



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 315-24-1756c

dated 04.05.2022

Re:

amendments to the Rules for the Classification and Construction of Sea-Going Ships, 2022, ND No. 2-020101-152-E in connection with coming into force of IACS unified requirement (UR) M74 (Rev.2 June 2021) and considering the experience of technical supervision

Item(s) of supervision:

automation equipment

Entry-into-force date:

01.07.2022

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

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dated -

Number of pages: 1 + 3

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part XV "Automation"

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 to the equipment:
requested for technical supervision during manufacture on or after 01.07.2022; or
installed on board the ships contracted for construction or conversion on or after 01.07.2022, in the absence of a contract, on board the ships, for which the review of technical documentation was requested on or after 01.07.2022.

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

Part XV: paras 1.4.1, 2.1.1 and Table 7.10.3.2

Person in charge: Andrey V. Vinogradov 315

+7 812 6050517

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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 1.4.1	Requirements for the submitted technical documentation have been specified	315-24-1756c of 04.05.2022	01.07.2022
2	Para 2.1.1	Requirements for automation equipment with regard to heat stability and cold endurance have been specified	315-24-1756c of 04.05.2022	01.07.2022
3	Table 7.10.3.2	Ballast water management system which belongs to category I in accordance with the provisions of UR M74 (Rev.2 June 2021) has been entered into Table	315-24-1756c of 04.05.2022	01.07.2022

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

ND No. 2-020101-152-E

PART XV. AUTOMATION

1 GENERAL

1 **Para 1.4.1** is replaced by the following text:

"1.4.1 For the automation equipment listed under 1.3.2, the technical documentation to be submitted to the Register depending on the object of survey, is as follows:

- .1** functional description including technical parameters and operating conditions;
- .2** block diagram of control system;
- .3** functional process diagram with indication of all instruments and control devices;
- .4** general arrangement and layout;
- .5** user interface description showing the physical layout, a list of all alarms, functions allocated to each keyboard/screen;
- .6** power supply arrangement and connection diagram;
- .7** cable routing layout diagram;
- .8** instrument and equipment list with indication of performance specifications;
- .9** description of functions covered by software and test program for application software at manufacturer's;
- .10** schematic diagrams of input and output circuits;
- .11** failure mode description;
- .12** test program;
- .13** operation manual;
- .14** installation and maintenance manual;
- .15** structural and mounting drawings of consoles and control and monitoring switchboards as well as mounting drawings of elements of automation systems and devices, sensors, signalling and instruments."

2 DESIGN OF AUTOMATION SYSTEMS, AUTOMATION COMPONENTS AND CONTROL DEVICES

2 **Para 2.1.1** is replaced by the following text:

"2.1.1 Reliable operation of automation systems, automation components and control devices shall be ensured under the following ambient temperature conditions:

- +5 °C to +45 °C in enclosed spaces;
- 25 °C to +45 °C on open deck.

Electronic components and devices of automation systems shall reliably operate at ambient temperatures up to +55 °C.

No damage to automation components and control devices intended for installation in switchboards, control panels or enclosures together with other heat-generating equipment shall be caused by temperatures up to +70 °C.

Categories of equipment according to heat stability depending on operating conditions are given in Table 2.1.1-1.

Table 2.1.1-1

Category of equipment	Temperature	Description
TH1	up to +55 °C	Equipment not related to categories TH2 and TH3.
TH2	up to +70 °C	Components and devices intended for installation in switchboards, control panels or enclosures together with other heat-generating equipment.
TH3	above +70 °C	The equipment for which higher operating temperatures are possible, for example, directly fitted to internal combustion engines, boilers, etc.
N o t e . Equipment falling into a higher category meets the requirements for all lower categories of equipment.		

Categories of equipment according to cold endurance depending on the operating conditions are given in Table 2.1.1-2.

Table 2.1.1-2

Category of equipment	Temperature	Description
TL1	not below +5 °C	The equipment intended for installation in heated spaces.
TL2	not below -25 °C	The equipment installed on the open deck or in unheated spaces.
TL3(DAT) ¹	design ambient temperature (DAT)	The equipment installed on the open deck or in unheated open spaces of ships with the distinguishing mark WINTERIZATION(DAT) in the class notation.
¹ Instead of DAT , the value of design ambient temperature shall be indicated in brackets.		
N o t e . Equipment falling into a higher category meets the requirements for all lower categories of equipment.		

7 COMPUTERS AND COMPUTER-BASED SYSTEMS

3 **Table 7.10.3.2** is replaced by the following one:

"Table 7.10.3.2

Examples of assignment to system categories

System category	Examples
I	Maintenance support system Information system Diagnostic system Ballast water management system
II	Liquid cargo transfer control system Automation system for bilge pumping system of machinery spaces Fuel oil treatment automation system Ballast remote automatic control system Stabilization and ride control systems Alarm and monitoring systems for propulsion systems
III	Control system of propulsion system of a ship, meaning the means to generate and control mechanical thrust in order to move the ship. Control system of devices used only during manoeuvring (e.g. bow tunnel thrusters) are not in the scope of this requirement Steering system control system Electric power system (including power management system) Fire detection system Fire-fighting system Flooding detection and fighting system Control bilge system Internal communication systems involved in evacuation phases Ship systems involved in operation of life saving appliances equipment Control system of dynamic positioning system of equipment classes 2 and 3 Towing winch emergency release system (refer to 6.6.3.2.8, Part IX "Machinery")