

RULES

FOR THE CLASSIFICATION SURVEYS OF SHIPS IN SERVICE WITH ANNEXES

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RULE CHANGE NOTICE

ENTERS INTO FORCE:

01.01.2024



**St. Petersburg
2023**

RULES FOR THE CLASSIFICATION SURVEYS OF SHIPS IN SERVICE WITH ANNEXES

The present Rule Change Notice to the Classification Surveys of Ships in Service with Annexes (hereinafter — RCN) has been approved in accordance with the established approval procedure and contains information on amendments and additions, except for editorial amendments. RCN amendments come into force on 1 January 2024.

REVISION HISTORY

RULES FOR THE CLASSIFICATION SURVEYS OF SHIPS IN SERVICE

Paras/Chapters/Sections	Item(s)/Type(s) of supervision and their particulars	Information on amendments	Remarks/References
Part I, Para 5.5	Assessment of the ship technical condition	Definition "wear" has been specified as regards the applied terminology	
Part II, Para 2.4.7.2.4	Ships Special survey Electric propulsion plant	Scope of application of the requirement for operational testing of the electric propulsion plant has been amended	
Part II, Para 4.8.2.1.1	Ships under the fleet monitoring system Survey	The scope of occasional survey has been amended	
Part II, Para 4.8.2.3.2	Ships Survey of a ship covered by the fleet monitoring system	Additional clarification has been made regarding the assignment of a due date for the next occasional survey of a ship covered by the fleet monitoring system	
Part II, Para 4.8.3.1	Ships under the fleet monitoring system Survey	The scope of occasional survey has been amended	
Part II, Para 4.8.4.1	Ships under the fleet monitoring system Survey	Requirements for the ship keeping out of the fleet monitoring system have been strengthened	
Part II, Para 4.9.2	Mobile offshore drilling units (MODU) Surveys associated with repair, modification, conversion and modernization	Requirements have been introduced regarding the actions to be taken when structures, new spare parts, materials and products containing asbestos are found out on MODU	IMO resolutions MSC.543(107), MSC.544(107) and MSC.545(107), IMO circulars MSC.1/Circ.1671 and MSC.1/Circ.1672

ANNEXES TO THE RULES FOR THE CLASSIFICATION SURVEYS OF SHIPS IN SERVICE

Amended paras/chapters/sections	Item(s)/Type(s) of supervision and their particulars	Information on amendments	Remarks/References
Annex 2, Table 2.2.1.1	Assessment of the hull technical condition. Verification of the hull cross-sectional (transverse sectional) characteristics	In column 1, the name and abbreviation of the Russian River Register have been specified due to its renaming into the Russian Classification Society (RCS). Heading of column 4 has been amended as regards the ultimate strength. Footnote *** has been specified as regards the renaming of the Russian River Register into the Russian Classification Society (RCS)	
Annex 2, Para 2.2.1.3	Assessment of the hull technical condition. Verification of verification of the hull cross-sectional characteristics	Requirements for verification of the hull cross-sectional (transverse sectional) characteristics of ships built according to the Rules of the Russian River Register (RCS) have been supplemented with the method for verification of the ultimate bending moment as an alternative method for assessment of the hull section ultimate strength	
Annex 2, Para 3.2.2.3	Assessment of the hull technical condition. Verification of verification of the hull cross-sectional characteristics	Requirements for calculation of ultimate bending moment and residual ultimate hull section modulus have been supplemented with incremental-iterative method (Smith's method)	

Amended paras/chapters/sections	Item(s)/Type(s) of supervision and their particulars	Information on amendments	Remarks/References
Annex 2, Para 3.3.2.2	Assessment of the hull technical condition. Verification of verification of the hull cross-sectional characteristics	Para has been supplemented with the requirements for calculation of the ultimate bending moment	
Annex 2, Para 4.2.1.2	Assessment of the hull technical condition. Verification of verification of the hull cross-sectional characteristics	Additional requirements have been introduced for calculation of the hull section ultimate bending moment, and the formula for calculation of permissible residual ultimate hull section modulus [$W_{d(b)}^u$], in cm ³ , for a deck or bottom, has been amended	
Annex 2, Para 4.2.2.1	Ships Determination of the hull technical condition Standards for hull with defects	A reference has been introduced to series of ships the keel of the prototype ship of which was laid before 1 October 1990 that shall be taken into account when determining the plate wear allowance	
Annex 2, Para 4.2.3.3	Ships Determination of the hull technical condition Standards for hull with defects	When determining the plate wear allowance for serial ships, the keel of the prototype ship of which was laid before 1 October 1990, the necessity to agree it with the Register has been deleted	
Annex 2, Para 4.2.5	Ships Determination of the hull technical condition Standards for hull with defects	When determining the plate wear allowance for serial ships, the keel of the prototype ship of which was laid before 1 October 1990, the necessity to agree it with the Register has been deleted	

