



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 312-11-1649c

dated 20.10.2021

Re:

amendments to the Rules for the Classification and Construction of Sea-Going Ships, 2021, ND No. 2-020101-138-E

Item(s) of supervision:

ships under construction, technical documentation

Entry-into-force date:

01.12.2021

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

~~dated~~

Number of pages: 1 + 5

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to Part XVII "Distinguishing Marks and Descriptive Notations in the Class Notation Specifying Structural and Operational Particulars of Ships"

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that 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 (or equipment installed onboard the ships, or products/machinery installed onboard the ships) contracted for construction or conversion on or after 01.12.2021, in the absence of a contract, on ships, the keels of which are laid, or which are at a similar stage of construction on or after 01.12.2021.
-

List of the amended and/or introduced paras/chapters/sections:

Part XVII: paras 2.1.1.1, 2.1.2, 2.1.3.1, 2.2.1.3, 2.2.2.5.2, 2.2.2.5.3, 2.3.1 — 2.3.3, 2.4.1 — 2.4.3, 3.6.3.9.1 — 3.6.3.9.3, Formulae (10.5.4.3.1-2), (10.5.5.2-2) and (10.5.6.2-1)

Person in charge: Andrey N. Novichenko 312

+7 (812) 312-24-28

"Thesis" System No. 21-247421

**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	Para 2.1.1.1	Scope of application has been specified	312-11-1649c of 20.10.2021	01.12.2021
2	Para 2.1.2	Definitions "manoeuvring time", "escort test speed" and "escort characteristics" have been specified	312-11-1649c of 20.10.2021	01.12.2021
3	Para 2.1.3.1	Para has been specified regarding submission of documentation to the Register	312-11-1649c of 20.10.2021	01.12.2021
4	Para 2.2.1.3	Requirement for minimum breaking strength of towing line components has been specified	312-11-1649c of 20.10.2021	01.12.2021
5	Para 2.2.2.5.2	Editorial amendments have been made	312-11-1649c of 20.10.2021	01.12.2021
6	Para 2.2.2.5.3	Text concerning typical escort speed range has been deleted	312-11-1649c of 20.10.2021	01.12.2021
7	Para 2.3.1	General provisions on full scale trials have been introduced	312-11-1649c of 20.10.2021	01.12.2021
8	Para 2.3.2	Names and content of documents submitted to the Register have been specified	312-11-1649c of 20.10.2021	01.12.2021
9	Para 2.3.3	Conditions of trials and names of parameters recorded during trials have been specified	312-11-1649c of 20.10.2021	01.12.2021
10	Para 2.4.1	Requirements for report on the results of full scale trials have been specified	312-11-1649c of 20.10.2021	01.12.2021
11	Para 2.4.2	Requirements for Stability Booklet have been supplemented	312-11-1649c of 20.10.2021	01.12.2021
12	Para 2.4.3	Name of documentation on stability has been specified	312-11-1649c of 20.10.2021	01.12.2021
13	Para 3.6.3.9.1	Requirements for ships with aggregate capacity of fuel oil tanks 600 m ³ and above have been specified	312-11-1649c of 20.10.2021	01.12.2021
14	Para 3.6.3.9.2	Additional condition related to ice class has been introduced	312-11-1649c of 20.10.2021	01.12.2021
15	Para 3.6.3.9.3	Additional condition related to ice class has been introduced	312-11-1649c of 20.10.2021	01.12.2021
16	Formula (10.5.4.3.1-2)	Formula has been aligned with the Russian version of the Rules	312-11-1649c of 20.10.2021	01.12.2021

Nos.	Amended paras/chapters/ sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
17	Formula (10.5.5.2-2)	Formula has been aligned with the Russian version of the Rules	312-11-1649c of 20.10.2021	01.12.2021
18	Formula (10.5.6.2-1)	Formula has been aligned with the Russian version of the Rules	312-11-1649c of 20.10.2021	01.12.2021

RULES FOR THE CLASSIFICATION AND CONSTRUCTION OF SEA-GOING SHIPS, 2021,
ND No. 2-020101-138-E

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

2 TECHNICAL REQUIREMENTS FOR ESCORT TUGS

1 **Para 2.1.1.1** is replaced by the following text:

"**2.1.1.1** The requirements apply to tugs intended for escort service. These requirements are additional to the requirements of Parts I — XV of the Rules."

