



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 311-09-1922c

dated 12.04.2023

Re:

amendments to the Rules for the Classification and Construction of Sea-Going Ships, 2023, ND No. 2-020101-174-E

Item(s) of supervision:

ships under construction and technical documentation

Entry-into-force date:

01.06.2023

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

312-10-1898

dated 17.02.2023

Number of pages: 1 + 6

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part I "Classification"

Director General

Sergey A. Kulikov

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 (or equipment installed on board the ships, or products/machinery installed on board the ships) contracted for construction or conversion on or after 01.06.2023, in the absence of a contract, during review and approval of the technical documentation on ships requested for review on or after 01.06.2023.
 3. Apply the provisions of the Circular Letter during review of the technical documentation on ships under construction and in service upon request of the interested parties.
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List of the amended and/or introduced paras/chapters/sections:

Part I: para 3.2.8

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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 3.2.8	Requirements for the scope of documentation to be submitted have been specified	311-09-1922c of 12.04.2023	01.06.2023

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SEA-GOING SHIPS, 2023

ND No. 2-020101-174-E

PART I. CLASSIFICATION

3 TECHNICAL DOCUMENTATION

Para 3.2.8 is replaced by the following text:

"3.2.8 Documentation on automation equipment.

3.2.8.1 General documentation.

No.	Description of documentation	Stamp	TD	DD	PAD	Remarks
.1	Technical description of automation systems and devices with indication of their purpose and principle of operation	AG	•			
.2	Technical description of automation systems and devices with indication of their purpose, principle of operation, their functions, configuration, self-diagnosis principles, with mandatorily designated system integrator (shipyard or, by cooperation, contracted alternative organization/supplier) for each system as well as consoles and control and monitoring switchboards in the main machinery control room and on the navigation bridge	AG			•	
.3	List of controlled parameters with indication of unique identifier, parameter description, type of signal (i.e. analogue/digital, input/output, etc.), distribution by automation systems and devices depending on the signal intended functional purpose (control, alarms, protection, indication), distribution by automation equipment groups	A	•		•	
.4	General arrangement plans of automation equipment in the main machinery control room and on the navigation bridge	A	•		•	

No.	Description of documentation	Stamp	TD	DD	PAD	Remarks
.5	Diagrams of power supply for automation systems: alarm and monitoring systems (AMS), centralized monitoring systems and integrated control systems and AMS, remote automated control systems for main machinery and propellers, automation systems of auxiliary engines and electric power plant, automation systems of boiler plant, automation systems of compressor plants, automation system of bilge and ballast systems, remote level indicating systems	A	•	•	•	
- +6	Technical background containing the design intent of a dynamic positioning system with indication of the equipment redundancy level for ships with distinguishing marks DYNPOS-2 or DYNPOS-3 in the class notation, with substantiation of the worst-case failure design intent when, after occurrence of the worst-case failure, the ship will be able to keep heading and/or position in the specified environmental conditions	AG	•		•	
.7	Failure modes and effects analysis (FMEA — failure mode and effects analysis, refer to 8.2.1 of Part XV "Automation") of dynamic positioning system taking into account the design intent as specified in 3.2.8.1.6 of this Part	AG	•	•	•	
.8	General arrangement plan of the dynamic positioning system equipment, including thrusters/propulsion unit, switchboards and panels of dynamic positioning system with indication of main and back-up (if any) control stations, automated, manual and emergency controls, emergency stops, position reference systems and external force sensors	A	•		•	
.9	Drawings of cable runs (power and control cables) with indication of their penetrations through watertight and fire-fighting bulkheads of ships with distinguishing mark DYNPOS-3 in the class notation	A	•	•	•	
.10	Arrangement plans of the dynamic positioning system equipment on ships with distinguishing mark DYNPOS-3 in the class notation with indication of boundaries formed by fire-fighting bulkheads of "A-60" class and watertight bulkheads. The plans shall specify the layout of ventilation equipment, pipelines of fuel oil system, cooling system and other equipment affecting dynamic positioning system operation, as well as specify passive fire protection ("A-60" class fire-protective ducts), if any	A	•		•	
.11	Functional diagrams of thruster and steering gear loop monitoring systems if the latter is a part of the dynamic positioning system, including diagrams of emergency stop systems	A	•		•	
.12	Technical description of thruster/propulsion system on ships with dynamic positioning system including performance and consumption diagrams, assessment of performance loss resulting from interaction with the hull and other devices, time delays when changing the value and direction of thrust with indication of all protection settings that may restrict device performance	AG	•		•	