RULES FOR THE CLASSIFICATION SURVEYS OF SHIPS IN SERVICE

PART I. GENERAL PROVISIONS

5 ASSESSMENT OF THE SHIP TECHNICAL CONDITION

Para 5.5. The second paragraph is replaced by the following text:

"wear — reduction of strength ~~dimensions~~ characteristics of structures and change of components dimensions or deterioration of material quality in operation due to corrosion, erosion, fatigue, galling of contacting parts of flexible joints, chafing, rotting, mould or mustiness (wood, tarpaulin, fibre ropes, etc.). For definition of wear of hull members refer to Annex 2 to these Rules;"

PART II. SURVEY SCHEDULE AND SCOPE

2 PERIODICAL SURVEYS

2.4 SPECIAL SURVEY

Para 2.4.7.2.4 is replaced by the following text:

"**2.4.7.2.4** Operational testing of the electric propulsion plant installed on board the ships, including ships with distinguishing mark **EPP** in the class notation, shall be carried out in accordance with 2.4.7.2.2 and 2.4.7.2.3."

4 OTHER SURVEYS

4.8 ADDITIONAL MEASURES AIMED AT MAINTENANCE AND IMPROVEMENT OF THE TECHNICAL CONDITION OF SHIPS

Para 4.8.2.1.1 is replaced by the following text:

"**4.8.2.1.1** Fleet monitoring system is implemented by the Register through occasional surveys of ships in the scope of ~~class~~ annual survey to verify their compliance with the applicable requirements in the intervals between the prescribed periodical surveys."

Para 4.8.2.3.2 is replaced by the following text:

"**4.8.2.3.2** The RS Branch Office for in-service supervision makes an entry on the condition of class (classification requirement) into the classification section of the List of Survey's Status: "Due to implementation of the fleet monitoring system for a ship, an occasional survey in the scope of annual one shall be carried out in accordance with 4.8.3.1 of Part II "Survey Schedule and Scope" of the Rules for the Classification Surveys of Ships in Service. After survey completion, new date of the condition of class (requirement) shall be assigned." The due date is calculated as the anniversary date plus 6 months. In addition, the due date may not be assigned less than in three (3) months from the date of implementation of the fleet monitoring system for a ship."

Para 4.8.3.1 is replaced by the following text:

"**4.8.3.1** An occasional survey of a ship shall be performed in the scope of annual survey in accordance with 2.2 of this Part of the Rules and Section 2 of Part III "Survey of Ships in Compliance with International Conventions, Codes, Resolutions and Rules for the Equipment of Sea-Going Ships" of the Guidelines (with regard to the statutory certificates issued to the ship). The decision to carry out measurement of residual thicknesses in the areas of substantial corrosion shall be taken by the RS surveyor based on the results of the survey of hull structures and ballast tanks subject to be examined at annual intervals."

Para 4.8.4.1 is replaced by the following text:

"**4.8.4.1** The matters relating to ship keeping out of the fleet monitoring system shall be reviewed by RHO upon the shipowner's written request and in case of simultaneous compliance with the following conditions:

- .1 the ship has been in the fleet monitoring system for at least 4224 months;
- .2 ~~at least one occasional survey is carried out~~ two occasional surveys are carried out in accordance with 4.8.3;
- .3 there were no PSC/FSC detentions of the ship in the last 4224 months for the reasons associated with deficiencies relating to technical condition of the item of the RS technical supervision;
- .4 the special surveillance regime (SSR) is not applied to the ship."

4.9 SURVEYS ASSOCIATED WITH REPAIR, CONVERSION AND MODERNIZATION OF SHIPS

Para 4.9.2. The third paragraph is replaced by the following text:

"During modernization, repair or conversion of ships, MODU, FOP and offshore installations, in particular, during replacement of insulation in fire structures and repair/replacement of equipment, regardless of the SOLAS-74 applicability to the ship and irrespective of the date of construction, provisions of IMO circulars MSC.1/Circ.1374/Rev.1, MSC.1/Circ.1379, ~~and MSC.1/Circ.1426, MSC.1/Circ.1671 and MSC.1/Circ.1672,~~ Annex 48 to the Guidelines and IACS recommendation No. 130, prohibiting installation of the materials and products containing asbestos on board ship (refer to 1.8.21 of Part III "Survey of Ships in Compliance with International Conventions, Codes, Resolutions and Rules for the Equipment of Sea-Going Ships" of the Guidelines) and to perform repair and maintenance using such materials or products, shall be met. The shipowner shall be responsible for ensuring that these provisions are met."

