RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER **No. 314-45-1689c** dated 30.01.2022

Re:

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

Item(s) of supervision:

ships under construction

Entry-into-force date:
01.03.2022

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

Number of pages: 1+9

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part 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 or conversion on or after 01.03.2022. In the absence of the contract for construction or conversion, apply the provisions of the Circular Letter during review of the technical documentation on ships requested for review on or after 01.03.2022.

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

Part II: paras 1.1.3, 1.4.2, 1.4.4.3, 1.7.4.6, 2.2.3, 2.3.1.2, 2.3.3, 2.5.4.1, 2.8.1.1, 2.8.1.2, 2.8.2.3, 2.10.2.1, 2.10.4.1.1, 2.10.4.1.2, 2.10.4.7, 2.12.3.2, 3.1.3.4, 3.7.1.5.1, 3.7.1.5.2, 3.7.1.6.3, 3.7.3.3, 3.10.1.2.3, 3.10.1.3.2, 3.10.2.1.4, 3.10.3.2, 3.10.3.3.3, 3.10.3.8.1, 3.10.3.8.3, 3.10.3.8.5, 3.11.1.3.2, 3.11.3.1.1 and 3.12.1.1

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Appendix 1 to Circular Letter
No. 314-45-1689c dated 30.01.2022

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	Para 1.1.3	New definition "Scantling waterline" has been introduced	314-45-1689c of 30.01.2022	01.03.2022
2	Para 1.4.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
3	Para 1.4.4.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
4	Para 1.7.4.6	Requirements have been specified considering the experience in application of the Rules	314-45-1689c of 30.01.2022	01.03.2022
5	Para 2.2.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
6	Para 2.3.1.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
7	Para 2.3.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
8	Para 2.5.4.1	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
9	Paras 2.8.1.1 and 2.8.1.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
10	Para 2.8.2.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
11	Para 2.10.2.1	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
12	Paras 2.10.4.1.1 and 2.10.4.1.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
13	Para 2.10.4.7	Requirements have been specified considering the experience in application of the Rules	314-45-1689c of 30.01.2022	01.03.2022
14	Para 2.12.3.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
15	Para 3.1.3.4	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
16	Paras 3.7.1.5.1 and 3.7.1.5.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
17	Para 3.7.1.6.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
18	Para 3.7.3.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
19	Para 3.10.1.2.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
20	Para 3.10.1.3.2	Requirements have been specified considering the experience in application of the Rules	314-45-1689c of 30.01.2022	01.03.2022
21	Para 3.10.2.1.4	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
22	Para 3.10.3.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022

23	Para 3.10.3.3.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
24	Para 3.10.3.8.1	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
25	Para 3.10.3.8.3	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
26	Para 3.10.3.8.5	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
27	Para 3.11.1.3.2	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
28	Para 3.11.3.1.1	Terminology has been specified	314-45-1689c of 30.01.2022	01.03.2022
29	Para 3.12.1.1	Requirements have been specified considering the experience in application of the Rules	314-45-1689c of 30.01.2022	01.03.2022

Appendix 2 to Circular Letter
No. 314-45-1689c dated 30.01.2022

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

ND No. 2-020101-152-E

PART II. HULL

1 DESIGN PRINCIPLES

1 **Para 1.1.3.** After the definition "Intermediate frames" the definition "Scantling waterline" is introduced reading as follows:

"Scantling waterline is a waterline corresponding to the scantling draught.".

2 **Para 1.4.2** is replaced by the following text:

"**1.4.2 Symbols.**

For the purpose of this Chapter the following symbols have been adopted:

L_1 = length of the compartment considered, in m;

B_1 = breadth of the compartment considered, in m;

A_F = difference between the area of horizontal upper deck projection (including forecastle deck) and scantling waterline on a length up to $0{,}2L$ aft from the forward perpendicular, in m^2;

z_F = vertical distance from the scantling waterline to the upper deck (forecastle deck included), as measured on the forward perpendicular, in m;

I = moment of inertia about the horizontal neutral axis at the section under consideration, in cm^4;

S = first moment about the neutral axis, of the area of the effective longitudinal members between the vertical level at which the shear stress is being determined and the vertical extremity of effective longitudinal members, taken at the section under consideration, in cm^3;

x = distance of the considered hull section from the after perpendicular, in m.".

