RUSSIAN MARITIME REGISTER OF SHIPPING

RULES

FOR TECHNICAL SUPERVISION DURING CONSTRUCTION OF SHIPS AND MANUFACTURE OF MATERIALS AND PRODUCTS FOR SHIPS

ND No. 2-020101-175-E

RULE CHANGE NOTICE

ENTERS INTO FORCE:

01.01.2026

St. Petersburg
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RULES FOR TECHNICAL SUPERVISION DURING CONSTRUCTION OF SHIPS AND MANUFACTURE OF MATERIALS AND PRODUCTS FOR SHIPS

The present Rule Change Notice to Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships (hereinafter — RCN) has been approved in accordance with the established approval procedure and contains information on amendments, except for editorial amendments. RCN amendments come in force on 1 January 2026.

REVISION HISTORY

PART I. GENERAL REGULATIONS FOR TECHNICAL SUPERVISION

Item	Applicability	Description	Remarks
Paras 9.3.20.5.1 and 9.3.20.9	Recognition of service suppliers Special requirements	References to IACS Recommendation No. 180 "Recommendation for Conducting Commissioning Testing of Ballast Water Management Systems" have been introduced	IACS UR Z17 (Rev.19 Oct 2024)
Appendix 1	Navigational equipment Electronic inclinometer	Code and group of item of technical supervision have been amended	IMO resolution MSC.532(107)
Appendix 1	Deck machinery Anchor handling winches	New codes have been introduced regarding anchor handling winches and associated equipment	IMO resolution MSC.532(107) and circular MSC.1/Circ.1662
Appendix 1	Electrical equipment Sources of electrical energy Fuel cells	New code 11020400 has been introduced for new item of technical supervision fuel cells	
Appendix 1	Hulls and hull elements made of polymer composite materials. Polymer buoyancy modules	Name of section with code 16000000 has been amended; new code 16030000 has been introduced for new item of technical supervision polymer buoyancy modules	

PART II. TECHNICAL DOCUMENTATION

Item	Applicability	Description	Remarks
Appendix 1, Table 1	Deck machinery Anchor handling winches Documentation	List of documentation has been supplemented with the documentation on anchor handling winches	IMO resolution MSC.532(107) and circular MSC.1/Circ.1662
Appendix 1, Table 1, item 7.4 (new)	Ship operational documentation for electrical equipment	New document titled "Register of monitoring condition and maintenance of accumulator batteries intended for use as power source for essential and emergency services" has been added	

PART III. TECHNICAL SUPERVISION DURING MANUFACTURE OF MATERIALS

Item	Applicability	Description	Remarks
Para 2.2.5.1	Products for ships, shipboard equipment, ship machine building Stainless steel castings	Application has been supplemented in connection with introduction of new requirements	
Paras 2.2.5.2.1, 2.2.5.2.2 and 2.2.5.3.1	Products for ships, shipboard equipment, ship machine building Stainless steel castings	Duplication has been deleted in general provisions of procedures for recognition of manufacturers of stainless steel castings of different manufacture types	
Para 2.2.5.4 (new)	Products for ships, shipboard's equipment, ship machine building Stainless steel castings	Provisions on recognition of manufacturers have been introduced	

Item	Applicability	Description	Remarks
Para 3.6.3 (new)	Synthetic materials used for bearings of marine shafts and rudder stocks	Requirements have been introduced regarding the scope of documentation, qualification tests and content of the Type Approval Certificate (CTO)	IACS UR M85 (New Nov 2024)
Para 4.3.2.3	Welding Welders' qualification Description of bar types and flux-cored wire filler Applied welding processes	List of welding processes for which designation of bar types and filler type of welding wire apply at assigning the range of approval of the Welder Approval Test Certificate (СДС), has been supplemented with welding processes 138 and 141 in accordance with the acting international requirements	IACS UR W32 (Rev.1 Sep 2020)
Para 4.3.2.6 (deleted)	Welding Welders' qualification Indices of flux classification	Excessive reference information has been deleted. Existing para 4.3.2.7 and references thereto have been renumbered 4.3.2.6	
Para 4.3.3.2	Welding Welders' qualification Types of welding methods	Terminology on types of welding methods and their classification regarding welds have been brought into compliance with the acting international requirements. Definition of welding method has been introduced	IACS UR W32 (Rev.1 Sep 2020)
Para 4.5.1	Welding Welders' qualification Range of approval of the Welder Approval Test Certificate	Essential variables of welding procedure to draw up СДС have been brought into compliance with the acting international requirements	IACS UR W32 (Rev.1 Sep 2020)

Item	Applicability	Description	Remarks
Para 4.5.2	Welding Welders' qualification Range of approval of the Welder Approval Test Certificate Welding processes	Exception has been introduced when welding of test pieces for drawing up СДС by one welding process covers another welding process	
Table 4.5.6	Welding Welders' qualification Range of approval Types of welding consumables	Applicability of types of welding consumables for welding processes 136 and 114 has been brought into compliance with the acting international requirements	ISO 9606-1:2012
Appendix 4	Welding Welders′ certification Practical recommendations for filling in Welder Approval Test Certificates	Recommendations for filling in Welder Approval Test Certificates (СДС) have been amended regarding filling sequence, names of table columns have been aligned with the current column names of the table "Range of Test and Approval" of the Welder Approval Test Certificate form	

PART IV. TECHNICAL SUPERVISION DURING MANUFACTURE OF PRODUCTS

Item	Applicability	Description	Remarks
Table 5.10.1 and Para 5.10.5	Deck Machinery Anchor Handling Winches	The requirements for product manufacturing supervision have been supplemented by the requirements for the supervision of anchor handling winches	IMO Resolution MSC.532(107) and IMO Circular MSC.1/Circ.1662
Para 8.2.4	Fittings of Class I and II pipelines Evaluation of Vibration Conditions	Type of fittings and requirements for vibration tests have been specified	

Item	Applicability	Description	Remarks
Para 10.7.13.4.6 (new)	Electrical Equipment Alarm Systems Fire Detection System	Requirements for testing linear heat detectors have been introduced	IMO Resolution MSC.555(108)
Table 10.7.13.1	Electrical equipment Sewage water high level alarm devices Bulkhead bearing high temperature alarm devices for cargo and ballast pumps. Hull lifting and lowering system malfunction alarm devices for mobile offshore drilling units (MODU)	Requirements for testing have been introduced	
Para 10.7.28 (new)	Electrical equipment Slip rings devices for podded azimuth propulsion	Reference to the applicable testing requirements has been introduced	
Para 12.6.14	Manufacture of Products Automation Equipment Radiated electromagnetic disturbance emission tests	Reference to standard CISPR 16-2-3: 2016+AMD1:2019+AMD2:2023 has been updated	IACS UR E10 (Rev.10 Aug 2024)
Para 12.6.15.2	Manufacture of Products Automation Equipment Immunity to conducted radio frequency disturbances tests	Reference to standard IEC 61000-4-6: 2023 has been updated	IACS UR E10 (Rev.10 Aug 2024)
Para 12.6.15.4	Manufacture of Products Automation Equipment Immunity to surge disturbances tests	Reference to standard IEC 61000-4-6: 2023 has been updated	IACS UR E10 (Rev.10 Aug 2024)

