



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 311-05-1954c

dated 28.06.2023

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

Entry-into-force date:

01.07.2023

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

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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

Sergey A. Kulikov

Text of CL:

We hereby inform that in connection with entry into force of IACS Unified Requirement (UR) P4 (Rev.7 July 2022), 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 contracted for construction or conversion on or after 01.07.2023, in the absence of a contract, during review and approval of the technical documentation on ships requested for review on or after 01.07.2023.
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List of the amended and/or introduced paras/chapters/sections:

Part VIII: paras 3.1.1, 3.2.2, 3.3.1.1, Table 3.3.1.2, paras 3.3.1.3 and 3.8.1

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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	Part VIII, para 3.1.1	Definition "Joint" has been specified	311-05-1954c of 28.06.2023	01.07.2023
2	Part VIII, para 3.2.2	Application of the requirement has been specified	311-05-1954c of 28.06.2023	01.07.2023
3	Part VIII, para 3.3.1.1	Components of the system have been specified that shall meet the requirements of fire-resistance	311-05-1954c of 28.06.2023	01.07.2023
4	Part VIII, Table 3.3.1.2	Requirements have been specified for application of fire tests to individual piping systems	311-05-1954c of 28.06.2023	01.07.2023
5	Part VIII, para 3.3.1.3	New para has been introduced containing requirements for specimens subject to fire-resistance tests	311-05-1954c of 28.06.2023	01.07.2023
6	Part VIII, para 3.8.1	Para has been supplemented with the requirements for testing of pipelines after installation on board	311-05-1954c of 28.06.2023	01.07.2023

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

ND No. 2-020101-174-E

PART VIII. SYSTEMS AND PIPING

3 PLASTIC PIPING

1 **Para 3.1.1.** The definition "Joint" is replaced by the following text:

"Joint is the location at which two pieces of pipes or a pipe and a fitting are connected together. The joint may be made by adhesive bonding, laminating, welding, flanges and mechanical joints as specified in Table 2.4.5.1."

2 **Para 3.2.2** is replaced by the following text:

"**3.2.2** The requirements are not applicable to mechanical joints used in metallic piping systems."

3 **Para 3.3.1.1** is replaced by the following text:

"**3.3.1.1** Pipes and their associated joints, as well as formed components, integrity of which has significant influence on ship's safety, shall meet the requirements of fire-resistance."

4 **Table 3.3.1.2** is replaced by the following:

"Table 3.3.1.2

Application of plastic pipelines

Nos.	Medium to be conveyed	Location ¹											
		Piping systems	A	B	C	D	E	F	G	H	I	J	K
1	Liquid cargoes with flash point ≤ 60 °C	Cargo	—	—	L1	—	—	O	—	O ²	O	—	L1 ³
		Crude oil tank washing	—	—	L1	—	—	O	—	O ²	O	—	L1 ³
		Venting	—	—	—	—	—	O	—	O ²	O	—	+
2	Inert gas	Pipeline from hydraulic lock	—	—	O ⁴	—	—	O ⁴	O ⁴	O ⁴	O ⁴	—	O
		Pipeline from purifier	O ⁴	O ⁴	—	—	—	—	—	O ⁴	O ⁴	—	O
		Main pipe	O	O	L1	—	—	—	—	—	O	—	L1 ⁵
		Distribution pipelines	—	—	L1	—	—	O	—	—	O	—	L1 ³
3	Flammable liquids with flash point > 60 °C	Cargo	+	+	L1	+	+	— ⁶	O	O ²	O	—	L1
		Fuel oil	+	+	L1	+	+	— ⁶	O	O	O	L1	L1
		Oil	+	+	L1	+	+	—	—	—	O	L1	L1
		Hydraulic	+	+	L1	+	+	O	O	O	O	L1	L1
4	Sea water	Drainage	L1 ⁷	L1 ⁷	L1	+	+	—	O	O	O	—	L1
		Drain pipelines of internal spaces	W1 ⁸	W1 ⁸	—	W1 ⁸	O	—	O	O	O	O	O
		Sanitary drains (internal)	O	O	—	O	O	—	O	O	O	O	O
		Drainage from weather decks	O ^{4,9}	O ^{4,9}	O ^{4,9}	O ^{4,9}	O ^{4,9}	O	O	O	O	O ^{4,9}	O
		Fire main system and water spraying	L1	L1	L1	+	—	—	—	O	O	+	L1
		Foam fire-extinguishing	W1	W1	W1	+	—	—	—	O	O	W1	W1
		Sprinkling	W1	W1	L3	+	—	—	—	O	O	L3	L3
		Ballast	L3	L3	L3	L3	+	O ¹	O	O	O	W2	W2
		Essential purpose cooling systems	L3	L3	—	—	—	—	—	O	O	—	W2
		Non-essential purpose cooling systems	O	O	O	O	O	—	O	O	O	O	O
Tank washing	—	—	L3	—	—	O	—	O	O	—	L3 ²		