3 **Para 1.4.4.3.** Explication to Formula (1.4.4.3-2) is replaced by the following text:

"where $\rho_n = \alpha^2(0{,}5 + 2{,}5\sin\beta_0) \geq \alpha$ for conventional bow shape (no bulb);

$\rho_n = \alpha^2(1 + \alpha^2) \geq 1$ for a bulbous bow;

α = waterplane area coefficient for scantling waterline;

β_0 = angle, in deg., between a frame tangential and a vertical at the level of scantling waterline at the section within $0{,}4(1 - C_b)L \leq 0{,}1L$ from the forward perpendicular;

$$f = \left\{\frac{Lv_0}{430D_1\eta\varphi}\left[\frac{2{,}5}{\varphi^{0{,}3}} + 1{,}5\left(\frac{L}{100}\right)^{2/3}\right]\right\}^{1{,}5}\left(\frac{L}{100}\right)^{0{,}75};$$

$$D_1 = D + h_c;$$

h_c = height of continuous hatch side coamings, in m (where these are not fitted, h_c = 0);

$$\Delta = 0{,}045(\alpha - 0{,}25)^2\frac{L}{20D_1\eta\varphi}\cdot\frac{L}{100}.".$$

4 **Para 1.7.4.6 (except for Figure 1.7.4.6)** is replaced by the following text:

"**1.7.4.6** It is recommended that local concentration of welds, crossings of welds at an acute angle, as well as close locations of parallel butts or fillet welds and butt welds, be avoided.

The angle between two butt welds shall not be less than 60° (refer to Fig. 1.7.4.6).".

2 GENERAL REQUIREMENTS FOR HULL STRUCTURES

5 **Para 2.2.3** is replaced by the following text:

"**2.2.3 Loads on shell plating.**

The external pressure p, in kPa, on the bottom and side shell plating is determined by the formula

$$p = p_{st} + p_w. \qquad (2.2.3\text{-}1)$$

For ships with double bottom and double skin side construction intended for liquid ballast and for tankers with neither double bottom nor double skin side construction, the internal pressure $p = p_c$ shall be determined additionally by Formulae (1.3.4.2.1-1) — (1.3.4.2.1-5). Where $p_{st} > p_w$, counter pressure shall be considered

$$p = p_c - (p_{st} - p_w). \qquad (2.2.3\text{-}2)$$

For ships with double bottom and double skin side construction, p_{st} and p_w shall be determined in accordance with 1.3.2 as in the case of the ballasted ships.

Both external and internal pressure, whichever is the greater, shall be taken as the design pressure.

The pressure p_w above the scantling waterline shall not be less than $p_{\min}$, in kPa, determined by the formula

$$p_{\min} = 0{,}03L + 5. \qquad (2.2.3\text{-}3)$$

Where $L > 250$ m, L shall be taken equal to 250 m.

For ships of restricted area of navigation, the value of $p_{\min}$ may be reduced by multiplying by the factor φ_r obtained from Table 1.3.1.5.".

6 **Para 2.3.1.2** is replaced by the following text:

"**2.3.1.2** For the purpose of this Chapter the following symbols have been adopted:

L_1 = length of the compartment considered (hold, tank, engine room, etc.), in m;

B_1 = breadth of the compartment considered, in m;

B_x = breadth of ship, in m, in way of considered section at the level of scantling waterline.".

