



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 314-04-1627c

dated 02.09.2021

Re:

amendments to the Rules for the Classification and Construction of Sea-Going Ships, 2020, ND No. 2-020101-124-E

Item(s) of supervision:

ships under construction

Entry-into-force date:

01.10.2021

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

~~dated~~

Number of pages: 1 + 3

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part XIII "Materials"

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, as well as interested organizations and persons in the area of RS Branch Offices activity.
 2. Apply the provisions of the Circular Letter during review and approval of technical documentation on ships contracted for construction or conversion on or after 01.10.2021, in the absence of a contract, on ships the keels of which are laid or which are at a similar stage of construction on or after 01.10.2021, as well as during review and approval of technical documentation on ships the delivery of which is on or after 01.10.2021.
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List of the amended and/or introduced paras/chapters/sections:

Part XIII: paras 2.2.10.1, 2.5.1.6.1, 3.5.1.2, 3.5.3.3.1.2 and 3.5.3.3.6, Table 3.5.4 and Figure 7.1.3-3

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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	Para 2.2.10.1	Requirements for Grade F and "Arc"-indexed steels have been specified	314-04-1627c of 02.09.2021	01.10.2021
2	Para 2.5.1.6.1	Requirements for cutting tool during corrosion assessment after testing have been specified	314-04-1627c of 02.09.2021	01.10.2021
3	Chapter 3.5 (paras 3.5.1.2 and 3.5.3.3.1.2 and Table 3.5.4)	Throughout the text of the Chapter requirements for Grade F and "Arc"-indexed steels have been specified	314-04-1627c of 02.09.2021	01.10.2021
4	Para 3.5.3.3.6	New para with the requirements for Grade F and "Arc"-indexed steels testing has been introduced	314-04-1627c of 02.09.2021	01.10.2021
5	Figure 7.1.3-3	Misprint has been corrected	314-04-1627c of 02.09.2021	01.10.2021

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SEA-GOING SHIPS, 2020,

ND No. 2-020101-124-E

PART XIII. MATERIALS

2 PROCEDURES OF TESTING

1 **Para 2.2.10.1** is replaced by the following text:

"2.2.10.1 The present procedures may be used in developing and correcting the programs needed in survey of manufacture of steel intended for use at low temperatures (refer to 3.5) including the steel marked with index "Arc" (refer to 3.5.3). The present provisions apply to:

procedures for determining the temperature of a ductile-brittle transition to estimate the material property with regard to retarding the spread of brittle failure (T_{kb} , NDT , $DWTT$);

procedures for determining crack resistance parameter CTOD for the base metal, the heat affected zone (HAZ) and weld metal in testing the specimens cut out from butt-welded joints.

Where one procedure for steel production is concerned (smelting, rolling, condition of supply), the results of tests carried out for the greatest thickness of rolled products may be extended to the rolled products with thicknesses smaller by 40 %, of all lower grades and strength levels where chemical composition, production technology and technology of thermal processing are identical to the tested material. At that, if, according to the calculations, the spread reaches the thickness of 10 mm and less, the minimum thickness approved by the Register shall exceed 10 mm."

2 **Para 2.5.1.6.1** is replaced by the following text:

"2.5.1.6.1 Scratching.

An engraving machine is recommended for use to get reproducible results. Where it is impracticable, the device for scratching shall correspond to the description of a single-bladed cutting tool in accordance with the requirements of ISO 2409:2013. The scratch may be horizontal, vertical or diagonal. It shall be at least 50 mm long, besides it shall be at least 20 mm away from each edge and shall extend to the very surface of the metal at any point of its length."

3 STEEL AND CAST IRON

3 **Para 3.5.1.2** is replaced by the following text:

"3.5.1.2 The general requirements for rolled steel depending on the strength level specified and operation conditions including manufacture, inspection, identification, marking and documentation for rolled products, are given in 3.2, 3.13, 3.14 and 3.17.

The general requirements for manufacture, inspection, identification, marking and documentation for forgings and castings are specified in 3.7 and 3.8 accordingly.

Additional requirements for Grade F rolled steel of higher strength are given in 3.5.2.

Additional requirements for steels with index "Arc" are given in 3.5.3.

Additional requirements for Grade F rolled steel with thickness of 15 mm and less are given in 3.5.4.

Additional requirements for forgings and castings operated at design temperature $-30\text{ }^{\circ}\text{C}$ are given in 3.5.5 and 3.5.6, accordingly."

4 **Para 3.5.3.3.1.2** is replaced by the following text:

".2 determining the crack resistance parameter *CTOD* for the base metal and HAZ metal in testing the specimens cut from butt-welded joints in accordance with 2.2.10.5 for rolled plates with thickness of 16 mm and more. Tests of steel with index "Arc" to determine T_d temperature, as a rule, are carried out in the temperature interval including T_D temperature. The value of T_d is determined with 10 °C interval. Where one procedure for steel manufacture is concerned (smelting, rolling, condition of supply), the results of the above tests obtained with the thickest rolled products may be extended to the rolling products with thicknesses smaller by 40 %, of all lower grades and strength levels where chemical composition, production technology and technology of heat treatment are identical to the tested material. At that, if, according to the calculations, the spread reaches the thickness of 10 mm and less, the minimum thickness approved by the Register shall be ≥ 10 mm."

5 **New para 3.5.3.3.6** is introduced reading as follows:

"3.5.3.3.6 *CTOD* acceptance testing shall be carried out during "Arc"-indexed rolled products manufacturing. At that, a set of three samples shall be taken from one square cut end of one plate from each batch in thickness approximating the full rolled product thickness. The samples shall be taken at 1/4 of the plate's width perpendicular to the rolling direction. The cut shall be located on thickness of the plate as for impact test specimens. Acceptance criteria are specified in Table 3.5.3.3.2.

For "Arc"-indexed rolled products with thickness of less than 16 mm, *CTOD* testing may be replaced by tests for determining temperature T_{kb} . Compliance with the requirements of 2.2.10.2 (70 % of fibrous component) for temperature T_d in accordance with the scope of recognition shall be considered as the acceptance criterion."

6 **Table 3.5.4.** The title of the Table is replaced by the following text:

"The impact energy standards for Grade F rolled plates and their welded joints with thickness of up to 15 mm at a temperature not exceeding T_d for the ships of ice class and icebreakers in absence of the special tests".

7 ANCHOR AND MOORING CHAIN CABLES

7 **Figure 7.1.3-3** is replaced as follows:

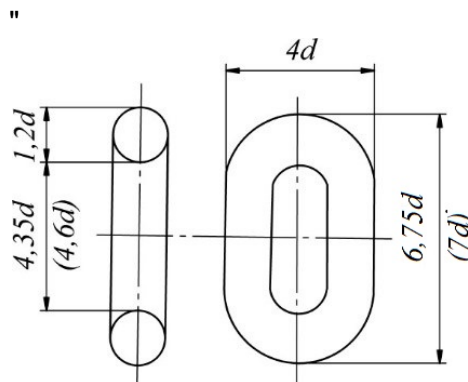


Fig. 7.1.3-3 Studless link".