Item	Applicability	Description	Remarks
Para 12.6.16	Manufacture of Products Automation Equipment Conducted disturbance emission level tests	Reference to the standard CISPR 16-2-1: 2014+AMD1:2017 has been updated	IACS UR E10 (Rev.10 Aug 2024)
Para 13.4.8 (new)	Life-Saving Appliances Report forms	Recommendations for use of test report model forms have been introduced	IMO Circulars MSC.1/Circ.1628/Rev.4, MSC.1/Circ.1630/Rev.3, MSC.1/Circ.1631/Rev.1 and MSC.1/Circ.1632/Rev.1
Appendix 1 to Section 13	Totally enclosed lifeboats	Additional information has been introduced regarding the amendments to IMO resolution MSC.81(70) as to the prototype testing	IMO resolution MSC.568(109)
Section 18 (new)	Long-term positioned floating facilities and floating objects Polymer buoyancy modules	Requirements for the polymer buoyancy modules have been introduced	

PART I. GENERAL REGULATIONS FOR TECHNICAL SUPERVISION

9. RECOGNITION OF SERVICE SUPPLIERS

9.3. SPECIAL REQUIREMENTS

Para 9.3.20.5.1. The **fourth paragraph** is amended as follows:

"have knowledge of the latest versions of IMO circulars BWM.2/Circ.70 "Guidance for the Commissioning Testing of Ballast Water Management Systems", IACS Recommendation No. 180 "Recommendation for Conducting Commissioning Testing of Ballast Water Management Systems" and IMO BWM.2/Circ.42 "Guidance on Ballast Water Sampling and Analysis for Trial Use in accordance with the BWM Convention and Guidelines (G2)";".

Para 9.3.20.9 is supplemented by the following text:

"IACS Recommendation No. 180 "Recommendation for Conducting Commissioning Testing of Ballast Water Management Systems".".

APPENDIX 1

NOMENCLATURE OF ITEMS OF THE REGISTER TECHNICAL SUPERVISION

Code 05230000 is amended as follows:

"

05230000MK	Electronic inclinometer	~~2~~3			

".

New codes 09100700-09100708 are introduced reading as follows:

"

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
09100700	Anchor handling winches:	3			
09100701	output and intermediate shafts	2			
09100702	pinions, gears of power drives	2			NDT reports shall be submitted
09100703	tension measuring and control means	2			
09100704	brakes	2			
09100705	loose gear	3			
09100706	chain stopper, including emergency release device	2			
09100707	spooling devices	2			
09100708	emergency release system	2			

".

New code 11020400 is introduced reading as follows:

"

11020400	Fuel cells	3			

".

Name of section with code 16000000 is replaced by the following text:

"

16000000	**HULLS AND HULL ELEMENTS MADE OF FIBER-REINFORSED PLASTIC MATERIALS. POLYMER BUOYANCY MODULES**				

".

New code 16030000 is introduced reading as follows:

"

16030000	Polymer buoyancy modules	3			Refer to Appendix 2 of Part I "Hull and Hull Equipment" of the Rules for the Classification and Construction of Ships for Inland Waterways of the Russian Federation

".

PART II. TECHNICAL DOCUMENTATION

APPENDIX 1

SHIP OPERATIONAL DOCUMENTATION FOR THE ITEMS OF RS TECHNICAL SUPERVISION

Table 1. New items 3.6 and 3.7 are introduced reading as follows:

"

Nos.	Document name	RS approval	Flag MA approval	Stamp	Application
3 — Machinery, propulsion, systems					
3.6	Maintenance Manual of anchor handling winches	-	–	For information	For anchor handling vessels SOLAS reg. II-1/3-13.2.2, IMO resolution MSC.532(107) and IMO circular MSC.1/Circ.1662
3.7	Operation Manual of anchor handling winches	-	–	For information	For anchor handling vessels SOLAS reg. II-1/3-13.2.2, IMO resolution MSC.532(107) and IMO circular MSC.1/Circ.1662

".

Table 1 is supplemented by the following text:

"

7.4	Register of monitoring condition and maintenance of accumulator batteries intended for use as power source for essential and emergency services	+	-	Agreed	13.1.5 of Part XI "Electrical Equipment" of the Rules for the Classification and Construction of Sea-Going Ships

"

PART III. TECHNICAL SUPERVISION DURING MANUFACTURE OF MATERIALS

2 METALS

2.2 PROCEDURES FOR RECOGNITION OF MANUFACTURERS

Para 2.2.5.1 is amended as follows:

"**2.2.5.1** General.

These provisions specify the procedure for recognition (initial survey) by the Register of the manufacturing process of rolled products, forgings, castings, forged and rolled plates, and stampings of corrosion-resistant (stainless) steel. Procedure for recognition of manufacturer, issue, endorsement and renewal of the Recognition Certificate for Manufacturer (СПИ) is set forth in 2.1.

Requirements for corrosion-resistant steels are set forth in 3.16, Part XIII "Materials" of the RS Rules/C.

Prior to the commencement of production under the RS technical supervision at the initial survey, the firm (manufacturer) shall prepare and submit documentation containing information on the manufacturing process and stages, at which the relevant process parameters and properties of semi-finished products and finished products are monitored.".

Para 2.2.5.2.1 is amended as follows:

"**2.2.5.2.1** General.

~~Prior to the commencement of production under the RS technical supervision at the initial survey, the firm (manufacturer) shall prepare and submit documentation containing information on the manufacturing process and stages, at which the relevant process parameters and properties of semi-finished products and finished products are monitored.~~All the provisions and instructions under 2.2.1 and related to the request, the scope and content of the submitted documentation, survey, amount of the metal subjected to the tests, as well as the sampling and test methods are applied to rolled products made of corrosion-resistant steel. For forgings, forged and rolled plates, as well as stampings of corrosion-resistant (stainless) steel, the provisions and instructions under 2.2.1 are also applied.".

Para 2.2.5.2.2 is amended as follows:

"**2.2.5.2.2** ~~Application.~~ Documentation.

