RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER	No. 314-26-1122c	dated	12.04.2018

Re:

amendments to the Rules for the Classification and Construction of High-Speed Craft, 2018, ND No. 2-020101-111-E

Item(s) of technical supervision:

high-speed craft under construction and in service

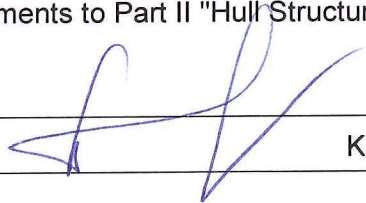| Implementation: **from the date of publication**	Valid till: -	Validity extended till: -

Cancels / amends/ supplements Circular Letter No.   dated

Number of pages: 1 + 3

Appendix(-ces): text of amendments to Part II "Hull Structure and Strength"

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We hereby inform that Part II "Hull Structure and Strength " of the Rules for the Classification and Construction of High-Speed Craft, 2018, ND No. 2-020101-111-E, shall be amended as specified in the Appendix 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 and interested persons in the area of the RS Branch Offices' activity.

2. Apply provisions of the Circular Letter during the RS practical activity.

List of ND amended and introduced paras/chapters/sections (to specify in the List of Circular Letters (form 8.3.36)): Part II: paras 1.1.6, 1.3, 5.3.9.1, 5.3.9.2.1, 5.3.9.2.5, 5.3.9.2.6, 5.3.9.2.7, 5.3.12.5, 5.3.13.2, 5.4.5.2, 5.4.5.3, 5.4.5.4, 5.4.5.6

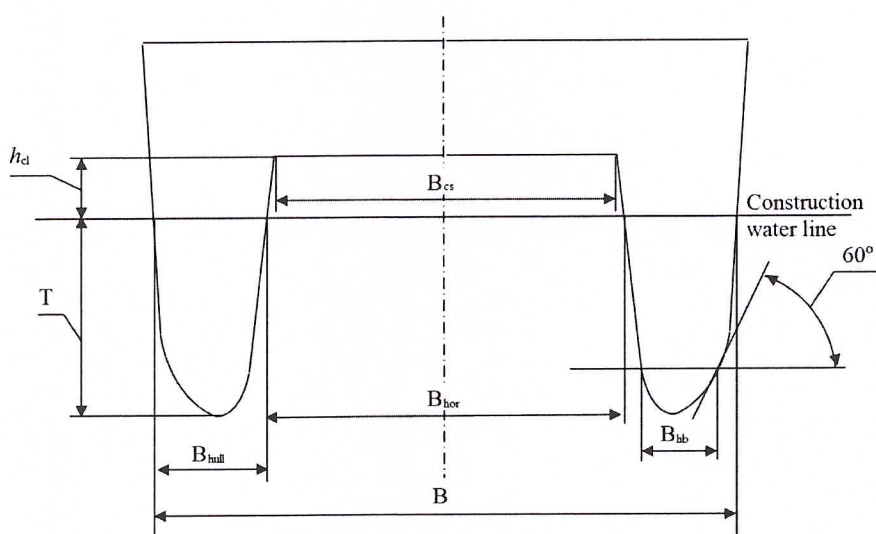| Person in charge:	I.A. Surikova	314	(812) 312-85-72

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PART II. HULL STRUCTURE AND STRENGTH

Para 1.1.6 shall be deleted. Paras 1.1.7 – 1.1.8 shall be renumbered 1.1.6 – 1.1.7 accordingly

Figure 1.3 "Structural parameters of catamaran" shall be amended to read:

"

Structural parameters of catamaran

Fig. 1.3"

Para 5.3.9.1. The annotation to formula " $\left(\bar{\rho}_y\right)^2 = \frac{\rho_y^2}{L^2} \cdot \frac{1+m_\psi}{1+m_z}$ " shall be supplemented by the following text:

" $\bar{\rho}_y$ – nondimensional cetral radius of gyration of the ship.";

the annotation to formula " $m_\psi = \frac{\pi}{24}\rho g \cdot \frac{\alpha^2}{(3-2\alpha)\cdot(3-\alpha)} \cdot \frac{B_{hull}^2 \cdot L^3}{\Delta \cdot \rho_y^2}$ ". The symbol " Δ " shall be deleted

Para **5.3.9.2.1.** The formula for " M_w ... " shall be amended to read:

" $M_w = 0{,}059\alpha\rho g \left(0{,}8 - 4{,}9\frac{B_{hull}}{L}\right) \cdot (1 + 2Fr_L - 0{,}3Fr_L^3) \cdot B_{hull}L^3 f k_M^b$, t·m; ";

the annotation to the formula shall be supplemented by the following text:

" α – waterplane area coefficient; ";

the formula for " M_d " shall be amended to read:

" $M_d = k_{\rho_y} \left(3{,}04 - 4{,}25\frac{l_G}{L}\right) \cdot (1 + m_z) \cdot \Delta \cdot L \cdot n \cdot k_M^q$, t·m; ".

