RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER **No. 314-41-1832c** dated 03.10.2022

Re:

amendments to the Rules for the Classification and Construction of Sea-Going Ships, 2022, ND No. 2-020101-152-E

Item(s) of supervision:

ships under construction and in service

Entry-into-force date:
01.11.2022

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

Number of pages: 1 + 4

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Parts I "Classification" and II "Hull"

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 of conversion on or after 01.11.2022, in the absence of a contract, during review and approval of the technical documentation on ships requested for review on or after 01.11.2022.

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

Part I: para 2.2.3.3.6, Table 2.5

Part II: paras 2.10.4.2.1, 2.10.4.2.6 and 3.10.5

Person in charge: Irina A. Surikova 314 +7 (812) 312-85-72

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Appendix 1 to Circular Letter
No. 314-41-1832c dated 03.10.2022

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 2.2.3.3.6	New para has been introduced containing requirements for assignment of distinguishing marks **I1(Hull)**, **I2(Hull)**, **I3(Hull)**	314-41-1832c of 03.10.2022	01.11.2022
2	Part I, Table 2.5	In item 2.1, distinguishing marks **I1(Hull)**, **I2(Hull)**, **I3(Hull)** have been introduced	314-41-1832c of 03.10.2022	01.11.2022
3	Part II, para 2.10.4.2.1	Formula (2.4.10.2.1) has been renumbered (2.4.10.2.1-1). Requirements for characteristics of rectangular solid propeller post have been specified	314-41-1832c of 03.10.2022	01.11.2022
4	Part II, para 2.10.4.2.6	Para has been deleted	314-41-1832c of 03.10.2022	01.11.2022
5	Part II, para 3.10.5	New para has been introduced containing requirements for ship's hull with distinguishing marks **I1(Hull)**, **I2(Hull)** or **I3(Hull)** in class notation	314-41-1832c of 03.10.2022	01.11.2022

Appendix 2 to Circular Letter
No. 314-41-1832c dated 03.10.2022

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SEA-GOING SHIPS, 2022,

ND No. 2-020101-152-E

PART I. CLASSIFICATION

2 CLASS OF A SHIP

1 **New para 2.2.3.3.6** is introduced reading as follows:

"**2.2.3.3.6** If berth-connected ships operated when lying at anchor at a water area distanced from the shore as well as ships operated in accordance with their intended purpose allowing for periodical drifting in ice-covered waters comply with the requirements of these Rules, one of the following ice class marks **I1(Hull)**, **I2(Hull)** or **I3(Hull)** may be added to the character of classification of such ships:

I1(Hull) — applicable to ships operating in the East Siberian Sea, the Chukchi Sea;

I2(Hull) — applicable to ships operating in the Barents Sea, the Sea of Okhotsk, the Kara Sea, the Laptev Sea, the Bering Sea;

I3(Hull) — applicable to ships operating the Baltic Sea, the Caspian Sea, the Sea of Azov.".

2 **Table 2.5. Para 2.1** is supplemented with the distinguishing marks reading as follows:

"

I1(Hull) **I2(Hull)** **I3(Hull)**	Ice class marks indicating operation of a ship in freezing areas of the following seas: **I1(Hull)** – the East Siberian Sea, the Chukchi Sea; **I2(Hull)** – the Barents Sea, the Sea of Okhotsk, the Kara Sea, the Laptev Sea, the Bering Sea; **I3(Hull)** – the Baltic Sea, the Caspian Sea, the Sea of Azov. The distinguishing mark may be added to the class notation of birth-connected ships operated when lying at anchor at a water area distanced from the shore as well as ships operated in accordance with their intended purpose allowing for periodical drifting in ice-covered waters	**Rules for the Classification and Construction of Sea-Going Ships** Part I, 2.2.3.3.6 Part II, 3.10.5

".

PART II. HULL

2 GENERAL REQUIREMENTS FOR HULL STRUCTURES

3 **Formula (2.10.4.2.1)** is renumbered **(2.10.4.2.1-1)**.

4 **Para 2.10.4.2.1.** Text after the Formula is replaced by the following text:

"The scantlings of the propeller post may be reduced for ships of restricted areas of navigation:

R2, **R2-RSN** and **R2-RSN(4,5)** — by 5 %;

R3-RSN and **R3** — by 10 %.

The thickness of rectangular solid propeller post may be reduced provided that the values of required sectional area and section modulus are retained, in this case, the new scantlings shall be not less than:

$$b_S^* \geq 3 \cdot (22\sqrt{\eta} - 1); \qquad (2.10.4.2.1\text{-}2)$$

$$l_S^* = \frac{l_S \cdot b_S^2}{b_S^{*2}} \qquad (2.10.4.2.1\text{-}3)$$

where η = application factor of mechanical properties of steel determined from Table 1.1.4.3.

Above the counter the sectional area of sternframe may be gradually reduced. And nowhere its sectional area shall be less than 40 % of the required area of the propeller post, corresponding to the scantlings stated above;".

5 **Para 2.10.4.2.6** is deleted.

3 REQUIREMENTS FOR STRUCTURES OF SHIPS OF SPECIAL DESIGN

6 **New para 3.10.5** is introduced reading as follows:

"**3.10.5 Strengthening of ice class ships with distinguishing marks I1(Hull), I2(Hull) or I3(Hull) in the class notation.**

3.10.5.1 Regions of ice strengthening.

3.10.5.1.1 There is one ice strengthening region lengthwise.

3.10.5.1.2 There is one ice strengthening region transversely — ice belt. The length of the ice belt is determined depending on design ice thickness h in the estimated operational area which is obtained based on statistical data on ice conditions in the area of the ship's operation during the greatest effect of the ice field and is equal to the maximum thickness of the ice field for a 5-year period with a probability of 1 %. The upper boundary of the ice belt shall be at a distance of $1{,}1\,h$ upwards from the ice loadline, the lower boundary — at a distance of $1{,}1\,h$ downwards from the ballast waterline.

3.10.5.2 Structure.

3.10.5.2.1 Side grillage structure of ships with distinguishing mark **I3(Hull)** in the class notation shall comply with the requirements of 3.10.2 for ships with ice class **Arc4**, with distinguishing mark **I2(Hull)** — **Arc5**, and with distinguishing mark **I1(Hull)** — **Arc8**.

3.10.5.3 Ice load.

3.10.5.3.1 Ice load parameters are determined from Table 3.10.5.3.1.

Table 3.10.5.3.1

Ice class mark	p, in kPa	b, in m	l, in m
I1(Hull)	4200	1,5	8,5
I2(Hull)	3000	1,0	7,0
I3(Hull)	1500	0,6	3,0

3.10.5.4 Scantlings of ice-strengthening structures.

3.10.5.4.1 Side scantlings in the ice strengthened regions shall be determined on the basis of the requirements of 3.10.4 for ice load parameters as stipulated in 3.10.5.3.1. When calculating $\Delta s_{\text{н}0}$ in accordance with 3.10.4.1, the annual average thickness reduction of shell plating as a result of corrosion and abrasion u, mm/year, shall be determined from Table 3.10.5.4.1.

Table 3.10.5.4.1

Ice class mark	u, in mm/year
I1(Hull)	0,28
I2(Hull)	0,24
I3(Hull)	according to 1.1.5.2

3.10.5.4.2 Strengthening of side framing in the area below the ice belt as compared to the required scantlings of a ship without ice strengthening is not required.

3.10.5.4.3 When assigning the thickness of shell plating below the ice belt it shall be taken into account that the allowable difference in the thickness of adjacent plates shall not exceed 40 % of the thickness of the thickest plate or 3 mm, whichever is less.".