~~All the provisions and instructions under 2.2.1 and related to the request, the scope and content of the submitted documentation, survey, amount of the metal subjected to the tests, as well as the sampling and test methods are applied to rolled products made of corrosion-resistant steel. For forgings, forged and rolled plates, as well as stampings of corrosion-~~

~~resistant (stainless) steel, the provisions and instructions under 2.2.1 are also applied.~~ The manufacturer shall submit together with the request, general information specified in 2.2.1.2.1.1 — 2.2.1.2.1.6 and the information relevant to:".

Para 2.2.5.3.1 is amended as follows:

"**2.2.5.3.1** General.

These provisions cover the pipes manufactured by one of these methods:

pipe is manufactured from a tubular billet by hot forming without welding;

pipe is manufactured from bored, turned hot-formed bare pipes;

pipe is welded with one longitudinal weld without use of adding material like strips.

~~Prior to the commencement of production under the RS technical supervision, the manufacturer shall prepare and submit documentation containing information on the manufacturing process and stages, at which the relevant process parameters and properties of semi-finished products and finished products are monitored.~~".

New para 2.2.5.4 is introduced reading as follows:

"**2.2.5.4** Procedure for recognition of manufacturers of castings made of corrosion-resistant alloys.

2.2.5.4.1 General.

These provisions apply to castings made of stainless austenitic chrome-nickel ferrum-base alloys complying with the requirements of 3.16.5, Part XIII of the RS Rules/C.

2.2.5.4.2 Application. Documentation.

All the provisions and instructions under 2.1.1 and related to the request, the scope and content of the submitted documentation and survey, are applied to castings made of corrosion-resistant steel.

2.2.5.4.3 Manufacture.

The manufacturer shall maintain records of heat treatment identifying the furnace used, furnace charge, date, temperature and time of exposure. The records shall be submitted to the Register during the survey. Condition of supply shall be indicated in the quality certificate (Manufacturer's Certificate). If more than one heat treatment schedule is indicated, the manufacturer shall choose the condition of supply, unless otherwise indicated.

At in-line mass manufacture, it is permitted to form a batch from steel castings of the same mark from several heats made according to the same drawing, cast in one furnace charge and heat treated by the same schedule. Herewith, batch number shall be indicated instead of cast number in the Manufacturer's Certificate. At low-batch manufacture at established production process, it is allowed to form a batch from steel castings of the same mark from several heats. The steel shall be cast in the casting forms or by continuous casting. Control measures shall be provided to ensure:

material strength on both ends of ingots;

uniformity of chemical composition of continuously cast material in transition areas along the longitudinal axis.

The Register shall check important aspects of casting production, including but not limited to mold preparation and chaplet positioning, pouring times and temperatures, mold breakout repairs, heat treatment and inspection of finished product.

For stainless steel casting flame cutting, scarfing or arc-air gouging shall be undertaken in accordance with recognized good practices and shall be carried out before the final heat treatment, unless otherwise is approved by the Register.

2.2.5.4.4 Test program.

The test program shall be approved by the Register. The test program is developed by the firm (manufacturer) and shall take into account the requirements given in 2.2.5.4.5.

When developing the test program, it should be noted that, as opposed to 2.2.1.3.1, the recognition for any corrosion-resistant steel mark may also cover recognition for another steel mark of the same alloying system (the same class), provided that the aim analyses, method of manufacture and condition of supply are similar.

2.2.5.4.5 Tests.

2.2.5.4.5.1 Sampling.

The test samples shall be taken in compliance with 3.16.5.8, Part XIII of the RS Rules/C.

2.2.5.4.5.2 Mechanical tests.

Mechanical tests shall be performed on samples after finishing operations, and the test results shall comply with the requirements of the national and international standards and/or the RS-approved documentation and Table 3.16.5.3, Part XIII "Materials" of the RS Rules/C.

2.2.5.4.5.3 Chemical analysis.

Chemical analysis shall comply with the steel mark given for castings in 3.16.5.2, Part XIII "Materials" of the RS Rules/C and/or RS-agreed standards, specifications.

2.2.5.4.5.4 Pressure test.

Castings under internal pressure shall be subject to hydraulic pressure test in compliance with the conditions specified in the relevant Parts of the RS rules. Test pressure shall be measured by means of an appropriate calibrated gauge. Test shall be carried out on the finished casting and before application of any coating which may obscure test effect. Unless otherwise specified, castings shall be tested in the presence of the RS representative.

2.2.5.4.5.5 Visual testing.

All castings shall be cleaned and prepared for inspection by a relevant method: pickling, alkali cleaning, cleaning with wire brush, local grinding, as well as shot blast or sand blast treatment. Surfaces shall not be hammed or treated in any way which may obscure defects. All castings shall be presented for visual testing.

2.2.5.4.5.6 Non-destructive testing.

Extent of tests and acceptance criteria shall be agreed with the Register. The manufacturer shall submit a report confirming that required checks have been performed without identifying substantial defects and including the reference to the standard of testing and agreed acceptance criteria.

2.2.5.4.5.6.1 Magnetic particle and penetrant testing.

Magnetic particle and penetrant testing shall be performed for finished castings. Unless otherwise specified, such tests shall be carried out in the presence of the RS representative.

2.2.5.4.5.6.2 Ultrasonic testing.

Ultrasonic testing shall be performed by the manufacturer in zones indicated in the approved plans, and areas which are deemed subject to casting defects. Welds and adjacent areas shall be tested as well.".

3 NON-METALLIC MATERIALS

3.6 POLYMER AND POLYMER COMPOSITE MATERIALS

New para 3.6.3 is introduced reading as follows:

"**3.6.3 Synthetic materials for bearings of marine shafts and rudder stocks.**

3.6.3.1 Submitted documentation subject to review shall contain test reports (refer to 3.6.3.2) which comply with the requirements of 6.13.3, Part XIII "Materials" of the RS Rules/C and documents, containing the following:

.1 product name;

.2 name and address of the manufacturer, including details for all relevant production places;

.3 reference of applicable RS rules and standards which the product shall comply with;

.**4** product description:

material type;

lubrication type;

isotropic or anisotropic behaviour;

elastomeric or non-elastomeric type;

.5 limitations of the product;

.6 product specification, technical data sheet, and installation manual including:

maximum nominal surface pressure;

product dimensions: — minimum and maximum dimensions — other, if relevant;

commonly acceptable mating material (type of shaft material, roughness, hardness, etc.);

running clearance;

maximum operating temperature;

.7 safety data sheet;

.8 description of production processes;

.9 description of quality assurance system or copy of ISO 9001 certificate;

.10 in-service experience, if available;

.11 list of tests and measuring equipment including calibration certificate.

