



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 328-04-1729c

dated 29.03.2022

Re:

amendments to the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk, 2022, ND No. 2-020101-157-E in connection with introduction of the requirements for stress analysis in the piping

Item(s) of supervision:

ships under construction

Entry-into-force date:

15.04.2022

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

~~dated~~

Number of pages: 1 + 2

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part 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.

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 15.04.2022, in the absence of a contract, on ships requested for review of technical documentation on or after 15.04.2022.

List of the amended and/or introduced paras/chapters/sections:

Part VI: para 2.2.3

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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 VI, para 2.2.3	Requirements for stress analysis in the piping have been specified	328-04-1929c of 29.23.2022	15.04.2022

**RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SHIPS
CARRYING LIQUEFIED GASES IN BULK, 2022,**

ND No. 2-020101-157-E

PART VI. SYSTEMS AND PIPING

2 PIPING

Para 2.2.3 is replaced by the following text:

"2.2.3 Stress analysis.

2.2.3.1 When the design temperature of the inner medium is -110°C or lower, a complete stress analysis in the piping, taking into account all the stresses due to the weight of pipes, including acceleration loads if significant, internal pressure, thermal contraction and loads induced by hog and sag of the ship for each branch of the piping system shall be submitted to the Register.

The analysis shall be carried out in compliance with the requirements of recognized standards and include at least the following:

- .1** description of calculation procedure;
- .2** initial data (used software, applicable normative documents, list of piping systems and equipment, list of supporting documents);
- .3** design data (parameter units, coordinate system, acceleration data according to 28.2, Part IV "Cargo Containment", data on piping materials, data on movements of supports under loads induced by the ship's hull deformation, design parameters of piping);
- .4** determination of design loads (constant loads, operating loads induced by external actions and emergency loads), their description and combinations;
- .5** determination of permissible stresses for piping;
- .6** determination of summary stresses in piping and their comparison with permissible stresses;
- .7** conclusion confirming that the strength criteria are met;
- .8** recommendations, if any.

Calculation procedure and strength criteria shall be agreed with the Register.

2.2.3.2 When the design temperature of the inner medium is above -110°C , a stress analysis may be required by the Register in relation to such matters as the design or stiffness of the piping system and the choice of materials. In any case, consideration shall be given to thermal stresses even though calculations are not submitted. The analysis may be carried out according to the procedure agreed with the Register."