



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 313-68-1725c

dated 23.03.2022

Re:

amendments to the Rules for the Classification and Construction of Sea Going Ships, 2022, ND No. 2-020101-152-E

Item(s) of supervision:

ships under construction

Entry-into-force date:

01.07.2022

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

~~dated~~

Number of pages:

1 + 4

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part VIII "Systems and Piping"

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Rules for the Classification and Construction of Sea-Going 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 contracted for construction or conversion on or after 01.07.2022, in the absence of a contract, during review and approval of the technical documentation on ships requested for review on or after 01.07.2022.
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List of the amended and/or introduced paras/chapters/sections:

Part VIII: new Chapter 11.4

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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	Chapter 11.4	New Chapter has been introduced containing requirements to the systems for reducing SO _x emissions	313-68-1725c of 23.03.2022	01.07.2022

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

ND No. 2-020101-152-E

PART VIII. SYSTEMS AND PIPING

11 EXHAUST GAS SYSTEM

New Chapter 11.4 is introduced reading as follows:

"11.4 SYSTEMS FOR REDUCING SO_x EMISSIONS

11.4.1 The requirements of this Chapter shall apply to the ships using an alternative compliance methods as effective in terms of exhaust gas cleaning systems for reduction of SO_x emissions (EGCS-SO_x) as that required by regulation 14 of MARPOL Annex VI. The efficiency of the system operation shall be measured along with the engines as part of the ship's propulsion plant.

The exhaust gas cleaning systems that are subject to the Register approval and consume as chemical treatment fluid the aqueous solution of sodium hydroxide (NaOH) and calcium hydroxide (Ca(OH)₂) that have corrosive properties or are considered to represent a hazard to personnel and typically carried on board in bulk quantities shall comply with the requirements of this Chapter.

For exhaust gas cleaning systems using chemicals other than the above, safety measures shall be taken according to the result of a risk assessment to be conducted to analyze the risks, in order to eliminate or mitigate the hazards to personnel brought by the use of such exhaust gas cleaning systems, to an extent equivalent to systems complying with the requirements of this Chapter.

11.4.2 The following requirements for exhaust gas cleaning systems using aqueous solution of sodium hydroxide (NaOH) or calcium hydroxide (Ca(OH)₂) for chemical treatment fluid shall be complied with:

.1 storage tank for chemical treatment fluids shall be arranged so that any leakage will be contained and prevented from making contact with heated surfaces. All pipes or other tank penetrations shall be provided with manual closing valves attached to the tank. In cases where such valves are provided below top of tank, they shall be arranged with quick acting shut-off valves which shall be capable of being remotely operated from a position accessible even in the event of chemical treatment fluid leakages. Tank and piping arrangements shall be approved by the Register;

.2 storage tank shall be protected from excessively high or low temperatures applicable to the particular concentration chemical treatment fluids. Depending on the operational area of the ship, this may necessitate the fitting of heating and/or cooling systems;

.3 if a storage tank for chemical treatment fluids is installed in a closed compartment, the area shall be served by an effective mechanical ventilation system of extraction type providing not less than 6 air changes per hour which is independent from the ventilation system of accommodation, service spaces, or control stations. The ventilation system shall be capable of being controlled from outside the compartment. A warning notice requiring the use of such ventilation before entering the compartment shall be provided outside the compartment adjacent to each point of entry;

.4 storage tank for chemical treatment fluids may be located within the engine room. In this case, a separate ventilation system is not required when the general ventilation system for the space providing not less than 6 air changes per hour is arranged so as to provide an effective

movement of air in the vicinity of the storage tank and is maintained in operation continuously except when the storage tank is empty and has been thoroughly ventilated;

.5 each storage tank for chemical treatment fluids shall be provided with level monitoring arrangements and high/low level alarms. In cases where heating and/or cooling systems are provided, high and/or low temperature alarms or temperature monitoring shall also be provided accordingly;

.6 storage tanks shall have sufficient strength to withstand a pressure corresponding to the maximum height of a fluid column in the overflow pipe, with a minimum of 2,4 m above the top plate taking into consideration the specific density of the treatment fluid;