The manufacturer shall submit test reports or qualification test program (refer to 3.6.3.2), if the tests have not been carried out.

3.6.3.2 Qualification tests.

The test laboratory selected for qualification tests shall be recognized by the Register and shall have accreditation according to ISO/IEC 17025 for carrying out and recording of the material property tests required by 6.13.3, Part XIII "Materials" of the RS Rules/C. If the test laboratory does not have the relevant recognition, said tests shall be carried out according to the qualification test program approved by the Register and shall be witnessed by an RS surveyor.

The test material/product used for testing shall be selected from the manufacturer's production line or stock as:

finished certified materials/products; or

от samples taken from earlier stages in the production of the component, when applicable.

3.6.3.3 Type Approval Certificate.

The Register shall issue a Type Approval Certificate (CTO) based on the test reports and manufacturer's technical documentation. The Certificate shall contain the general information as defined by the RS Rules. As minimum, the following information is specifically applicable to products relevant to this document and shall be included in the relevant Type Approval Certificate:

.1 product description and properties in accordance with 6.13.3, Part XIII "Materials" of the RS Rules/C;

.2 maximum nominal surface pressure;

.3 maximum operating temperature.".

4 WELDING. WELDERS' CERTIFICATION

4.3 DEFINITIONS, TERMS AND SYMBOLS USED IN WELDERS' APPROVAL TESTING

Para 4.3.2.3 is amended as follows:

"**4.3.2.3** For assigning the range of approval of the Welder Approval Test Certificates for welding processes 111, 114, 131, 133, 135, 136, 138 and 141 the types of electrode covering, wires and flux-cored wire filler shall be indicated in accordance with the instructions given below.

According to ISO 2560:2020, the type of electrode covering, depending on its composition, (welding process 111) is shown by the following letter indices:

A = acid (oxidizing) covering;
B = basic covering;
C = cellulose covering;
R = rutile covering;
RA (AR) = mixed rutile-acid covering;
RB = mixed rutile-basic covering;
RC = mixed rutile-cellulosic covering;
RR = rutile thick covering;

The use of solid wire for welding processes 131 and 135 and solid rods for process 141 is indicated by the S letter index.

According to ISO 17632:2015, depending on the composition, the filler type for flux-cored welding wire (welding processes 114, 133, ~~and~~ 136 and 138) is indicated by letter indices according to Table 4.3.2.3.".

Table 4.3.3.1-1. In column "Types of steel" for sub-group of steel 1.3, the description of the scope of application of the sub-group regarding yield strength is amended as follows:

"Normalized fine grain steels with a specified minimum yield strength ~~R_{eH} > 360 MPa~~ 360 MPa < R_{eH} ≤ 460 MPa".

Para 4.3.2.6 is deleted.

Existing para 4.3.2.7 and references thereto are renumbered **4.3.2.6**.

Para 4.3.3.2 is amended as follows:

"**4.3.3.2** In welder certification, the types of welded joints are indicated by the following indices:

.1 ~~BW —~~ for butt welds (BW):

A — single-sided weld with backing;

B — single-sided weld without backing;

C — double-sided weld with back gouging;

D — double-sided weld without back gouging.

.2 ~~fillet welds — F~~for tee, corner and lap joints:

F — single-sided or double-sided fillet weld;

sl — single-layer weld;

ml — multilayer welding;

N o t e . ~~Fillet weld is a triangle section weld between two and more components in tee, corner or lap joint.~~

~~Weld is a result of welding. A weld includes weld metal and heat-affected area.~~

Types of welding joints include bath protection welding or welding without shielding gas, single-side welding, double-side welding, single-layer and multilayer welding, leftward welding and rightward welding (for oxyacetylene welding (OAW)).".

4.5 RANGE OF APPROVAL BASED ON TEST RESULTS

Para 4.5.1 is amended as follows:

"**4.5.1** The assessment of welders' practical skills in the course of practical tests for defining the range of approval for issuing the Welder Approval Test Certificates is based on the following essential variables of:

.1 welding process and type;

.2 product type/structure (plate and pipe);

.3 type of welded joint ~~(butt and fillet)~~;

.4 base metal group;

.5 welding consumables type;

.6 structural dimensions of ~~welded joint~~ a test piece (thickness of materials ~~and~~ / outside pipe diameter);

.7 welding positions of test pieces;

~~**.8** special features of welding process (backing, back gouging, single-side welding, double-side welding, single-layer weld, multilayer welding, leftward and rightward welding).~~

Some types of welding may be singled out as requiring individual tests:

pipe welding under conditions of the limited access (refer to 4.4.3.7);

pipe assembly welding (refer to 4.4.3.6 and 4.4.3.8);

repair of casting and forging defects (refer to 4.4.3.9).

~~All welded joint test pieces shall be generally welded using the essential variables independently.~~

For each essential variable of welding process, a range of approval is defined according to 4.5.2 — 4.5.9 that shall be specified in СДС. If a welder has to perform welding outside the welder's range of approval for one of the parameters specified in 4.5.1, issue of new СДС is required after satisfactory additional certification according to 4.2.8 or new qualification test, except for application of combination of two or more welding processes ~~in~~ for one test piece

~~(refer to~~ according to 4.5.2~~)~~, as well as dimensions and welding positions ~~(refer~~ according to 4.5.7 and 4.5.8~~)~~.".

Para 4.5.2. **The first paragraph** is supplemented by the following text:

"**4.5.2** Every practical test is generally limited by the range of approval for one welding process/type designated by indices according to the requirements of 4.3.2.1 and 4.3.2.2 except for the range of approval of welding process 135 that also covers welding process 138 and vice versa, when the range of approval of welding process 138 also covers welding process 135 (refer to Footnote 1 in Table 4.3.2.2).".

Paras 4.5.4 — 4.5.4.2 are amended as follows:

"**4.5.4** The range of approval of the Welder Approval Test Certificate for the weld joint types (butt or fillet weld) to select the type of test pieces at practical testing, shall be determined based on the provisions stated bellow.

4.5.4.1 The range of approval of the Welder Approval Test Certificate for butt joints of one type of welding method ~~may~~ covers butt joints ~~welds in~~ of other types of ~~butt joints and welds~~ welding method taking into account 4.5.9 except for cases requiring additional types of testing ~~(refer~~ according to 4.5.1~~)~~.

