RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER **No.** 312-11-993c dated 14.03.2017

Re:
requirements for anchor handling vessels

Item of technical supervision:
ships under construction and in service

Implementation:	from the date of publication
Valid: till	-
Validity period extended till	-
~~Cancels~~ / amends / supplements Circular Letter	312-11-954c dated 15.11.2016

Number of pages:	1 + 5
Appendices:	text of amendments to the Rules for the Classification and Construction of Sea-Going Ships, 2017, ND No. 2-020101-095-E

Director General K.G. Palnikov

Amends Rules for the Classification and Construction of Sea-Going Ships, 2017, ND No. 2-020101-095-E

We hereby inform that new Chapter 13.3 has been introduced to Section 13, Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships" of the Rules related to the requirements for anchor handling vessels, also Part II "Hull" of the Rules has been amended related to the requirements for the hull structure of these vessels.

It is necessary to do the following:

1. Familiarize surveyors of the RS Branch Offices and interested organizations in the area of the RS Branch Offices' activity with the content of the Circular Letter.
2. Apply the above requirements in the RS practical activity.

Person in charge: D.A. Grubov Department 312 + +7 (812) 312 24 28

"Thesis" System 17-34013

Appendix to Circular Letter
No. 312-11-993 dated 14.03.2017

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SEA-GOING SHIPS, 2017,

ND No. 2-020101-095-E

PART I. CLASSIFICATION

New para. 2.2.37 (refer to Circular letter No. 312-11-949c of 31.10.2016). The list of descriptive notations shall be supplemented with the following

"**Anchor handling vessel** – ship intended for anchor handling"

PART II. HULL

3.8 VESSELS INTENDED FOR OFFSHORE SUPPORT SERVICES

The Chapter shall be amended in compliance with the Appendix to Circular Letter No. 312-11-954c of 15.11.2016, as follows and as underlined:

Para 3.8.1 shall be amended to read:
"**3.8.1** The requirements of the Chapter apply to supply vessels, standby vessels and anchor handling vessels. Structural elements not covered by this Chapter shall comply with the requirements of Sections 1 and 2.";

Para 3.8.2.4 shall be amended to read:
"**3.8.2.4** In way of stern rollers and in fenders area the outer shell reinforcement shall be provided.";

Para 3.8.4.5 shall be amended to read:
"**3.8.4.5** Section modulus of hold, tween deck and forecastle frames shall not be less than specified in 3.7.4.4 with p determined by Formula (3.7.3.3-1), α_1 = 1,16, α_2 = 1,0. The section modulus of side longitudinals, hold and tween deck frames ~~of supply vessels~~ shall, however, not in any region be more than 1,25 times as required in 2.5.4.";

Para 3.8.4.9 shall be amended to read:
"**3.8.4.9** While determining reinforcements for stern rollers and mooring winches, 4.3.5 of Part III "Equipment, Arrangements and Outfit" shall be guided by. Thickness of plate structures in way of stern rollers and shark jaws shall be at least 25 mm."

PART XVII. DISTINGUISHING MARKS AND DESCRIPTIVE NOTATIONS IN THE CLASS NOTATION DEFINING STRUCTURAL AND OPERATIONAL PARTICULARS OF SHIPS

1. In compliance with the Appendix to Circular Letter No. 312-11-954c of 15.11.2016, Chapter 13.2 "**STANDBY VESSELS**" Russian version shall be amended:

Para 13.2.3.6 Russian version only shall be amended.

Para 13.2.10.3.3 Russian version only shall be amended.

2. Section 13 shall be supplemented with new Chapter 13.3 reading as follows:

"13.3 ANCHOR HANDLING VESSELS

13.3.1 General.

The class notation of the vessels equipped for servicing (handling, heaving up and shifting) anchors and complying with the requirements of this Chapter, may be supplemented with the descriptive notation **Anchor handling vessel** .

The class notation of the vessels equipped for anchor servicing and towing of floating facilities, may be supplemented with the descriptive notation **Anchor handling vessel, Tug.**

13.3.2 Documentation.

In addition to documentation specified in Section 3, Part I "Classification" the following documents shall be submitted (A – for approval; AG – for agreement, FI – for information):

13.3.2.1 Layout drawing of anchor handling equipment: anchor handling winches, shark jaws, towing pins, stern rollers, load-carrying arrangements, where available, including standard cargo placing on the deck (anchors, cables, chains, etc.) indicating the towline path, extreme sectors, maximum pulling force, maximum design load for each component (FI).

13.3.2.2 For anchor handling winches:
.1 design criteria, including design loads and characteristics of emergency quick release system of towline indicating the response time and remaining holding force after release) (FI);
.2 strength calculation of winch drum with flanges, shaft couplings, housing and brakes (AG);
.3 assembly drawings and general arrangement drawing (A).

13.3.2.3 For shark jaw:
.1 design criteria, including design loads and characteristics of emergency quick release system indicating the response time and remaining holding force after release) (FI);
.2 strength calculation (AG);
.3 assembly drawings and general arrangement drawing (A).

13.3.2.4 For towing pins:
.1 design criteria, including design loads and characteristics of emergency release capabilities in operation and dead ship condition (FI);
.2 strength calculation (AG);
.3 assembly drawings and general arrangement drawing (A).

13.3.2.5 For stern rollers:
.1 design criteria, including design loads (FI);
.2 strength calculation (AG);
.3 assembly drawings and general arrangement drawing (A).

13.3.2.6 Drawings of foundations and supports for winches, shark jaws, stern rollers and towing pins indicating the maximum design load (A).

13.3.2.7 Electrical power supply circuits and control system configuration of towing equipment and anchor handling equipment (A).