The Note is supplemented with the following text:

"From 1 January 2024, the provisions of IMO circulars MSC.1/Circ.1671 and MSC.1/Circ.1672 shall also be followed at survey of MODU to which the requirements of Codes for the Construction and Equipment of Mobile Offshore Drilling Units (MODU Codes): the 2009 MODU Code, the 1989 MODU Code or the 1979 MODU Code are applicable."

The last paragraph is deleted.

ANNEXES TO THE RULES FOR THE CLASSIFICATION SURVEYS OF SHIPS IN SERVICE

ANNEX 2

INSTRUCTIONS FOR DETERMINATION OF THE TECHNICAL CONDITION AND REPAIR OF THE HULLS OF SEA-GOING SHIPS

2 INSTRUCTIONS ON ASSESSMENT OF THE HULL TECHNICAL CONDITION

2.2 STRUCTURES WITH WEAR

Table 2.2.1.1 is replaced by the following one:

"Table 2.2.1.1

	Evaluation of the loss in cross-sectional (transvers sectional) area* of the strength deck outside the line of hatch openings with continuous side coaming and/or bottom shell plating including the bilge with longitudinal framing or without it	Verification of the hull cross-sectional (transvers sectional) area* amidships (midship region) and outside of amidships where the design was modified and/or steel grades other than those specified were used, in accordance with 2.2.1.2	Verification of the hull section ultimate section modulus-strength *, in accordance with 2.2.1.3
Ships built according to the Rules for Construction	Required**	Required if the residual cross-sectional area (column 2) is less than 90 % of the as-built area	—
Ships built according to the rules of Russian River Register/ <u>Russian Classification Society (RCS)</u>	—	Required at any wear degree	Required at any wear degree
Ships transferred into the RS class from ACS — IACS member	According to the losing society standards***	According to the losing society standards***	According to the losing society standards***
Ships transferred into the RS class from ACS — non-IACS member or accepted into the RS class as non-classed ships	—	Required at any wear degree	—
<p>* Verification of the hull cross-sectional (transverse sectional) characteristics is carried out at each special survey starting from the second one, by using the thickness measured, renewed or reinforced, as appropriate. The verification of the hull cross-sectional characteristics may be required, as deemed necessary by the RS surveyor, at annual/intermediate/occasional survey of ships over 10 years of age, if suspect areas, residual deformations have been found on the deck and/or bottom shell plating including the bilge, that may affect the hull cross-sectional characteristics.</p> <p>** For ships built according to the Rules for Construction, the allowable diminution of the transverse sectional (cross-sectional) areas of deck and bottom with bilge shall be established equal to and less than 10 % of the as-built area.</p>			

*** Evaluation of longitudinal strength of the hull shall be carried out according to the losing society standards when a decision on their application has been made by the Register and the relevant standards are stated in the ship's file. If permissible residual scantlings of hull members are applied to the ship based on the calculation agreed with the Register and performed in accordance with the Rules for Construction, the allowable diminution of transverse sectional (cross-sectional) areas of deck and bottom with bilge and hull section modulus shall be established equal to and less than 10 % of the as-built area/modulus. With regard to verification of such hull section modulus, its necessity shall be defined based on additional instructions related to this verification available in the rules of the losing society, or if the permissible residual scantlings of hull members are applied to the ship, which are determined in accordance with the Rules for Construction, and if the ship has been built to the Russian River Register/Russian Classification Society (RCS) class.