4.5.4.2 ~~Butt welds qualify fillet welds~~The welder's approval for butt joints also covers fillet welds (F). Carrying out separate tests for fillet welds on test pieces P_2 or P_4 is required in the following cases:

.1 the welder, at the request of the manufacturer, shall be qualified only for fillet welds;

.2 if deemed necessary by the Register, in cases where the majority of work is fillet welding~~.~~;

this requirement does not apply to the fillet and tee welding with full or incomplete penetration when the edge preparation is provided. ~~As a rule, t~~The approval test for the welding of such welds is conditioned by the extension of the range of approval of the Welder Approval Test Certificate for the welding of butt welds ~~under identical conditions~~ with full penetration.

~~Note. This requirement does not apply to the fillet welding with full or incomplete penetration when the edge preparation is provided. As a rule, the approval test for the welding of such welds is conditioned by the extension of the range of approval of the Welder Approval Test Certificate for the welding of butt welds under identical conditions.~~".

Para 4.5.5.1 is amended as follows:

"**.1** the welder may be allowed for welding of dissimilar metal joints in any combination of base metal groups for welding of which he is qualified in accordance with Tables 4.5.5-1, 4.5.5-2, ~~and~~ 4.5.5-3 and 4.5.5-4. In this case the welding consumable shall correspond to the group of one of the welded base metal;".

Table 4.5.6 is amended as follows:

"Table 4.5.6

Range of approval of the Welder Approval Test Certificates for types of welding consumables[1]

Welding process	Type of electrode covering used for tests[2]	Range of approval as per test results		
		A, RA, RB, RC, RR, R	B	C
111	A, RA, RB, RC, RR, R	×	–	–
	B	×	×	–

Welding process	Type of electrode covering used for tests[2]	Range of approval as per test results			
		A, RA, RB, RC, RR, R		B	C
	C	–		–	×
–	Filler material types used for tests	solid wire, rod (S)	Type of electrode core		
			(M)	(B)	(R, P, V, W, Y, Z)
131 135 141	solid wire, rod (S)	×	×	–	–
133 138	metal powder (M)	×	×	–	–
~~114~~136	basic (B)	–	–	×	×
114 136	(R, P, V, W, Y, Z) refer to Table 4.3.2.3	–	–	–	×

[1] Symbols of welding consumable types comply with 4.3.2.3.

[2] Type of welding consumables used in approval tests for root run welding without backing with reverse root formation (B) is a type of welding consumables qualified by the approval for root run welding in production.

Symbols:

"x" — indicates those welding consumables (electrode covering, electrode core) for which the welder is qualified.

"–" — indicates those welding consumables (electrode covering, electrode core) for which the welder is not qualified.

".

Appendix 4 is replaced by the following text:

"APPENDIX 4 (Mandatory)

PRACTICAL RECOMMENDATIONS FOR COMPLETING FORMS 7.1.30-1 AND 7.1.30-2 "WELDER TEST APPROVAL CERTIFICATE"

1. Welder's certification and the issuance of the Welder Approval Test Certificate (СДС) are based on essential variables of the welding procedure indicated in 4.5.1, with specified scope of approval in accordance with 4.5.2 — 4.5.9 for each parameter. If a welder is required to carry out works exceeding the scope of approval of one of the essential variables indicated in 4.5.1, a new СДС shall be issued after obtaining satisfactory results of additional qualification in accordance with 4.2.8 or new qualification.

2. Columns "Welder's name", "Identification number", "Date of birth" shall contain information provided by the welders' employer according to 4.2.9.

In column "Employer", the full name of the manufacturer is entered where the welder works and which applied for his certification.

3. In column "Code/Testing Standard", the rules of Russian Maritime Register of Shipping ("RS Rules") are noted.

4. The explanations and indications on completing the main Table "Range of test and approval" are detailed in the Table.

4.1 When filling in information about the applied welding process specification used in sample welding, a number of corresponding WPS is indicated in the column "Weld test details".

4.2 For welding processes with gas shield, the test performing conditions and range of approval of the Welder Test Approval Certificate are set according to the following requirements:

for welding processes 135 and 136, the qualification tests are performed with one of the shielding gas compositions of C or M groups, which is mostly used in production process and cover all gases compositions of these two groups (C1, C2, M1, M2 and M3);

for welding processes 131, 133, 141 and 15, qualification tests are performed with one of the shielding gas compositions of group I, which are mostly used in production process and cover all gases compositions of this group (I1, I2, I3).

Note Shielding gases of R and F groups are normally not employed for shipbuilding materials, and, therefore, they are not used for testing qualification of welders.

4.3 For welding processes with the use of fluxes (121, 125), the range of approval of the Welder Test Approval Certificate is not regulated. The manufacture method (indices F, A or M according to 4.3.2.5) of the flux used during the qualification tests are shown in the corresponding column of the Certificate (column 9) and a dash (–) is inserted in the column for range of approval.

4.4. Examples for filling in data on consumables used during weld tests:

for column 6: 1.2/ A32; 2.1/ D40; 3.1/ E500; 34/ МНЖ5-1;

for column 7: wm/S (СВ-08Г2С-О); wm/E (УОНИ 13/55); wm/FCW (ПП-ХХ) R;

for column 8: C1 (100 %CO2); M21 (80 %Ar +20%CO2); I1 (100 %Ar), ОСЦ-45М;

for column 9: F; B.

4.5 In item "Option for the Welder Test Approval Certificate prolongation" of form 7.1.30-2 one of options shall be specified in accordance with 4.6.7.

5. Table "Test results" of the Welder Test Approval Certificate is drawn as follows. Results of practical tests and theoretical examination shall be indicated by terms "Accepted" or "Not tested".

6. Table "Validity and prolongation for approval". The left half of the Table is completed by the employer's official in charge according to the requirements of 4.6.6 and 4.6.9.

The entry on prolongation of the Welder Test Approval Certificate validity period shall be made in the right half of the Table by the RS surveyor according to 4.6.8. and certified by his personal signature and stamp.

7. In the row "Date of first test" the date of issuing the minutes of meeting of the Certification Committee shall be indicated. This date means a commencement of the welder's certificate.

In the row "Valid until" the date of extension from the date of the initial tests shall be indicated in compliance with 4.6.6. The row "Location and date of issue" shall contain the name of the RS Branch Office issued the Welder Approval Test Certificate, RS-approved certification center where the tests for issuing of the Welder Approval Test Certificate have been carried out (where applicable) and the actual date of the Certificate issuing.