2 **Para 2.1.2** is replaced by the following text:

"2.1.2 Definitions and explanations.

For the purpose of this Section the following definitions and explanations have been adopted.
Assisted ship means the ship being escorted by the escort tug.

Escort characteristics: maximum steering pull of the tug F_s , in t; escort test speed V , in knots; manoeuvring time t , in s.

Escort service means steering, braking and otherwise controlling the assisted ship.

Escort test speed V means the speed, in knots, of the assisted ship.

Escort tug means a tug which in addition to towing and ship handling operations is intended for escort services.

Full scale trials mean sea trials of the escort tug to determine escort characteristics.

Manoeuvring time t means a minimum manoeuvring time, in s, from position of the tug on one side of the assisted ship giving the maximum transverse steering force to mirror position on the other side of the assisted ship.

Maximum steering pull of the tug F_s means the maximum transverse steering force, in t, exerted by the tug on the stern of the assisted ship at the escort test speed of 8 and/or 10 knots (refer to Fig. 2.1.2)."

3 **Para 2.1.3.1** is replaced by the following text:

"**2.1.3.1** The following technical documentation shall be submitted to the Register for review:

.1 towing arrangement plan required for escort service including towing line path and minimum breaking strength of towing line components and strength of appropriate structures;

.2 preliminary calculation of maximum steering pull of the tug at the escort test speed of 8 and/or 10 knots including propulsion components of the escort tug for balancing of oblique angular position of the tug;

.3 preliminary tug stability calculations;

.4 plan of full scale trials."

4 **Para 2.2.1.3** is replaced by the following text:

"**2.2.1.3** The towing line components shall have a minimum breaking strength of at least 2,2 times the maximum towing pull."

5 **Para 2.2.2.5.2** is replaced by the following text:

"**2.2.2.5.2** At design stage, the values of steering force, breaking force and heeling lever may be determined by model test or calculation. On completion of the tug's construction, the values are specified by full scale tests or numerical simulations in accordance with the procedure approved by the Register."

6 **Para 2.2.2.5.3** is replaced by the following text:

"**2.2.2.5.3** For each loading condition, the evaluation of the equilibrium positions shall be performed over the applicable escort speed range, whereby the speed of the assisted ship through the water shall be considered."

7 **Chapter 2.3** is replaced by the following text:

"2.3 FULL SCALE TRIALS

2.3.1 The full scale trials are performed to specify the preliminary values of the escort characteristics adopted at the design stage.

If the escort characteristics are determined in accordance with the procedure approved by the Register, the full scale trials may not be performed.

2.3.2 Plan of full scale trials.

2.3.2.1 The following shall be submitted to surveyor to the Register prior to the full scale trials:

- plan of the trials;
- calculation of tug's stability during escort service;
- preliminary calculation of the ship's escort characteristics.

2.3.2.2 The plan of full scale trials shall stipulate determination of escort characteristics at the speed of the assisted ship of 8 and/or 10 knots (refer to Fig. 2.1.2).

2.3.2.3 The plan shall include a list of measuring instruments, description of mandatory manoeuvres, a towing arrangement scheme for escort service, design and safe working loads of strong points of the tug and assisted ship.

2.3.3 Procedure of trials.

2.3.3.1 Full scale trials shall be carried out on:

- .1 the first ship out of the series of ships, then every fifth ship of the series (i.e. sixth, eleventh, etc.) provided their propulsion plant is identical;
- .2 every ship of non-series construction.

2.3.3.2 The trials shall be carried out in weather conditions that deliver reliable results (recommended limitation of wind force is 10 m/s, sea state 2), with the load of the tug equal to 50 — 10 % of provisions. Velocity of current in the area of the trials, if any, shall be measured both upstream and down stream.