Nos.	Medium to be conveyed	Location ¹												
		Piping systems			A	B	C	D	E	F	G	H	I	J
5	Fresh water	Essential purpose cooling systems	L3	L3	—	—	—	—	O	O	O	L3	L3	
		Condensate return system	L3	L3	L3	O	O	—	—	—	O	O	O	
		Non-essential purpose systems	O	O	O	O	O	—	O	O	O	O	O	
6	Other media	Air, sounding and overflow pipes: Water tanks and dry compartments	O	O	O	O	O	O ²	O	O	O	O	O	
		Flammable liquids, $T_{flash} > 60\text{ °C}$	+	+	+	+	+	+ ⁶	O	O ²	O	+	+	
		Pneumatic control systems	L1 ¹⁰	L1 ¹⁰	L1 ¹⁰	L1 ¹⁰	L1 ¹⁰	—	O	O	O	L1 ¹⁰	L1 ¹⁰	
		Air pipes for domestic needs	O	O	O	O	O	—	O	O	O	O	O	
		Brine	O	O	—	O	O	—	—	—	O	O	O	
		Low pressure steam	W2	W2	O ¹¹	O ¹¹	O ¹¹	O	O	O	O	O ¹¹	O ¹¹	
		Independent vacuum cleaners	—	—	—	O	—	—	—	—	O	O	O	
		Discharge pipes of the exhaust gas cleaning system	L3 ⁴	L3 ⁴	—	—	—	—	—	—	—	O	L3 ^{4, 12}	O
		Pumping and discharge arrangement/system for urea	L1 ¹³	L1 ¹³	—	—	—	—	—	—	—	—	L3 ¹²	O

Symbols:

A — machinery spaces of category A;
 B — other machinery spaces;
 C — cargo pumps rooms, including accesses and trunks;
 D — cargo spaces of roll-on/roll-off ships;
 E — dry cargo rooms and trunks;
 F — cargo tanks and trunks;
 G — fuel oil tanks and trunks;

H — ballast tanks and trunks;
 I — cofferdams, dry compartments, etc.;
 J — accommodation, service spaces and control stations;
 K — weather decks;
 O — fire-resistance test is not required;
 "—" — not applicable;
 "+" — only metal materials with fusion point above 925 °C.

¹ For passenger ships subject to SOLAS Reg. II-2/21.4 (Safe Return to Port), plastic pipes for services required to remain operative in the part of the ship not affected by the casualty thresholds, such as systems intended to support safe areas, shall be considered essential services. In accordance with circular MSC.1/Circ.1369, interpretation 12, for Safe Return to Port purposes, plastic piping can be considered to remain operational after a fire casualty if the plastic pipes and fittings have been tested to L1 standard.

² For tankers, where the requirements of item 3.6, Regulation 19 of Annex I to MARPOL 73/78 shall be met, "—" shall be used instead of "O".

³ For cargo tanks the remotely closing valves shall be provided.

⁴ From the side the valves with remote control located outside of the room shall be provided.

⁵ For pipeline between engine room and deck hydraulic lock "O" may be used instead of "L1".

⁶ When cargo tanks contain flammable liquids with flash point > 60 °C, "O" may be used instead of "—" or "+".

⁷ For passenger ships "+" shall be used instead of "L1".

⁸ For drainage pipelines servicing only the particular space "O" may be used instead of "W1".

⁹ Scupper holes of weather decks in the positions 1 and 2 according to Regulation 13 of the International Convention on Load Line, 1966, shall be "+", if they are not provided with the appropriate blanking means.

¹⁰ When control functions are not foreseen, "O" may be used instead of "L1".

¹¹ For essential purposes, such as heating of cargo tanks and ship's typhon, "+" shall be used instead of "O".

¹² For L3 in service spaces, in accommodation and control spaces "—".

¹³ Register Type Approved plastic piping without fire endurance test "O" is acceptable downstream of the tank valve, provided this valve is metal seated and arranged as fail-to-closed or with quick closing from a safe position outside the space in the event of fire.

5 New para 3.3.1.3 is introduced reading as follows:

"3.3.1.3 Fire endurance tests shall be carried out with specimen representative for pipes, joints and formed components¹.

The following shall be subjected to tests:

.1 pipes with outer diameter < 200 mm — on test specimens with the minimum outer diameter and wall thickness²;

.2 pipes with outer diameter ≥ 200 mm — one test specimen for each category of t/D (D = outer diameter, t = structural wall thickness). A scattering of ±10 % for t/D is regarded allowable. Minimum size approved is equal to the diameter of specimen successfully tested;

.3 each type of joint applicable for applied fire endurance level — on pipe to pipe specimen.

Means shall be provided to ensure a constant media pressure inside the test specimen during the fire test as specified in Appendix 1 or 2 of the IMO resolution A.753(18), as well as

¹ A test specimen incorporating several components of a piping system may be tested in a single test.

IMO resolutions MSC.313(88) and MSC.399(95). During the test it is not permitted to replace media drained by fresh water or nitrogen.

² The most critical parameter in the tests is the wall thickness and thus, if a specimen with the minimum wall thickness is successfully tested, pipes with larger wall thickness are also covered. A key factor determining the fire performance of a pipe component variant is the thickness-to-diameter (t/D) ratio and whether it is larger or smaller than that of the variant which has been fire-tested.

If fire-protective coatings or layers are included in the variant used in the fire test, only variants with the same or greater thickness of protection, regardless of the (t/D) ratio, shall be qualified by the fire test."

6 **Para 3.8.1** is replaced by the following text:

"3.8.1 After installation the pipeline system of essential purpose shall be hydraulically tested with pressure at least 1,5 times higher than the design pressure. Notwithstanding the requirement above, the requirements in 3.8.2 may be applied to open ended pipes (drains, effluent, etc.)."