Table

Forms 7.1.30-1, 7.1.30-2, columns	Weld test details (to be entered)	Range of approval (to be entered)
1 Welding procedure specification	No. of appropriate WPS if drawn up for practical tests	Insert a dash (–)
2 Welding type	Welding type designation with M, S. A and T variants (refer to 4.3.2.1) For example, S for semi-automatic welding	Welding type designation and its full name

Forms 7.1.30-1, 7.1.30-2, columns	Weld test details (to be entered)	Range of approval (to be entered)
3 Welding process	Numeric welding process designation (refer to 4.3.2.2) For example, 135 for MAG welding with solid wire electrode When combining two welding processes for weld test welding processes are indicated with " / ", starting with the root run process, for example: 141/136	Full welding process designation and its abbreviated alphabetical designation is indicated according to Table 4.3.2.2. For process 135 the scope of approval additionally covers process 138 and vice versa. Scope of approval for other processes is limited to the process used during weld test in accordance with 4.5.2
4 Plate or pipe	Coded designation P (for plate test assembly) or T (for pipe weld test assembly) (refer to 4.3.4.1)	Designation of test assembly type P and T; T and/or P taking into account 4.5.3.1 and 4.5.3.2 and reference "refer to welding positions"
5 Type of welding technique	Designation of welding technique type of test assembly (refer to 4.3.3.2). Possible designation variants:	Designation of welding technique type of the joint according to 4.5.4 and 4.5.9. Possible designation variants:
	A;	A, C, F;
	B;	A, B, C, D, F;
	C;	A, C, F;
	D;	A, C, D, F;
	F	F
6 Base metal group/designation	Designation of base metal subgroup (group) (refer to Tables 4.3.3.1-1, 4.3.3.1-2, 4.3.3.1-3 and 4.3.3.1-4), and for shipbuilding materials, after "/" symbol, the category designation in compliance with Part XIII "Materials" of the RS Rules/C. For other materials, brands are designated in accordance with the national standards.	Designations of base metal subgroups covered by the scope of approval according to 4.5.5 (refer to Tables 4.5.5-1, 4.5.5-2, 4.5.5-3 and 4.5.5-4).
7 Filler material type / designation	In numerator: coded designation for filler material: wm — welding with filler material; nm — welding without filler material. In denominator: filler material type: E — covered electrodes; S — solid wire; FCW — flux-cored wire; SR — solid rod; FR — flux-cored rods. Additionally, the brand of the consumable is indicated in brackets, and for flux-cored wire and flux-cored rods the type is indicated in accordance with Table 4.3.2.3	Types of and cores and fillers (for wires and rods) covered by the scope of approval are indicated in accordance with Table 4.5.6. Types of coatings for electrodes, covered by the scope of approval are indicated in column 9, dash (–) symbol is inserted.
8 Shielding gas composition/flux	Group of shielding gas composition in use during tests for the range of qualification (refer to 4.3.2.4). For welding processes 121 and 125 flux designation (brand) and method of its manufacture are indicated (refer to 4.3.2.5).	According to the requirements of 4.2 and 4.3 of the present Appendix

Forms 7.1.30-1, 7.1.30-2, columns	Weld test details (to be entered)	Range of approval (to be entered)
9 Type of flux or electrode covering	For fluxes the manufacture method (F, A or M indices) is indicated in accordance with 4.3.2.5. For welding electrodes used during weld test, designation of electrode covering or filler of the flux-cored wire used during the tests (refer to 4.3.2.3) is indicated	For fluxes the СДС scope of approval is not defined, dash (–) symbol is inserted. For welding electrodes the СДС scope of approval is indicated depending on the type of electrode coating in accordance with Table 4.5.6
10 Auxiliary materials	Data on auxiliary materials, namely: backing type and material, various pastes and fluxes for oxy-acetylene welding, composition of shielding gas for backing on the back of weld, etc.	Range of approval of the Welder Test Approval Certificate by auxiliary materials of the same type as that used in testing, or in case of no auxiliary materials, a dash (–) is inserted.
11 Base metal thickness	Actual thickness of base metal of test assemblies welded (refer also to Table 4.5.2 for combination of welding processes on one test assembly)	Range of thicknesses of base metal the welder is approved for according to 4.5.7. For a combination of welding processes the range of thickness is indicated separately for each welding process and their combination. E.g.: 141: 3 mm ≤ t ≤ 10 mm 135: t ≥ 5 mm or 141/135: t ≥ 5 mm
12 Pipe outside diameter	Actual values of outside pipe diameter of test assemblies welded	Range of pipe diameters the welder is approved for according to 4.5.7
13 Welding position(s) / type of test assembly	In numerator: designations of test assembly welding positions according to Appendix 2 separated by "/" symbol. In denominator: designation of test assembly in accordance with Appendix 1 is indicated. For example, PF/ P_1 or H-L045/ P_3	Welding positions for butt welds (BW) and fillet welds (F) the welder is approved for according to 4.5.8 (for plates and pipes separately). Before specifying the range of approval for fillet welds, an index F is used with the additional designation sl or ml: (single-layer or multi-layer technique welding according to 4.3.3.2). For shortening the record, the entry: "All except... " is permitted.
14 Prolongation option	For form 7.1.30-2, one of two prolongation options is indicated: *a* or *c* according to 4.6.7. For other forms of the Welder Test Approval Certificate (СДС), the prolongation option has been already specified	

".

PART IV. TECHNICAL SUPERVISION DURING MANUFACTURE OF PRODUCTS

5 MACHINERY

5.10 DECK MACHINERY

Table **5.10.1** is amended as follows:

"Table 5.10.1

Nos.	Item of technical supervision	Examination of materials, blanks, assemblies, components	Verification of accompanying documents[1]	Flaw detection	Hydraulic tests	Special tests	Bench tests
1	**Steering gear (engine):**						+
	tillers of main and auxiliary gear	+	+	+			
	steering segments	+	+				
	rudder stock yoke	+	+				
	cylinders	+	+		+		
	pinions, gear wheels and tooth rims	+	+	+			
	pistons with rods	+	+				
	fittings and piping	+	+		+		
	drive shafts	+	+				
	connecting pins of tiller drive	+	+	+			
2	**Windlasses and anchor capstans:**						+
	driving and intermediate shafts, spindles	+	+				
	chain sprockets	+	+				
	pinions, gear wheels of power drives	+	+	+			
	disengaging and safety clutches	+	+				
	band and disk brakes	+	+				
3	**Mooring capstans and winches:**						+
	spindles, output shafts	+	+				
	pinions, gear wheels of power drives	+	+				
	safety clutches	+	+				
	band and disk brakes	+	+				
4	**Towing winches:**						+
	output and intermediate shafts	+	+				
	pinions and gear wheels of power drives	+	+	+			
	towline tension governing devices and fairleads	+	+				
	brakes	+	+				
5	**Special anchor handling arrangement**						
5.1	Anchor handling winches:						+
	output and intermediate shafts	+	+				
	pinions, gears of power drives	+	+	+			
	tension measuring and control means	+	+				
	Brakes	+	+				
	audible and visual overload alarm device	+	+				
	Speed control	+	+				

[1] When performing the survey, the following accompanying documents shall be verified: reports by Technical Control Department on performance of visual and measurement control, certificates issued by the Register or manufacturer depending on the group of product.