Para **5.3.9.2.5** shall be deleted.

Paras **5.3.9.2.6** and **5.3.9.2.7** shall be renumbered **5.3.9.2.5** and **5.3.9.2.6**, accordingly.

Para **5.3.12.5** shall be deleted.

Para **5.3.13.2.** The annotation to formula (5.3.13.2-1) shall be supplemented by the following text:

"y – distance of hull member under consideration from the neutral axis of hull section, m (refer to Fig. 5.3.13.2); ".

Figure 5.3.13.2. The sections "A-A" and "B-B" of Fig. 5.3.13.2 shall be amended to read:
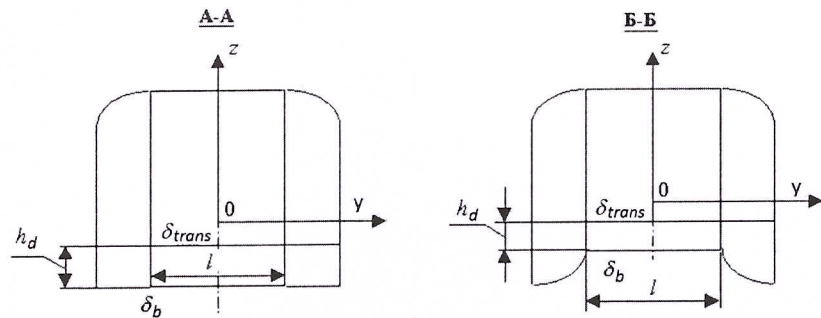
"

Fig. 5.3.13.2".

Para **5.3.13.2.** The second expression in formula (5.3.13.2-2) shall be amended to read:

$$" \; \sigma_\delta = -E(\alpha + \beta) \cdot x \cdot \frac{12}{l^2} \cdot z_\delta, \; ";$$

the annotation to the second expression in formula (5.3.13.2-2) shall be supplemented the following text:

"α and β – parameters determined in the annotation to formula (5.3.13.2-1). ".

Para **5.4.5.2.** In the annotation to formula (5.4.5.2) for the determination of " k_0 " shall be amended to read:

"$k_0 = 1{,}0, when \; \frac{10S_0}{B_{cs}L} \leq 0{,}00015;$

$k_0 = exp\left[-1{,}9 \cdot \left(\frac{10S_0}{B_{cs}L} - 0{,}00015\right)^{0{,}2}\right], when \; \frac{10S_0}{B_{cs}L} > 0{,}00015,$

but not less 0,3.";

Note to the formulas for the determination of "k_0" shall be amended to read:

"Notes: 1. Here S_0 is the are a supported by the component; for the plates the supported area is taken equal to the product of distance between stiffeners (spacing) and the value of the largest plate side or triple spacing (whichever is less).
2. B_{cs} –width of the connecting bridge in compliance with Fig. 1.3. ";

the annotation to formula (5.4.5.2) shall be supplemented by the following text:

"Δ - displacement, kN. ".

Para **5.4.5.3.** Formula (5.4.5.3) shall be amended to read:

$$"P_i = \frac{(56Fr_L^2 + 28Fr_L + 70) \cdot n}{B_h \cdot L} \cdot \Delta \cdot k_x k_0^b k_{sh}, \; kN/m^2, \; (5.4.5.3) ";$$

in the annotation to the formula the parameter " $\bar{h}$ " shall be amended to read " n";

the annotation to the formula shall be supplemented by the following:

"Δ - displacement, kN. ".

Para 5.4.5.4. The reference to para "5.4.5.8" shall be amended to read "5.4.5.3".

Fig. **5.4.5.4.** The legend of the figure shall be amended to read:

Distribution of design pressure along the cross section outline:
——————— wave pressures
— — — impact pressures

Para 5.4.5.6. Formula (5.4.5.6-2) shall be amended to read:

"$P_w = k_w(P_w^{wl} - \rho g z_i)$, kN/m²";

the annotation to formula (5.4.5.6-2) shall be amended to read:

"ρ – sea water density, t/m³".

Para 5.4.5.7. The formula for determination of $k_\mu(x)$ in the annotation to formula (5.4.5.7) shall be amended to read:

$$"k_\mu(x) = \left(1,0 - \frac{3b(x)}{L}\right) \cdot \left\{1 - \left[2,5 - \left(\frac{1,2B_{hor}}{T(x)} + 0,63\right) \cdot exp\left(-21\left(Fr_L - 0,28\sqrt{\frac{L}{B_{hor}}}\right)^2\right)\right] \cdot \frac{b(x)}{L} \cdot (1 + 2,5Fr_L)^2\right\};".$$