13.3.2.8 Layout drawings (A) and technical specification of operator control stands (user interface) of towing equipment control systems and anchor handling equipment (AG).

13.3.2.9 Layout drawings (A) and technical specification of communication means between the anchor operations control station and wheelhouse (AG).

13.3.2.10 Bollard pull estimation (FI).

13.3.2.11 Bollard pull test procedure (A).

13.3.3 Hull.

The hull structure shall comply with the applicable requirements of 3.8, Part II "Hull".

13.3.4 Equipment, Arrangements and Outfit.

13.3.4.1 Design loads of arrangements specified in 13.3.2.3 to 13.3.2.5 shall be assumed in compliance with 5.4.2.2, Part III "Equipment, Arrangements and Outfit". Thus, the stress in these components shall not exceed 0.8 yield strength of their material.

13.3.4.2 Anchor handling winch shall be fitted with cable tension measuring means.

13.3.5 Stability.

13.3.5.1 Stability of ships with the descriptive notation **Anchor handling vessel** shall meet the requirements of 3.7.3, Part IV "Stability".

13.3.6 Subdivision.

13.3.6.1 Ships with the descriptive notation **Anchor handling vessel** shall meet the requirements of 3.4.9, Part V "Subdivision".

13.3.6.2 In addition to 3.4.9, the ships with the descriptive notation **Anchor handling vessel**, **Tug** shall also meet the requirements of 3.4.4, Part V "Subdivision".

13.3.7 Machinery.

13.3.7.1 Anchor handling winches shall meet the applicable requirements of 6.1 and 6.5.5, Part IX "Machinery".

13.3.8 Electrical equipment.

13.3.8.1 Winches shall be controlled from control stations where sufficient visibility of the winch drums is provided. Controls shall ensure single action control by one operator; therewith the selected operating mode shall be clearly distinguished from other modes provided. In case of control system failure, the arrangement shall be set in safe position.

13.3.8.2 Anchor handling winch shall be controlled both in anchor hoisting and dropping modes.

13.3.8.3 In compliance with 13.3.4.2, the information of cable tension shall be displayed at the winch control panels or in the close vicinity thereof, as well as the data of the maximum permissible cable tension, relevant vertical and horizontal angles to determine the cable position according to the calculations made for each loading condition. The above information may be duplicated at ship steering position.

13.3.8.4 Controls (handles, buttons, etc.) for emergency disconnecting shall be protected against unintentional action of the personnel.

13.3.9 Bollard pull testing.

13.3.9.1 The following shall subject to testing for bollard pull measuring:
.1 the first ship in the series, then every fifth ship of the series (i.e. sixth, eleventh, etc.) provided the propulsion plant identity;

.2 every ship of nonserial construction.

13.3.9.2 Prior to bollard pull tests, the test program, approved Stability information, as well as the results of design assessment of bollard pull shall be submitted to the Register.

13.3.9.3 During the stationary pull tests the main engine(s) shall be operated at full torque corresponding to the maximum continuous rating.
Actual output shall be checked during the resting.

13.3.9.4 During the normal operation of the ship, all auxiliary equipment, such as pumps, generators and other equipment driven by the main engine(s) or propeller shaft(s) shall be connected while testing.

13.3.9.5 Towline measured between the ship's stern and the mooring bollard shall be at least 300 m in length. When the above towline length may not be provided during the tests, the towline length equal to at least two ship's length might be accepted.

13.3.9.6 At least 20 m depth shall be provided at the test place within a radius of 100 m around the ship. When 20 m depth may not be provided at the test place, the maximum depth equal to twice maximum ship's draught might be accepted.

13.3.9.7 The test shall be carried out with the vessel's displacement corresponding to full ballast and half fuel capacity.

13.3.9.8 During the tests the ship shall be trimmed on an even keel or shall have a trim by stern not exceeding 2 % of the ship's length.

13.3.9.9 The tests shall be conducted at wind velocity not exceeding 5 m/s. Current speed at the testing place shall not exceed 0.5 m/s in any direction.

13.3.9.10 The ship shall demonstrate the ability to keep to the heading set for at least 10 min developing power at the conditions specified above in 13.3.9.3. The verified continuous bollard pull is the mean value of readings for 10-minute period.

13.3.9.11 Load cell that used during the tests shall be calibrated in the presence of the Register representative. The load cell error shall be at least ±2 % at the temperature and range of loads applicable to the testing conditions.

13.3.9.12 An instrument for the continuous readout and a recording device for registration of bollard pull in graph form as function on time shall be both connected to the load cell.
Where practicable, both devices shall be located and continuously monitored from the shore.

13.3.9.13 The load cell shall be placed between the eye of the towline and the bollard.

13.3.9.14 The towline position during the tests shall have the minimum affect on the measuring results due to its friction with the towing arrangement components.

13.3.9.15 For the testing period, the communication system shall be installed between the ship and ashore personnel performing the continuous monitoring of the loading cell and the recording device ashore using USB-communication or telephone.

13.3.10 Records.

13.3.10.1 Bollard pull testing report.

13.3.10.2 Report on Survey of the Ship (Form 6.3.10).

13.3.10.3 Based on results of the bollard pull testing, the following entry shall be introduced in the Classification Certificate (Form 3.1.2) in the Section "Other Characteristics": "Permanent static bollard pull at the maximum continuous rating of the propulsion plant ... kW is ...t".

13.3.10.4 Upon the shipowner's request, Bollard Pull Certificate (Form 6.3.45) may be issued for a ship with the descriptive notation **Anchor handling vessel** or **Anchor handling vessel, Tug**.