness of steel and corrosion-resistant pipes, copper and titanium alloy pipes shall be not less than 2 mm. The surface temperature of exhaust gas pipes shall not exceed 220 °C that is obtained by applying insulation or cooling. The insulating material shall be non-combustible and shall be protected from penetration of petroleum products and their vapours.

If a closure on the shell plating is not provided, the thickness of steel pipes on the section between the shell plating and the arrangements precluding the possibility of sea water entering the engine shall not be less than specified in 4.3.2.6.

Where the wet exhaust system is provided, the pipes shall additionally meet the requirements for sea water pipes and essential cooling system. Water to the exhaust gas pipe shall be supplied after the arrangement precluding the possibility of sea water entering the engine or a separate arrangement precluding the possibility of cooling water entering the engine shall be provided. Provision shall be made to drain the system completely by means of a water drainage system.

The use of plastic pipes and non-metallic sleeves of exhaust gas pipe is allowed in the wet exhaust system if material resistance to petroleum products and fuel combustion products at design temperatures is confirmed. The sleeves shall be secured by not less than two compression clamps from each side. Degree of material fire-resistance for pipes and sleeves shall not be less than L3 in accordance with 3.3.1.2. The use of plastic pipes and non-metallic hoses in the wet exhaust system is allowed in case a flow alarm sensor in the exhaust gas cooling system and the standby cooling water supply arrangements are provided.

11.1.3 In oil tankers, oil recovery tankers, supply vessels, ships adapted for the carriage of explosive and fire hazardous cargoes and on ships servicing or towing the above-mentioned ships, the uptakes of boilers, exhaust pipes of main and auxiliary engines, incinerators shall be fitted with spark arresters of the construction complying with 8.6, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships."

PART X. BOILERS, HEAT EXCHANGERS AND PRESSURE VESSELS

2 STRENGTH CALCULATIONS

8 **Para 2.1.2.1** is replaced by the following text:

"2.1.2.1 The design pressure to be used for strength calculations of the elements of boilers, heat exchangers and pressure vessels shall generally be taken not less than the maximum permissible working pressure of the medium under the normal operation, herewith, a short-time pressure rise by not more than 10% at the fully open position of the safety valves may be omitted.

The hydrostatic pressure shall be taken into account in the design pressure calculations when it exceeds 0,05 MPa."

3 BOILERS

9 **Para 3.3.6.4** is replaced by the following text:

"3.3.6.4 The safety valves of steam boilers shall be adjusted at the opening pressure of not more than $1,03p_{design}$. In all cases the safety valve shall be so adjusted that at fully open position and with the maximum steaming capacity of a boiler the pressure shall not exceed $1,1p_{design}$.

When lifted, safety valves on main and essential auxiliary boilers shall fully stop the steam bleeding in case of the pressure drop in the boiler not below 0,85 of the working pressure."

PART XII. REFRIGERATING PLANTS

2 GENERAL TECHNICAL REQUIREMENTS

10 **Para 2.3.3** is replaced by the following text:

"2.3.3 Capacity of main equipment of the refrigerating plant shall be sufficient to maintain the required temperatures in refrigerated spaces when working 24 h a day and to supply cold to other consumers.

The main and standby equipment shall comprise not less than two similar compressors with a drive motor as well as two similar condensers and, where intermediate secondary refrigerant or cascade and stage cycles are used, two similar evaporators, intercascade heat exchangers and intermediate pressure vessels.

Standby control system and all valves necessary for independent operation of all components of this equipment shall also be provided.

Capacity of the standby equipment shall be such as to supply cold to all consumers with one of the main compressors or condensers inoperative."

11 **Paras 2.3.5** and **2.3.6** are deleted. **Existing paras 2.3.7 — 2.3.12** are renumbered **2.3.5 — 2.3.10**, accordingly.