Nos.	Item of technical supervision	Examination of materials, blanks, assemblies, components	Verification of accompanying documents[1]	Flaw detection	Hydraulic tests	Special tests	Bench tests
	continuous load monitor	+	+				
	Emergency release system	+	+				
5.2	Loose gear	+	+				+
5.3	Chain stoppers, including emergency release	+	+				+
~~5~~6	Boat winches:						+
	Load and intermediate shafts	+	+				
	Gears and toothed wheels of power transmission systems	+	+				
	Automatic and manual brakes	+	+				
	Stopping devices	+	+				

".

Para 5.10.5 is amended as follows:

"**5.10.5 Towing winches and special special anchor handling arrangement.**

5.10.5.1 Output and intermediate shafts.

5.10.5.2 Pinions, gear wheels.

5.10.5.3 Brakes.

5.10.5.4 Technical supervision regarding 5.10.5.1 to 5.10.5.3 shall be performed in accordance with the requirements of 5.10.3, as far as the similar components, mounting and bench tests are concerned.

5.10.5.5 Towline tension measuring and control means ~~governing devices~~, ~~fairleads~~ spooling devices.

During external supervision of the finished towline tension measuring and control means ~~governing devices~~ and ~~fairleads~~ spooling devices, it is necessary to make sure that

contact surfaces and heat treatment thereof comply with the technical documentation;

all surveys of the sensors and actuators of the towline tension measuring and control means ~~measuring and governing~~ devices have been dealt with, depending on the principle of operation, in the relevant parts of the Rules;

final check of the machinery in operation has been carried out during the tests.

5.10.5.6 The final operational check of chain stoppers and removable parts shall be carried out during the bench tests of the machinery.

5.10.5.7 Anchor handling winches shall be fitted with a permanently affixed nameplate containing at least the following information:

details of the manufacturer (name, address);

model name/number;

serial number;

date of manufacture and date of installation;

details of power supply;

details of wire (e.g. length, diameter));

maximum brake holding capacity (metric tonnes);

maximum line pull (metric tonnes);

maximum static bollard pull (metric tonnes);

placeholder for the surveyor's stamp;
drum dimensions;
winch speed.".

8 SYSTEMS AND PIPING

8.2 FITTINGS OF CLASSES I AND II PIPELINES AS WELL AS BOTTOM AND SIDE INSTALLED ON FOREPEAK BULKHEAD AND REMOTELY OPERATED FITTINGS

Para 8.2.4 is amended as follows:

"**8.2.4** During technical supervision of the prototype and pilot samples of the remotely controlled fittings, provision shall be made for supplementary check of the continuous operation thereof under vibration, check of operability at limiting temperature and pressure values, as well as their operation under other special conditions which depend on the purpose of the fittings. When evaluating vibration conditions, the manufacturer specifications or applicable national and/or international standards shall be followed.".

10 ELECTRICAL EQUIPMENT

10.7 ELECTRICAL TESTS OF PARTICULAR TYPES OF EQUIPMENT

Table **10.7.13.1** is amended as follows:

"Table 10.7.13.1

Apparatus and devices	Inspection and checks	Measurement of insulation resistance	Test of insulation strength	Tests for compliance with operational conditions onboard a ship	Heat test	Operational test	Other and special checks	Check for permissible levels of industrial radio interference voltages	Tests for immunity to electromagnetic emission
Electric engine telegraphs	+	+	+	+	+	+	+	+	+
Sensors and indicators of a rudder angle and CPP blades position	+	+	+	+	+	+	+	–	+
General alarm system – devices and contactors of visual and audible alarms	+	+	+	+	+[1]	+	+	+	+
Switchboards and telephone sets	+	+	+	+	–	+	+	+	+
Devices of a fire detection system and of a warning alarm of fire-extinguishing medium release	+	+	+	+	+[2]	+	+	+[2]	+
Devices of a system warning about starting a local application fire extinguishing system	+	+	+	+	+[3]	+	--	+[3]	+
Devices of a high bilge water and sewage water level alarm systems	+	+	+	+	+	+	+	+	+
Devices of a system for emergency call of engineers and of a personnel alarm	+	+	+	+	+	+	+	+	+
Devices of an alarm system on presence of people inside refrigerated holds	+	+	+	+	+	+	+	+	+

Apparatus and devices	Inspection and checks	Measurement of insulation resistance	Test of insulation strength	Tests for compliance with operational conditions onboard a ship	Heat test	Operational test	Other and special checks	Check for permissible levels of industrial radio interference voltages	Tests for immunity to electromagnetic emission
Devices of a system for control of side ports, fire and watertight doors position	+	+	+	+	+	+	+	+	+
Devices of an external/internal video surveillance system	+	+	+	+	+	+	+	+	+
Devices of an alarm system on rise of explosive gases concentration	+	+	+	+	+	+	+	+	+
Devices of a cargo hold water level alarm system of bulk carriers, ore carriers, combination carriers, passenger ships carrying 36 persons or more, cargo ships with one or more holds, other than bulk carriers, ore carriers, combination carriers and tankers	+	+	+	+[4]	+	+[5]	+[6]	+	+
Devices of a high and high-high cargo level alarm system	+	+	+	+	+	+	–	+	+
Devices of alarm system of high temperature in bulkhead bearings of cargo and ballast pumps	+	+	+	+	+	+	+	+	+
Devices of alarm system of malfunctions in the hull lifting and lowering system of Mobile offshore drilling units (MODU)	+	+	+	+	+	+	+	+	+

Symbols – refer to Table. 10.7.5.1.

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[1] Contactors are not subject to testing.

[2] Detectors of an automatic fire detection system and manual fire alarms are not subject to testing.

[3] Detectors are not subject to testing.

[4] In respect of protective enclosure testing – refer to Appendix 15 "Requirements for testing of a cargo hold water level alarm system of bulk carriers, ore carriers, combination carriers, passenger ships with 36 people or more on board, cargo ships with one or more holds other than bulk carriers, ore carriers, combination carriers and tankers".

[5] Functionality tests shall be carried out in accordance with IMO Resolution MSC.188(79)/Rev.2 "Performance standards for water level detectors on ships subject to SOLAS regulations II-1/25, II-1/25-1 and XII/12.".

[6] Refer to Appendix 15 Requirements for testing of a cargo hold water level alarm system of bulk carriers, ore carriers, combination carriers, passenger ships with 36 people or more on board, cargo ships with one or more holds other than bulk carriers, ore carriers, combination carriers and tankers"..

