



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 313-79-1317c

dated 28.01.2020

Re:

amendments to the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk, 2020, ND No. 2-020101-131-E

Item(s) of supervision:

pressure relief system

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Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part VI "Systems and Piping"

Director General

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Text of CL:

We hereby inform that in connection with coming into force of the IACS Unified Interpretation (UI) GC28 (Rev.1 Dec 2019) 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, 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 technical documentation on ships, the keels of which are laid or which are at a similar stage of construction on or after 01.01.2020, as well as during review and approval of the technical documentation on ships, the delivery of which is on or after 01.01.2020.

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

Part VI: paras 3.16.3 and 3.19.3

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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 3.16.3	Requirements for relieving capacity of pressure relief devices for interbarrier spaces have been specified considering IACS UI GC28 (Rev.1 Dec 2019)	313-79-1317c of 28.01.2020	28.01.2020
2	Part VI, para 3.19.3	A new para with the requirements for the calculation of relieving capacity of pressure relief devices for interbarrier spaces has been introduced considering IACS UI GC28 (Rev.1 Dec 2019)	313-79-1317c of 28.01.2020	28.01.2020

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SHIPS CARRYING LIQUEFIED GASES IN BULK, 2020

ND No 2-020101-131-E

PART VI. SYSTEM AND PIPING

3 CARGO SYSTEM

1 **Para 3.16.3** is replaced by the following text:

"3.16.3 Interbarrier spaces shall be provided with pressure relief devices approved by the Register.

The required relieving capacity of pressure relief devices of interbarrier spaces surrounding cargo tanks of various designs shall be determined as follows:

.1 the relieving capacity of pressure relief devices of interbarrier spaces surrounding independent type A cargo tanks shall be determined in accordance with 3.19.3;

.2 the relieving capacity of pressure relief devices of interbarrier spaces surrounding independent type B cargo tanks may be determined in accordance with 3.19.3, however, the leakage rate shall be determined in accordance with 7.2, Part IV "Cargo Containment";

.3 the relieving capacity of pressure relief devices for interbarrier spaces of membrane and semi-membrane tanks shall be evaluated on the basis of specific membrane/semi-membrane tank design;

.4 the relieving capacity of pressure relief devices for interbarrier spaces adjacent to integral tanks may, if applicable, be determined in accordance with 3.19.3."

2 A **new para 3.19.3** is introduced reading as follows:

"3.19.3 The combined relieving capacity of the pressure relief devices for interbarrier spaces surrounding type A independent cargo tanks is determined by the following formula:

$$Q_{sa} = 3,4A_c \frac{\rho}{\rho_v} \sqrt{h} \quad (3.19.3)$$

where Q_{sa} = minimum required discharge rate of air, in m³/s, at standard conditions (0 °C and 0,1013 MPa);

A_c = design crack opening area, in m²;

$A_c = \frac{\pi}{4} \delta * L$;

δ = max, crack opening width, m;

$\delta = 0,2t$;

t = thickness of tank bottom plating, in m;

L = design crack length, in m, equal to the diagonal of the largest plate panel of the tank bottom, as shown in Fig. 3.19.3;

h = max liquid height above tank bottom plus 100·MARVS, in m;

ρ = density of product liquid phase, in kg/m³, at the set pressure of the interbarrier space relief device;

ρ_v = density of product vapour phase, in kg/m³, at the set pressure of the interbarrier space relief device and a temperature of 0 °C;

MARVS = max allowable relief valve setting of the cargo tank, MPa.

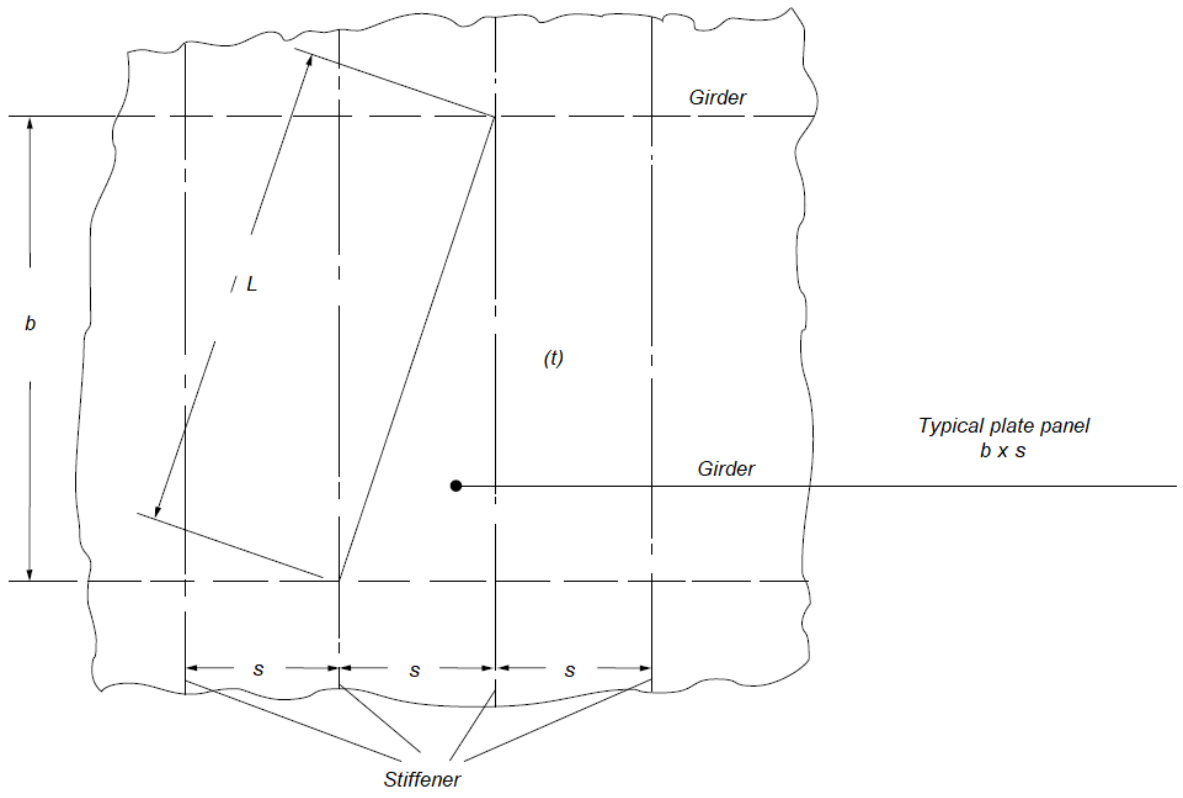


Fig. 3.19.3