2.3.3.3 The assisted ship shall maintain the heading and speed during the necessary tug manoeuvring.

2.3.3.4 The following data shall be recorded continuously in real time mode during trials:

- .1 position of the assisted ship in relation to the escort tug;
- .2 towing line tension;
- .3 escort test speed;
- .4 angle of the tug heel during escort service;
- .5 angle of the towing line from the centerline of the assisted ship;
- .6 manoeuvring time from maintained oblique position of the tug on one side of the assisted ship to mirror position on the other side at the maximum tension of towing line and the maximum towing line angle from the centerline of the assisted ship (but not more than 60°);
- .7 angle of heel due to sudden loss of thrust."

8 **Chapter 2.4** is replaced by the following text:

"2.4 REPORTING

2.4.1 Report in tabular form on the results of the full scale trials shall contain records of the parameters measured and calculation of the steering pull value taking into account the time of the tug's transfer to the mirror position.

The results of the full scale trials shall be executed as the report and submitted to the Register for review. Based on the positive results of the review, the Register representative signs and stamps the front page of the record with the surveyor's seal.

2.4.2 The Stability Booklet shall be drawn up with regard to refined escort characteristics.

2.4.3 Upon satisfactory results of the review of the Stability Booklet, the descriptive notation **Escort tug** is added to the character of classification in the Classification Certificate (form 3.1.2), and the following entry shall be made in the column "Other characteristics": "During escort service the maximum steering pull is equal to t, with the escort test speed 8 (or 10) knots and the minimum manoeuvring time s".

In case the measurements were taken at two values of escort test speed (8 and 10 knots), the data of both speeds shall be recorded."

3 REQUIREMENTS FOR THE EQUIPMENT OF SHIPS IN COMPLIANCE WITH THE DISTINGUISHING MARKS ECO AND ECO-S IN THE CLASS NOTATION

9 **Para 3.6.3.9.1** is replaced by the following text:

"3.6.3.9.1 For ships with aggregate capacity of fuel oil tanks 600 m³ and above, the requirements of 3.5.3.9 shall apply, except that the alternative for structural protection of tanks specified in 3.5.3.9.3 shall not apply to ships of ice class **Arc4** and higher or equivalent class."

10 **Para 3.6.3.9.2** is replaced by the following text:

"3.6.3.9.2 For ships of ice class specified in 3.6.3.9.1 with aggregate capacity of fuel oil tanks less than 600 m³, all fuel oil tanks shall be located at a distance of at least 0,76 m from the shell plating. This requirement shall not apply to small fuel oil tanks with the capacity not exceeding 30 m³."

11 **Para 3.6.3.9.3** is replaced by the following text:

"3.6.3.9.3 For ships of ice class specified in 3.6.3.9.1, all oil residue (sludge) tanks and oily bilge water holding tanks shall be located at a distance of at least 0,76 m from the shell plating. This requirement shall not apply to such small tanks with the capacity not exceeding 30 m³."

10 REQUIREMENTS FOR BALTIC ICE CLASS SHIPS

12 **Formula (10.5.4.3.1-2)** is replaced by the following one (for the English version only):

$$"A = \frac{\sqrt{3}f_4f_5phl}{2\sigma_y} 10^4, \text{ in cm}^2, \quad (10.5.4.3.1-2)".$$

13 **Formula (10.5.5.2-2)** is replaced by the following one (for the English version only):

$$"A = \frac{\sqrt{3}f_9f_{10}f_{11}phl}{2\sigma_y} (1 - h_s/l_s)10^4, \text{ in cm}^2, \quad (10.5.5.2-2)".$$

14 **Formula (10.5.6.2-1)** is replaced by the following one (for the English version only):

$$"A = \frac{\sqrt{3}\alpha f_{13}Q}{2\sigma_y} 10^4, \text{ in cm}^2, \quad (10.5.6.2-1)".$$