New para 10.7.13.4.6 is introduced reading as follows:

"**.6** Linear heat detectors shall be tested according to standards EN 54-22:2015 and IEC 60092-504. Alternative testing standards may be used as determined by the Register.".

New Para 10.7.28 is introduced reading as follows:

"**10.7.28 Test of slip rings devices for podded azimuth propulsion.**
Tests shall be carried out in compliance with the requirements of IEC 60092-501 standard.".

12 AUTOMATION EQUIPMENT

12.6 DESCRIPTION OF TESTS AND CHECKS

Para 12.6.14. **The first paragraph** is amended as follows:

"The tests shall be carried in accordance with standards CISPR 16-2-3: 2016+AMD1:2019+AMD2:2023 and IEC 60945:2002 for 156 — 165 MHz.".

Para 12.6.15.2. **The first paragraph** is amended as follows:

"The tests shall be carried out in compliance with standard IEC 61000-4-6:~~2013~~2023.".

Para 12.6.15.4. **The first paragraph** is amended as follows:

"The tests shall be carried out in compliance with standard IEC 61000-4-5: 2014+AMD1:2017.".

Para 12.6.16. **The heading and the first paragraph** are amended as follows:

"12.6.16 Tests for ~~tolerable levels of radiated conductive~~ the level of emitted conducted interference.
The tests shall be carried out in compliance with standard CISPR 16-2-1:2014+AMD1:2017.".

13 LIFE-SAVING APPLIANCES

13.4 TECHNICAL SUPERVISION AT THE FIRM (MANUFACTURER)

New Para 13.4.8 is introduced reading as follows:

"**13.4.8** For recording the data of these tests, it is recommended to use the standardized life-saving appliance evaluation and test report forms given in:
.1 MSC.1/Circ.1628/Rev.4 for the following personal life-saving appliances:
Lifebuoys (Lifebuoys, Lifebuoy self-igniting lights, Lifebuoy self-activating smoke signals);
Lifejackets (Inherently buoyant lifejackets; Inflatable lifejackets;
Lifejacket/immersion suit lights; Reference Test Device (RTD));
Immersion suits (non-insulated, insulated);
Anti-exposure suits;
Thermal protective aids

.2 MSC.1/Circ.1630/Rev.3 for the following survival craft:
Inflatable liferafts;
Rigid liferafts;
Components for survival craft (Hydrostatic release units;
Lifeboat and rescue boat inboard engines; Lifeboat buoyant material;
Inflatable liferaft materials;
Searchlights for lifeboats and rescue boats; Survival craft position indicating lights);
Davit-launched lifeboats;
Free-fall lifeboats;
.3 MSC.1/Circ.1631/Rev.1 for rescue boats:
Rigid rescue boats;
Inflated rescue boats;
Rigid/inflated rescue boats;
Rigid fast rescue boats;
Inflated fast rescue boats;
Rigid/inflated fast rescue boats;
Outboard engines for rescue boats;
.4 MSC.1/Circ.1632/Rev.1 for the following Launching and Embarkation appliances:
Launching and Embarkation appliances (Launching and Recovery appliances;
Launching and Recovery appliances for free-fall lifeboats;
Free-fall launching and recovery appliances;
Marine evacuation systems;
Means of rescue.".

ANNEX 1

LIST OF AMENDMENTS TO IMO RESOLUTION MSC.81(70) "REVISED RECOMMENDATION ON TESTING OF LIFE-SAVING APPLIANCES"

The list is supplemented by a **new entry** reading as follows:

"

December 6, 2024 **Entry-into-force date:** Upon adoption	MSC. 568(109)	**Part I** – Prototype tests for life-saving appliances (totally enclosed lifeboat self-righting test)

".

New **Section 18** is introduced reading as follows:

"18 POLYMER BUOYANCY MODULES

18.1 The provisions of this Section apply during technical supervision of the manufacture of polymer buoyancy modules (PBM) intended for use in the structure of long-term positioned floating facilities and floating objects (e.g., floating terminals).

18.2 The design of long-term positioned floating facilities and floating objects, manufactured using PBM, is divided as follows:

.1 facilities consisting of PBM fastened together, providing strength and positive buoyancy of the facilities.

.2 facilities consisting of hull, providing strength and structural integrity of facilities, and PBM, providing positive buoyancy of the facilities.

18.3 Definitions.

For the purposes of this Section, the following definitions shall apply:

Polymer Buoyancy Module (PBM) means a unified single product possessing buoyancy, watertight integrity and strength.

Type 1 PBM means buoyancy modules applied in the construction of facilities specified in 18.2.1 and 18.2.2.

Type 2 PBM means buoyancy modules applied in the construction of facilities specified in 18.2.1.

18.4 Technical documentation for PBMs, submitted to the Register.

.1 documents defining the design and characteristics of the buoyancy modules, including the composition and properties of the material (Technical Specifications, Specifications, etc.);

.2 a test program developed in accordance with 18.5.1 and/or 18.6 and containing test procedures;

.3 Manufacturer's manual for the maintenance, operation, and repair of PBMs.

18.5 Technical requirements for Type 1 PBMs.

.1 the polymer material for the manufacture of PBMs shall meet the requirements of 6.15, Part XIII "Materials" of the RS Rules/C;

PBMs shall pass the following tests:

mass test, according to manufacturer's requirements;

buoyancy test, according to manufacturer's requirements;

watertightness test.

The test program and procedures for the above tests are subject to review by the Register.

.2 Marking.

Each buoyancy module shall have marking including:

manufacturer's name;

brand;

type (1 or 2);

technical documentation;

date of manufacture;

unique number.

At least one surface of each PBM shall bear manufacturer's marking.

18.6 Technical requirements for Type 2 PBMs.

The requirements of 18.4 apply. Additionally, Type 2 PBMs shall pass the following tests:

test of the ultimate tensile load of the connection assembly;

test of the ultimate uniformly distributed load on the top edge;

test of the ultimate uniformly distributed load applied to the side edge.

The test program and procedures for the above tests are subject to review by the Register.

18.7 Documents.

Upon satisfactory results of the technical supervision, RS issues a document of the established form for the PBMs, according to Appendix I (the RS Nomenclature), which confirms the compliance of both the products themselves and the polymer materials. The RS document shall, among other things, specify the operating temperature range and the type of PBM.

PBMs shall be supplied with Manufacturer's Certificate of Quality (MC) and the RS document.".

Russian Maritime Register of Shipping

Rule Change Notice
to the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships

Endorsed: 25-267540

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