



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 328-04-1623c

dated 27.08.2021

Re:

amendments to the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk, 2021, ND No. 2-020101-140-E, in connection with implementation of new additional distinguishing mark **highPRESS(pressure)**

Item(s) of supervision:

ships under construction

Entry-into-force date:

15.09.2021

Cancels / amends / adds Circular Letter No.

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dated -

Number of pages:

1 + 3

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Parts I "Classification" and VI "Systems and Piping"

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk shall be amended as specified in the Appendices to the Circular Letter.

As well as It is necessary to do the following:

1. Bring the content of the Circular Letter to the notice of the RS surveyors, as well as 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 15.09.2021, in the absence of a contract, the keels of which are laid or which are at a similar stage of construction on or after 15.09.2021.
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List of the amended and/or introduced paras/chapters/sections:

Part I: paras 2.2.12 and 4.1

Part VI: para 3.16.6

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**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 I, para 2.2.12	New para 2.2.12 with requirements for assignment of a distinguishing mark in the class notation highPRESS(pressure) has been introduced	328-04-1623c of 27.08.2021	15.09.2021
2	Part I, para 4.1	Requirements for the list of technical documentation have been specified; new para 4.1.9 with requirements for calculation of maximum filling levels of cargo tanks has been introduced, existing paras 4.1.9 — 4.1.26 have been renumbered 4.1.10 — 4.1.27 accordingly; reference to the Rules for the Classification and Construction of Sea-Going Ships has been specified	328-04-1623c of 27.08.2021	15.09.2021
3	Part VI, para 3.16.6	Requirements have been specified for the procedure of changing the relief valve setting	328-04-1623c of 27.08.2021	15.09.2021

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SHIPS CARRYING LIQUEFIED GASES IN BULK, 2021

ND No. 2-020101-140-E

PART I. CLASSIFICATION

2 CLASS NOTATION

1 **New para 2.2.12** is introduced reading as follows:

"2.2.12 If membrane LNG cargo tanks of LG carrier are capable to withstand vapour pressure exceeding 25 kPa but not more than 70 kPa, the distinguishing mark **highPRESS(pressure)** shall be added to the ship's class notation where a maximum allowable vapour pressure in kPa is indicated in brackets, for example, **highPRESS(50)**. In order to assign **highPRESS(pressure)** mark to the ship, the documentation shall be submitted in accordance with 4.1 confirming fulfillment of the requirements specified in 24.1.4 and 24.4, Part IV "Cargo Containment", 3.16.6, Part VI "Systems and Piping" and 4.1, Part VIII "Instrumentation and automation systems".".

4 PLAN APPROVAL DOCUMENTATION

2 **Para 4.1** is replaced by the following text:

"4.1 In addition to the technical documentation specified in Section 3, Part I "Classification" of the Rules for the Classification, the following technical documentation confirming fulfillment of the LG Rules shall be submitted to the Register¹:

.1 drawings and strength calculations of cargo tanks with their distances from side plating and the bottom specified (*);

.2 drawings of supports and other structures for securing of independent cargo tanks (*);

.3 drawings and diagrams of systems and piping for cargo specifying the components like compensators, flange joints, stop and regulating valves (*);

.4 drawings and descriptions of an inert gas generation plant (*);

.5 justification of fitness of fire-extinguishing media, fire detection and extinction system apparatus for cargoes carried, as well as the documents confirming the design time of fire extinction, the rate of fire extinguishing media delivery and the stores of fire-extinguishing media on board (**);

.6 diagrams and calculations of the ventilation system of spaces in the cargo area and of other spaces to be accessible for cargo operations performance. The diagrams shall contain data on fitness of materials used for manufacture of fan impellers and air ducts (*);

.7 diagrams and calculations of the vent system with indication of all relief valve settings and relevant alarm in case the tanks are equipped with the setting pressure change system (*);

.8 drawings and descriptions of all systems and arrangements for the measurement of cargo amount and characteristics, and for gas detection (*);

.9 calculation of maximum filling level of cargo tanks considering all values of relief valve setting if cargo tanks are equipped with the setting pressure change system (*);

.10 diagrams and calculations of drain and ballast systems in the cargo area, pump-rooms, cofferdams, pipe tunnels, spaces for independent cargo tanks, etc. (*);

¹ Stamp types following the documentation (marked with (*) and (**)) review results according to 3.1.5, Part I "Classification" of the Rules for the Classification.

- .11 justification of fitness of insulating materials used in the cargo area, as well as data on the procedure of their manufacture, storage conditions, quality control techniques, the extent of a harmful effect of solar radiation, resistance to vibration and temperature (**);
- .12 drawings of quick-closing arrangements of the cargo containment system (*);
- .13 diagrams of cargo heating and refrigeration systems and the heat transfer calculation (*);
- .14 drawings of relief and vacuum relief valves of cargo tanks (*);
- .15 diagrams of cargo pressure and temperature regulation systems (*);
- .16 calculations of stresses in cargo and other piping containing cargo at a temperature below — 110 °C (**);
- .17 diagrams of piping relating to the use of cargo as fuel with indication of separate units of pipe joints, and of valves location and design (*);
- .18 diagrams of electric drives and control systems for a reliquefaction unit for cargo vapours, liquefied gas refrigeration units, cargo pumps and compressors, an inert gas generation plant, fans of dangerous spaces and air locks and functional diagrams of control systems for units as above (*);
- .19 functional diagrams of electric measurement and alarm systems (*);
- .20 functional diagrams of systems for automatic and remote disconnection of electrical equipment, for remote control over hull structure heating valves (*);
- .21 drawings of cable laying in dangerous spaces and areas (*);
- .22 drawings of earthing for electrical equipment, cables, piping located in gas-dangerous spaces (*);
- .23 justification of electrical equipment fitness (**);
- .24 techniques for mechanical relief of stresses in independent cargo tanks (**);
- .25 Failure Mode and Effects analysis (FMEA) for electrical generation and distribution systems and associated control systems (refer to 2.1.4, Part VII "Electrical equipment") (**);
- .26 an inspection/survey plan for the cargo containment system (*);
- .27 cargo system operation manual in accordance with the requirements of Chapter 18 of the Code (*).

PART VI. SYSTEMS AND PIPING

3 CARGO SYSTEM

3 **Para 3.16.6** is replaced by the following text:

"3.16.6 In case of cargo tanks permitted to have more than one relief valve setting this may be accomplished by:

installing two or more properly set and sealed valves and providing means as necessary for isolating the valves not in use from the cargo tank; or

installing relief valves whose settings may be changed by the insertion of previously approved spacer pieces or alternative springs or by other similar means not requiring pressure testing to verify the new set pressure.

All valve adjustments shall be sealed.

The requirements for testing and adjusting the relief valves are set out in 12.1.3.

The procedure for changing of relief valve setting shall be included in the cargo system operation manual (refer to 4.1.27 of Part I "Classification")."