Para 2.2.1.3 is replaced by the following text:

"2.2.1.3 For ships specified in 2.2.1.1 of this Annex, built in compliance with the rules of Russian River Register/RCS, additionally, the verification of the hull section ultimate bending moment or ultimate section modulus shall be performed in accordance with the following condition—the conditions (2.2.1.3-1) or (2.2.1.3-2) accordingly:

$$\underline{M''_{sag(hog)} \geq M_{ult}} \quad (2.2.1.3-1)$$

where $M''_{sag(hog)}$ = ultimate hull section bending moment (disregarding the sign) in case of sagging, hogging determined in accordance with 3.2.2.3 and 3.3.2.2;
 M_{ult} = required ultimate hull section bending moment determined in accordance with 4.2.1.2.

$$\underline{W''_{d(b)} \geq [W^u_{d(b)}]} \quad (2.2.1.3-2)$$

where $W''_{d(b)}$ = residual ultimate hull section modulus determined in accordance with 3.2.2.3 and 3.3.2.2;
 $[W^u_{d(b)}]$ = permissible residual ultimate hull section modulus determined in accordance with 4.2.1.2.

Such verification of the hull cross-sectional characteristics shall be performed at each special survey starting from the second one."

3 PROCEDURE OF INSPECTION (FLAW DETECTION) OF THE SHIP'S HULL

3.2 STRUCTURES WITH WEAR

Para 3.2.2.3 is replaced by the following text:

"3.2.2.3 The hull section ultimate bending moment $M''_{sag(hog)}$ and/or residual ultimate hull section modulus $W''_{d(b)}$ shall be calculated in accordance with the requirements of the Strength Norms for Sea-Going Ships developed by the Register or by means of incremental-iterative method (Smith method)¹. Actual member scantlings shall be considered when calculating geometrical characteristics.

¹ Refer to the Rules for the Classification and Construction of Sea-Going Ships, Part XVIII "Additional Requirements for Structures of Container Ships and Ships, Dedicated Primarily to Carry their Load in Containers".

3.3 STRUCTURES WITH DEFORMATIONS

Para 3.3.2.2 is replaced by the following text:

"**3.3.2.2** The hull section ultimate bending moment $M''_{sag(hog)}$ and/or residual ultimate hull section modulus $W''_{d(b)}$ shall be determined in case of ship hogging and sagging in accordance with the procedures approved by the Register. In any case, the reduction of compressed hull members and of those deformed hull members, which are compressed and strained, shall be considered. The calculation of $M''_{sag(hog)}$ and/or $W''_{d(b)}$ shall be reviewed and agreed upon by the Register."

4 STANDARDS FOR HULL WITH DEFECTS

4.2 STRUCTURES WITH WEAR

Para 4.2.1.2 is replaced by the following text:

"**4.2.1.2** The required ultimate hull section bending moment in case of sagging, hogging M_{ult} , in kNm, is determined from the formula

$$M_{ult} = 1,1 \cdot |0,92M_w + M_{sw}| \quad (4.2.1.2-1)$$

where M_w, M_{sw} = bending moments in case of sagging, hogging, in kNm, to be determined from the Rules for Construction.

The permissible residual ultimate hull section modulus $[W_{d(b)}^u]$, in cm³, for a deck or bottom is determined from the formula

$$[W_{d(b)}^u] = 1,1 \frac{|0,92M_w + M_{sw}|}{\sigma_n} \cdot 10^3 \quad (4.2.1.2)$$

$$[W_{d(b)}^u] = \frac{M_{ult}}{\sigma_n} \cdot 10^3 \quad (4.2.1.2-2)$$

where M_w, M_{sw} = bending moments, in kNm, to be determined from the Rules for Construction;
 σ_n = standard yield stress of deck (bottom) material, in MPa, in accordance with the Rules for Construction."

Para 4.2.2.1. Text before Formula (4.2.2.1-3) is replaced by the following one:

"for ships built to the RS Rules whose keel was laid before 1 October 1990 (may also be applied to series of ships built to the RS Rules irrespective the keel laying date, provided that the keel of the prototype ship was laid before 1 October 1990)."

Para 4.2.3.3. Text before Formula (4.2.3.3-3) is replaced by the following one:

"for ships built to the RS Rules whose keel was laid before 1 October 1990 ~~(upon agreement with the Register)~~ may also be applied to series of ships built to the RS Rules irrespective the keel laying date, provided that the keel of the prototype ship was laid before 1 October 1990."

Para 4.2.5. Text before Formula (4.2.5-1) is replaced by the following one:

"for ships built to the RS Rules whose keel was laid before 1 October 1990 ~~(upon agreement with the Register)~~ may also be applied to series of ships built to the RS Rules

irrespective the keel laying date, provided that the keel of the prototype ship was laid before 1 October 1990)." .

Russian Maritime Register of Shipping

**Rule Change Notice to the Rules for the Classification Surveys of Ships
in Service with Annexes**

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