



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 322-04-1666c

dated 24.11.2021

Re:

amendments to the Guidelines on Technical Supervision of Ships under Construction, 2021, ND No. 2-030101-042-E in connection with implementation of new revision of IACS Unified Requirement (UR) Z28 (Corr.1 June 2021), new revision of IACS Recommendation No. 47 (Rev.10 September 2021), resolution MSC.488(103) (adopted on 13 May 2021) and considering experience in technical supervision

Item(s) of supervision:

ships and offshore installations under construction

Entry-into-force date:

01.01.2022

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

~~dated~~

Number of pages: 1 + 10

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to the Guidelines on Technical Supervision of Ships under Construction

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Guidelines on Technical Supervision of Ships under Construction 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 involved in the technical supervision of ships under construction.
2. Apply the provisions of the Circular Letter when performing technical supervision during construction of ships contracted for classification under construction on or after 01.01.2022.
3. Apply the provisions of the Circular Letter when performing technical supervision during construction of ships contracted for classification under construction before 01.01.2022, as far as reasonable and practicable.

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

Section 2: para 2.14.2.1, Appendix 1: paras 17 – 21 in Literature of Part A, Standards of Part A, paras 1.3, 3.1.1, 3.3, 4.1, 4.2.2, paras 12, 13 in Literature of Part B, Standards of Part B, paras 1.4, 3.1.1, 3.2, Table 4.2 of Part B, and Appendix 4: para 3.2.1

Section 10: paras 10.4.2.9, 10.4.2.9.1, 10.4.2.9.2, 10.4.3.18 and 10.4.3.18.1

Section 13: para 13.4.1.1

Section 17: para 17.6.1.4

Section 18: paras 18.1.5, 18.1.12, 18.1.13, 18.1.15, 18.1.17, 18.1.18, 18.2.2, 18.2.3, 18.3.2, 18.3.3, 18.3.5, 18.3.6, 18.4.3 and 18.4.4

Person in charge: Alexey V. Rumyantsev 322

+7 (812) 380-20-74

"Thesis" System No. 21-275209

**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 2.14.2.1 | Requirement has been specified for the MODU watertight cable transit seal systems considering IACS UR Z28 | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 2 | Section 2, Appendix 1 | The Appendix title has been supplemented by the number and year of new revision of IACS Recommendation No. 47 (Rev.10 September 2021) | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 3 | Section 2, Appendix 1, Part A, References | References have been supplemented by new references A17 – A21 | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 4 | Section 2, Appendix 1, Part A, Standards | New Section "Standards" has been introduced | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 5 | Section 2, Appendix 1, Part A, para 1.3 | Para has been supplemented by new references [19] and [21] | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 6 | Section 2, Appendix 1, Part A, para 3.1.1 | Requirement has been specified for the qualification of welders considering new revision of IACS Recommendation No. 47 (Rev.10 September 2021) | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 7 | Section 2, Appendix 1, Part A, para 3.3 | Requirement has been specified for the qualification of NDT operators considering new revision of IACS Recommendation No. 47 (Rev.10 September 2021) | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 8 | Section 2, Appendix 1, Part A, para 4.1 | New reference [17] has been introduced | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 9 | Section 2, Appendix 1, Part A, para 4.2.2 | Figures 1 and 2 have been renamed | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 10 | Section 2, Appendix 1, Part B, References | References have been supplemented by new references B12 and B13 | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 11 | Section 2, Appendix 1, Part B, Standards | New Section "Standards" has been introduced | 322-04-1666c of 24.11.2021 | 01.01.2022 |

| Nos. | Amended paras/chapters/ sections | Information on amendments | Number and date of the Circular Letter | Entry-into-force date |
|------|---|---|--|-----------------------|
| 12 | Section 2, Appendix 1, Part B, para 1.4 | New para 1.4 has been introduced specifying application of IACS UR W33 | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 13 | Section 2, Appendix 1, Part B, para 3.1.1 | Requirement has been specified for the qualification of welders considering new revision of IACS Recommendation No. 47 (Rev.10 September 2021) | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 14 | Section 2, Appendix 1, Part B, para 3.2 | Requirement has been specified for the qualification of welding procedures considering new revision of IACS Recommendation No. 47 (Rev.10 September 2021) | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 15 | Section 2, Appendix 1, Part B, Table 4.2 | Note 2) has been amended | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 16 | Section 2, Appendix 4, para 3.2.1 | Requirement has been specified for the mass of missing cargoes during the inclining test | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 17 | Paras 10.4.2.9, 10.4.2.9.1 and 10.4.2.9.2 | New paras 10.4.2.9, 10.4.2.9.1 and 10.4.2.9.2 has been introduced containing requirements for mooring trials of static sources of electrical power | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 18 | Paras 10.4.3.18 and 10.4.3.18.1 | New paras 10.4.3.18 and 10.4.3.18.1 been introduced containing requirements for sea trials of static sources of electrical power | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 19 | Para 13.4.1.1 | Requirement has been specified for the launch test of lifeboats and rescue boats considering IMO resolution MSC.488(103) | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 20 | Para 17.6.1.4 | Reference has been specified | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 21 | Para 18.1.5 | Requirements have been introduced for mooring and sea trials having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision (TS Rules) | 322-04-1666c of 24.11.2021 | 01.01.2022 |