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

"**2.3.3 Single bottom loads.**

2.3.3.1 The external pressure determined by Formula (2.2.3-1) for a ship in the ballast condition is taken as the design pressure acting on single bottom structures of dry cargo ships. When determining p_{st} in Formula (2.2.3-1), the ballast draught may be taken as 0,6 of the scantling draught.

If a dry cargo ship is designed to operate in a fully loaded condition with some holds empty, the static pressure p_{st} in Formula (2.2.3-1) for these holds shall be determined at scantling draught.

2.3.3.2 The external pressure determined by Formula (2.2.3-1) at scantling draught or the total pressure determined by Formula (2.2.3-2), whichever is the greater, is taken as the design pressure acting on single bottom structures of tankers.".

8 **Para 2.5.4.1.** Explication to Formula (2.5.4.1-2) is replaced by the following text:

"where z = distance, in m, from the mid-span of the frame to the scantling waterline;".

9 **Para 2.8.1.1** is replaced by the following text:

"**2.8.1.1** This Chapter specifies the requirements for the following structures: fore peak and bulb (if any), bottom within 0,25L aft of the forward perpendicular, side within 0,15L aft of the forward perpendicular, structures located aft of the after peak bulkhead, as well as strengthening of bottom and side forward in the region of impact pressure.

It is assumed in this Chapter that the upper boundary of the fore and after peak is formed by a tight deck or platform arranged directly above the scantling waterline.".

10 **Para 2.8.1.2 (except for Figure 2.8.1.2-1)** is replaced by the following text:

"**2.8.1.2** For the purpose of this Chapter the following symbols have been adopted:

d_f = minimum draught, in m, in way of forward perpendicular;

α_x = angle, in deg., between a vertical and the straight line connecting the intersection points of scantling waterline and weather deck with the ship's side at a cross section within 0,05L from the forward perpendicular (refer to Fig. 2.8.1.2-1);

β_x = angle, in deg., between a tangent to the waterline at vertical mid-distance between the scantling waterline and weather deck on forward perpendicular, and a line parallel to the centreline at a cross section within 0,05L from the forward perpendicular (refer to Fig. 2.8.1.2-2).".

11 **Para 2.8.2.3** is replaced by the following text:

"**2.8.2.3** If transverse system of framing is adopted in the fore peak side, the side stringers shall be fitted at least up to the deck directly above the scantling waterline. Side stringers shall be so fitted that the distance measured vertically between them shall not, in general, exceed 2 m.

Side stringers shall be supported by panting beams fitted at alternate frames and shall, where possible, be supported at the centreline by a longitudinal bulkhead.

The free edge of the side stringers shall be stiffened by a face plate having a thickness not less than that of a stringer web and a breadth in accordance with 1.7.3.1. At every frame, the stringer web shall be stiffened by brackets having the side dimensions not less than half the stringer web height, and where panting beams are fitted, these shall be not less than required by 1.7.2.2. The thickness of brackets shall not be less than that of the stringer web.

Instead of panting beams, the side stringers may be supported by web frames spaced not more than 3 m apart.

It is recommended that non-tight platforms be fitted instead of side stringers with panting beams or web frames. In this case, the distance between the platforms may be increased to 2,5 m. The beams of non-tight platforms shall be fitted at every frame.

If in the structure with panting beams or web frames the distance from the base line to the nearest deck or platform exceeds 9 m, a non-tight platform shall be fitted at the middle of this length, in which the total area of openings shall not exceed 10 % of its area.

With longitudinally framed fore peak side, the spacing of web frames shall not exceed 2,4 m. Deck transverses shall be fitted in way of the web frames passage through or attachment to decks and platforms.

Floors without web frames fitted in line with them shall be attached to the nearest side longitudinals by brackets.".

12 **Para 2.10.2.1** is replaced by the following text:

"**2.10.2.1** It is recommended to use a bar or plate type welded stem. The lower part of the stem shall be efficiently connected to the bar or plate keel and, whenever possible, to the centre girder.