3.2.8.2 Documentation on individual automation systems, consoles and control and monitoring switchboards.

Technical documentation listed in 3.2.8.2 shall be submitted by the designer or system integrator specified in 3.2.8.1.2 of this Part. In the latter case, the documentation shall be developed taking into account the solutions adopted in technical documentation listed in 3.2.8.1 of this Part, and submitted for approval at the stage of delivery and installation to the RS Branch Office for technical supervision during construction together with the documentation according to 1.4.1 of Part XV "Automation" of these Rules approved during technical supervision of automation equipment as required by Section 12 of Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships.

No.	Description of documentation	Stamp	TD	DD	PAD	Remarks
.1	Functional diagrams of AMS, centralized monitoring systems, computer-based and integrated control systems and AMS, including diagrams of power supply	A	•			
.2	Technical documentation on alarm and monitoring systems (AMS), centralized monitoring systems and integrated control systems and AMS, including functional diagrams, face panels of consoles and control and monitoring switchboards with indication of all devices, diagrams of power supply	A			•	
.3	Technical documentation on remote automated control for main engines and propellers: including functional diagrams, remote automated control console panels with indication of all devices, diagrams of power supply of remote automated control	A	•		•	
.4	Technical documentation on automation of auxiliary engines and electric power plant, functional diagrams and face panels of consoles and control and monitoring switchboards for electric power plant with indication of all devices	A	•		•	
.5	Technical documentation on automation of boiler plant: functional diagrams and face panels of consoles and control and monitoring switchboards with indication of all devices	A	•		•	
.6	Functional diagrams of automation of compressor plants	A	•		•	
.7	Functional diagrams of automation and remote control of bilge and ballast systems	A	•		•	
.8	Functional diagrams of remote level indicating systems	A	•		•	
.9	Diagrams of electric connections for automation systems and equipment: alarm and monitoring systems (AMS), centralized monitoring systems and integrated control systems and AMS, remote automated control systems for main machinery and propellers, automation system of auxiliary engines and electric power plant, automation system of boiler plant, automation system of compressor plants, automation system of bilge and ballast systems, remote level indicating systems (with indication of cable types and places of installation of all system elements and devices)	A		•	•	

No.	Description of documentation	Stamp	TD	DD	PAD	Remarks
.10	Drawings of face panels of consoles and control and monitoring switchboards in the main machinery control room and on the navigation bridge with indication of all devices	A			•	
.11	Failure modes and effects analysis of dynamic positioning system if it is not included in the document specified in 3.2.8.1.7	AG	•		•	
.12	Drawings of panels of main and back-up (for DYNPOS-3) control stations of dynamic positioning system with indication of location of controls, thruster emergency stops, alarm devices, indicators and internal communications	A	•		•	
.14	List of critical components of dynamic positioning system	AG	•	•	•	
.15	Blackout recovery procedure for dynamic positioning system	AG		•	•	
.16	Capability plots demonstrating ship's position keeping capacity at least for fully effective dynamic positioning system and post worst-case failure condition for particular environmental conditions	AG		•	•	
.17	Functional diagrams of computer-based dynamic positioning control system with indication of inputs and outputs with feedbacks and power supplies	A		•	•	
.18	List of alarm signals displayed on the main control station by dynamic positioning system	AG		•	•	
.19	Specification of means of two-way internal communication including the list of equipment, characteristics, operation conditions, connection diagrams, description of user interface for ships with dynamic positioning system	AG		•	•	
.20	Functional diagrams of fire protection system including control system over spraying of fire extinguishing medium, including all control panels and control circuit monitoring system for ships having distinguishing mark DYNPOS-2 in the class notation	A	•		•	
.21	Specification of protection system of electrical power plant for ships having distinguishing mark DYNPOS-2 and DYNPOS-3 in the class notation in a form of analysis of protection means that may include: results of short circuit calculation; report with description of selective protection for power distribution systems; FMEA from system manufacturers/suppliers, in particular, for common elements and automatic changeover systems between redundancy groups; results of factory acceptance tests for system with extended generator protection; analysis of matching of protection means groups including engine revolution regulators, control systems of electric power plant and automatic voltage regulators; test reports on systems for immunity to short circuit	AG	•		•	
.22	Diagrams of electric connections and power supply of the dynamic positioning system equipment (with indication of cable types and places of installation of all system elements)	A		•	•	

