



# RUSSIAN MARITIME REGISTER OF SHIPPING

**CIRCULAR LETTER**

**No. 315-23-1641c**

dated 13.10.2021

Re:

Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways), 2017, ND No. 2-020101-102-E

Item(s) of supervision:

power electronics

Entry-into-force date:

**01.12.2021**

Cancels / amends / adds Circular Letter No.

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dated -

Number of pages: 1 + 2

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part IX "Electrical Equipment"

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Rules for the Classification and Construction of Inland Navigation Ships (for European Inland Waterways) 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 of technical documentation on ships contracted for construction or conversion on or after 01.12.2021, 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 01.12.2021.

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

Part IX: para 1.2.1 and Sections 21 and 22

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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 1.2.1	New definition "power electronics" has been introduced considering ECE-TRANS-SC3-172-Rev2-Amend2 (Recommendations on Harmonized Europe-Wide Technical Requirements for Inland Vessels)	315-23-1641c of 13.10.2021	01.12.2021
2	Sections 21 and 22	Existing Section 21 has been replaced by new text with requirements for power electronics considering ECE-TRANS-SC3-172-Rev2-Amend2 (Recommendations on Harmonized Europe-Wide Technical Requirements for Inland Vessels): requirements of the existing Section 21 have been transferred to the new Section 22	315-23-1641c of 13.10.2021	01.12.2021

## **RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF INLAND NAVIGATION SHIPS (FOR EUROPEAN INLAND WATERWAYS), 2017,**

**ND No. 2-020101-102-E**

### **PART IX. ELECTRICAL EQUIPMENT**

#### **1 GENERAL**

1 **Para 1.2.1.** after the definition "Down conductor" a new definition is introduced reading as follows:

"Power electronics are an installation, appliance, assembly or device for converting electrical power with switching electronic devices or a system comprised thereof."

2 **Section 21** is replaced by the following text:

#### **"21 POWER ELECTRONICS**

**21.1** A separate device for disconnecting from the mains shall be provided for each power electronics system. The combination "fuse — switch" may be used for consumers of domestic equipment up to a nominal current of 315 A. In all other cases, a circuit-breaker shall be provided on the network side.

**21.2** The power electronics shall be readily accessible for repairs and measurements. Appropriate devices shall be provided for checking functions and detecting malfunctions.

**21.3** Control and signal electronics shall be galvanically separated from power circuits.

**21.4** Converter systems shall ensure safe operation even with the largest permissible voltage and frequency fluctuations. For impermissibly high frequency and/or voltage variations in the supply voltage, the system shall switch off or remain in a safe operating condition.

**21.5** Electric charges in assemblies shall be reduced to a voltage below 50 V in less than 5 s after disconnecting from the network. If longer discharge times are required, a warning sign shall be affixed to the device.

**21.6** The failure of external control signals shall not lead to a dangerous condition.

**21.7** Power electronics shall be designed and installed in such a way that the failure of control voltages cannot lead to threats or damage to the system or device where the power electronics are installed, or to the overall system.

**21.8** The monitoring of the power electronics shall detect errors with certainty and prevent them from remaining unrecognized."

3 Requirements of the **existing Section 21** are transferred to the **new Section 22**.