The welded stem plates shall be stiffened with transverse brackets. Arrangement of transverse brackets of the stem shall be consistent with the hull framing. Transverse brackets stiffening the stem plate are fitted not more than 1 m apart below and not more than 1,5 m above the scantling waterline. The brackets shall overlap the joints of the stem with the shell plating and shall be extended and welded to the nearest frames.

The brackets which cannot be extended to the framing, except for the brackets in way of ice belt in ships with ice class, shall have their rear edge made along a smooth curve.

In case where the radius of curvature of the stem is sufficiently large, it is recommended to fit a centerline girder with a face plate.".

13 **Paras 2.10.4.1.1 and 2.10.4.1.2** are replaced by the following text:

"**.1** the sectional area f, in cm^2, of a bar stem from the keel to the scantling waterline shall not be less than

$$f = 1{,}3L - 4. \qquad (2.10.4.1.1)$$

The sectional area may be reduced for ships of restricted areas of navigation:
R2, **R2-RSN** and **R2-RSN(4,5)** — by 10 %;
R3-RSN and **R3** — by 20 %.
The sectional area above the scantling waterline may be gradually reduced to 70 % of the area stated above;

.2 the plate thickness s, in mm, of welded stem shall not be less than

$$s = (0{,}085L + 5{,}5)\sqrt{\eta}, \qquad (2.10.4.1.2)$$

where η = as determined from 1.1.4.3,

but not less than 7 mm.
Where $L > 220$ m, L shall be taken equal to 200 m.
The plate thickness of the stem 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 plate thickness of the stem above the scantling waterline may be gradually reduced to that of shell plates adjoining the stem.
The thickness and width of the stem plates in way of attachment to the plate keel shall not be less than the thickness and width of the latter.
When the distance between the brackets strengthening the stem is reduced by 0,5 m, as compared to that required by 2.10.2.1, the reduction of plate thickness of stem by 20 % may be permitted. If the reduction of the distance between the brackets is less than 0,5 m, the permissible reduction of plate thickness shall be determined by linear interpolation;".

14 **Para 2.10.4.7** is replaced by the following text:

"**2.10.4.7** The thickness of outer and inner plating of fixed propeller nozzle shall comply with the requirements of 2.4.2 of Part III "Equipment, Arrangements and Outfit" taking the following into consideration:
width of middle belt of inner plating shall be not less than the distance from $0{,}03D_o$ forward of the propeller blade tips and $0{,}07D_o$ aft of the propeller blade tips where D_o is the internal diameter of propeller nozzle;
thickness of forward part of the inner and outer plating shall be not less than required for side shell plating (refer to 2.2.4.1 for transverse framing system).
The width of attachment shall be at least $0{,}15D_o$.
The cross-sectional area of the joint shall be not less than required by 2.10.4.2.5 for the solepiece.
For twin screw ships when the propeller nozzle is not attached to the hull at its bottom part, the width of attachment at the top part shall be not less than $0{,}3D_o$.
The propeller nozzle shall be attached to the hull at least at two points.
In way of attachment of the nozzle to the hull the thickness of framing members shall not be less than required by Formula (2.4.2.2-2) of Part III "Equipment, Arrangements and Outfit".".

15 **Para 2.12.3.2**. In the explication to Formula (2.12.3.2) the definition of z_1 is replaced by the following text:

"z_1 = vertical distance, in m, from the scantling waterline to the mid-point of the plate panel considered or the mid-point of span of the bulkhead stiffener.".

3 REQUIREMENTS FOR STRUCTURES OF SHIPS OF SPECIAL DESIGN

16 **Para 3.1.3.4.** In the explication to Formula (3.1.3.4-3) the definition of C_{WL} is replaced by the following text:

"C_{WL} = water plane area coefficient for scantling waterline;".