.7 where chemical treatment fluid is stored in integral tanks, the requirements of 11.3.2.6.1–11.3.2.6.4 shall be considered during the design and construction;

.8 requirements specified in 11.4.2.3 also apply to closed compartments normally entered by persons:

.8.1 when they are adjacent to the integral storage tanks for chemical treatment fluids and there are possible leak points (e.g. manhole, fittings) from these tanks;

.8.2 when the treatment fluid piping systems pass through these compartments, unless the piping system is made of steel or other equivalent material with melting point above 925 °C and with fully welded joints;

.9 chemical treatment fluid piping and venting systems shall be independent of other ship service piping and/or systems. The chemical treatment fluid piping systems shall not be located in accommodation, service spaces, or control stations. The vent pipes of the storage tank shall terminate in a safe location on the weather deck and the tank venting system shall be arranged to prevent entrance of water into the tank for chemical treatment fluids;

.10 storage tanks and pipes/piping systems for chemical treatment fluids which transfer undiluted chemical treatment fluids shall be of steel or other equivalent material with a melting point above 925 °C;

.11 storage tanks and pipes/piping systems for chemical treatment fluids shall be made with a material compatible with chemical treatment fluids, or coated with appropriate anticorrosion coating. It is necessary to consider that several metals are incompatible with the chemical treatment fluids, e.g. sodium hydroxide (NaOH) is incompatible with zinc, aluminum, etc.;

.12 regardless of design pressure and temperature, piping systems containing chemical treatment fluids only shall comply with the requirements applicable to Class I piping systems. As far as practicable, e.g. except for the flange connections that connect to tank valves, the piping systems shall be joined by welding;

.13 following connections shall be screened and fitted with drip trays to prevent the spread of any spillage where they are installed:

.13.1 detachable connections between pipes (flanged connections and mechanical joints, etc.);

.13.2 detachable connections between pipes and equipment such as pumps, strainers, heaters, valves; and

.13.3 detachable connections between equipment mentioned in 11.4.2.13.2;

.14 drip trays shall be fitted with drain pipes which lead to appropriate tanks, such as residue tanks, which are fitted with high level alarm, or shall be fitted with alarms for leak detection. In cases where such tank is an integral tank, the requirements in 11.3.2.6.1–11.3.2.6.2 shall be applied to the tank;

.15 for the protection of crew members, the ship shall have on board suitable personnel protective equipment. The number of personnel protective equipment carried onboard shall be appropriate for the number of personnel engaged in regular handling operations or that may be exposed in the event of a failure; but in no case shall there be less than two sets available onboard;

.16 personnel protective equipment shall consist of protective clothing, boots, gloves and tight-fitting goggles;

.17 eyewash station and safety showers shall be provided, the location and number of these eyewash stations and safety showers shall be derived from the detailed installation arrangements. As a minimum, the eyewash station and safety showers shall be provided:

.17.1 in the vicinity of transfer or treatment pump locations. If there are multiple transfer or treatment pump locations on the same deck then one eyewash and safety shower station may be considered for acceptance provided that the station is easily accessible from all such pump locations on the same deck;

.17.2 in the vicinity of a chemical bunkering station on-deck. If the bunkering connections are located on both port and starboard sides, then consideration shall be given to providing two eyewash stations and safety showers, one for each side;

.17.3 in the vicinity of any part of the system where a spillage/drainage may occur and in the vicinity of system connections/components that require periodic maintenance;

.18 storage tanks for chemical treatment fluids shall be arranged so that they can be emptied of the fluids and ventilated by means of portable or permanent systems.

11.4.3 Tanks for residues generated from the exhaust gas cleaning process shall satisfy the following requirements:

.1 tanks shall be independent from other tanks, except in cases where these tanks are also used as the over flow tanks for chemical treatment fluids storage tank;

.2 tank capacities shall be decided in consideration of the number and kinds of installed exhaust gas cleaning systems as well as the maximum number of days between ports where residue can be discharged ashore. In the absence of precise data, a figure of 30 days shall be used;

.3 where residue tanks used in closed loop chemical treatment systems are also used as the overflow tanks for chemical treatment fluids storage tank, the requirements for storage tanks shall apply.".