17 **Paras 3.7.1.5.1 (except for Table 3.7.1.5.1)** is replaced by the following text:

"**3.7.1.5.1** Depth dimension:

region A lying between the line drawn lower than the ballast waterline by the value of h and the line drawn higher than the scantling waterline by the value of h. The value of h shall be determined from Table 3.7.1.5.1;

region B lying between the upper boundary of region A and upper deck;

region C lying between the upper deck and the first tier superstructure deck, forecastle and poop included.".

18 **Paras 3.7.1.5.2** is replaced by the following text:

"**3.7.1.5.2** Lengthwise, region A lies between sections in which the ship breadth at the level of the scantling waterline is equal to (B − 3 m).

In special purpose ships, region A shall extend for at least 0,36L forward and aft from the midship section.".

19 **Para 3.7.1.6.3** is replaced by the following text:

"**3.7.1.6.3** If the bow at ice loadline of a fishing vessel of ice class **Ice3** exceeds 0,25L, an intermediate region of ice strengthening may be established the boundaries of which shall be determined as in the case of **Arc4** ice class.".

20 **Para 3.7.3.3.** In the explication to Formula (3.7.3.3-2) the definition of Δ is replaced by the following text:

"Δ = design ship displacement, in t. For a fishing vessel Δ — displacement to the scantling waterline. For a special purpose ship Δ — displacement of the largest ship mooring alongside. In any case Δ shall not be taken greater than 7500 t and smaller than 464 t;".

21 **Para 3.10.1.2.3 (except for Table 3.10.1.2.3)** is replaced by the following text:

"**3.10.1.2.3** Hull configuration parameters of icebreakers.

For icebreakers, at 0 ÷ 0,25L from the area of the forward perpendicular within service draughts, straight and convex waterlines shall be used. The recommended entrance angles for above waterlines α_0 are within the limits of α_0 = 22° ÷ 30°.

At service draughts, the angle φ shall not exceed:

30° for icebreakers of ice classes **Icebreaker6**, **Icebreaker7**;

25° for icebreakers of ice classes **Icebreaker8**, **Icebreaker9**.

The cross section of stem shall be executed in the form of a trapezoid with a convex forward face.

For icebreakers with standard bow lines, slope angles of frames shall be adopted from Table 3.10.1.2.3.

In way of ice loadline, frames shall have a straight-lined or moderately convex shape.

Projection of the ice loadline on the horizontal plane shall cover the blade tips of side propellers.".

22 **Para 3.10.1.3.2 (except for Figure 3.10.1.3.2 and Table 3.10.1.3.2)** is replaced by the following text:

"**3.10.1.3.2** The length of regions of ice strengthening in ice class ships shall be determined on the basis of Fig. 3.10.1.3.2 and Table 3.10.1.3.2.

An ice loadline shall be determined as a loadline enveloping all the possible waterlines of the ship during ice navigation (heel and mass of ice in case of icing disregarded) including scantling waterline, taking into account Note 5 to Table 2.2 of Part I "Classification". Ballast waterline shall be determined as a waterline enveloping from below all the possible waterlines of the ship in service (heel and mass of ice in case of icing is disregarded).

For **Ice1** — **Ice3** ice class ships no intermediate region of ice strengthening will be established. In this case, it shall be considered that the aft boundary of the forward region of ice strengthening coincides with the forward boundary of the midship region of ice strengthening.".

23 **Para 3.10.2.1.4** is replaced by the following text:

"**3.10.2.1.4** In regions I and II of icebreakers and **Arc4 — Arc9** ice class ships, intercostal and/or side stringers shall be fitted from the fore peak bulkhead to the after peak bulkhead the distance between which or the stringer-to-deck or platform distance shall not exceed 2 m, as measured on a chord at side.

For region I of **Ice1 — Ice3** ice class ships, this distance shall not exceed 3 m.

Side stringers shall be fitted in the ice loadline and ballast waterline regions. If there is a deck or platform lying on the same level, the side stringer may be omitted. Stringers shall be attached to bulkheads by means of brackets.".

24 **Para 3.10.3.2.** In the explication to Formula (3.10.3.2.1) the definitions of Δ и β are replaced by the following text:

"Δ = displacement to the ice loadline, in t;";

"β = angle of frame inclination at ice loadline on the considered section which shall be measured in accordance with Fig. 3.10.1.2.1-2, in deg.; where the frame is concave, in case of **Arc4**, **Arc5**, **Arc6**, **Arc7**, **Arc8**, **Arc9** ice class ships, β shall be chosen as a minimum angle, which is measured between the ballast waterline and the ice loadline;".

25 **Para 3.10.3.3.3.** In the explication to Formula (3.10.3.3.3) the definition of C_4 is replaced by the following text:

"C_4 = factor to be taken from Table 3.10.3.3.3 based on the minimal side inclination angle with regard to normal in the midship region of ice strengthening at the level of the ice loadline;".

26 **Para 3.10.3.8.1.** In the explication to Formula the definition of ν_m is replaced by the following text:

"ν_m = maximum value of the shape factor ν to be determined in bow area sections with the vertical side at ice loadline by the formula

$$\nu\left(\frac{x}{L},\alpha\right) = b_0^{\nu} + b_1^{\nu}\frac{x}{L} + b_2^{\nu}\alpha + b_{11}^{\nu}\left(\frac{x}{L}\right)^2 + b_{22}^{\nu}\alpha^2 + b_{12}^{\nu}\frac{x}{L}\alpha;$$".

27 **Para 3.10.3.8.3.** In the explication to Formula the definition of u_{l_m} is replaced by the following text:

"u_{l_m} = maximum value of the shape factor u_l to be determined in sections of bow area with the vertical side at ice loadline by the formula

$$u_l\left(\frac{x}{L},\alpha\right) = b_0^{u} + b_1^{u}\frac{x}{L} + b_2^{u}\alpha + b_{11}^{u}\left(\frac{x}{L}\right)^2 + b_{22}^{u}\alpha^2 + b_{12}^{u}\frac{x}{L}\alpha;$$".

28 **Para 3.10.3.8.5** is replaced by the following text:

"**3.10.3.8.5** For ships of ice classes **Arc4**, **Arc5**, **Arc6**, **Arc7** with bulbous bows and extended bow at ice loadline, an intermediate region of ice strengthening inside the region A may be added, in addition to the requirements of 3.10.1.3.1. In this case, the values of hull shape factors ν_m, u_{b_m}, u_{l_m} shall be taken equal to the maximum value of the relevant factors determined for each intermediate region inside the A region at ice loadline.".

29 **Para 3.11.1.3.2** is replaced by the following text:

"**3.11.1.3.2** In tugs with a small length of the bow at ice loadline ($b + L_3 < 0{,}35L$, refer to 3.10.1.3), the intermediate region of ice strengthening (or the forward region where no intermediate region is established) shall be extended aft so that the forward boundary of the midship region would be at least $0{,}35L$ away from the forward perpendicular.".

30 **Para 3.11.3.1.1.** In the explication to Formula (3.11.3.1.1) the definition of Δ is replaced by the following text:

"Δ = displacement to the ice loadline, in t;".

31 **Para 3.12.1.1** is replaced by the following text:

"**3.12.1.1** Application.

The requirements of this Chapter apply to hull structures of wing-walled (caisson, pontoon, sectional) docks.

Caisson dock is a structure fitted with a solid pontoon and two wings continuous along the entire length and structurally inseparable (including caisson docks with end pontoons for docking a centre pontoon).

Pontoon dock is a structure fitted with two wings continuous along the entire length and several pontoons connected to the wings by bolts, rivets, welding.

Sectional dock is a structure consisting of several sections, each section being a caisson or a pontoon dock, connected by bolts, welded plates, hinges.

Other structural configurations of floating docks and their proportions shall be subject to calculation according to the agreed procedure.".