| Nos. | Amended paras/chapters/ sections | Information on amendments | Number and date of the Circular Letter | Entry-into-force date |
|------|----------------------------------|---|--|-----------------------|
| 22 | Para 18.1.12 | Requirements have been introduced for mooring and sea trials having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 23 | Para 18.1.13 | Requirements have been specified considering those having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 24 | Para 18.1.15 | Requirement has been specified considering that having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 25 | Para 18.1.17 | Requirements have been specified considering those having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 26 | Para 18.1.18 | Requirement has been introduced for mooring and sea trials having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 27 | Para 18.2.2 | Requirement has been specified for mooring trials considering that having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 28 | Para 18.2.3 | Requirement has been specified for mooring trials considering that having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |

| Nos. | Amended paras/chapters/ sections | Information on amendments | Number and date of the Circular Letter | Entry-into-force date |
|------|----------------------------------|--|--|-----------------------|
| 29 | Para 18.3.2 | Requirements have been specified for mooring trials considering those having been deleted from para 13.9, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 30 | Para 18.3.3 | Requirements has been specified for the submission of the Stability Booklet and Damage Stability Booklet to the RS surveyor | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 31 | Para 18.3.5 | Terms have been specified | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 32 | Para 18.3.6 | Requirement has been specified for the drawing-up of documents considering para 13.10, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 33 | Para 18.4.3 | New para 18.4.3 has been introduced containing the requirement for the list agreement having been deleted from para 13.11, Part I "General Regulations for Technical Supervision" of the TS Rules. Para 18.4.3 and references thereto have been renumbered 18.4.4 | 322-04-1666c of 24.11.2021 | 01.01.2022 |
| 34 | Para 18.4.4 | Requirement has been specified for the operational tests considering that having been deleted from para 13.11, Part I "General Regulations for Technical Supervision" of the TS Rules | 322-04-1666c of 24.11.2021 | 01.01.2022 |

GUIDELINES ON TECHNICAL SUPERVISION OF SHIPS UNDER CONSTRUCTION, 2021,

ND No. 2-030101-042-E

2 HULL

1 **Para 2.14.2.1** is replaced by the following text:

"2.14.2.1 Checks, control and inspections performed in the course of technical supervision during manufacture of hull structures including the MODU/FOP specific hull structures are given in Table 2.5.1.

For MODUs, watertight cable transit seal systems shall be inspected in accordance with item 8.6 of Table 2.5.1."

APPENDIX 1

IACS RECOMMENDATION No. 47

Shipbuilding and Repair Quality Standard

2 The title of the Appendix is supplemented by the number and date of new revision of IACS Recommendation No. 47 "(Rev.10 September 2021)".

PART A

SHIPBUILDING AND REMEDIAL QUALITY STANDARDS FOR NEW CONSTRUCTION

3 **References.** The Section is supplemented by new references A17 – A21 reading as follows:

A17. IACS UR W31 "YP 47 Steels and Brittle Crack Arrest Steels"

A18. IACS UR W32 "Qualification scheme for welders of hull structural steels"

A19. IACS UR W34 "Advanced non-destructive testing of materials and welds"

A20. IACS UR W35 "Requirements for NDT Suppliers"

A21. IACS UR S33 "Requirements for Use of Extremely Thick Steel Plates in Container Ships".

4 After section "References" a **new section "Standards"** is introduced reading as follows:

"STANDARDS

EN 10163-1:2004 "Delivery requirements for surface condition of hot-rolled steel plates, wide flats and sections – Part 1: General requirements".

5 **Para 1.3** is supplemented by new references A19 and A21 to paras 19 and 21 of the Section "References".

6 **Para 3.1.1** is replaced by the following text:

«**3.1.1** Welders are to be qualified in accordance with IACS UR W32 (ref.A18) or other recognized standard accepted by the Classification Society.

Recognition of other standards is subject to submission to the Classification Society for evaluation. Subcontractors are to keep records of welders qualification and, when required, furnish valid approval test certificates.".

7 **Para 3.3** is supplemented by a new paragraph reading as follows:

«In case, of non-destructive examination carried out by an independent firm from the shipbuilder, such firm shall comply with IACS UR W35 (ref. A20).».

8 **Para 4.1.** New reference A17 is introduced to para 17 of the Section "References".

9 **Para 4.2.2.** Figure 1 is renamed as follows:

"Determination of the area influenced by an isolated discontinuity (EN 10163-1:2004)".

Figure 2 is renamed as follows:

"Determination of the area influenced by clustered discontinuities (EN 10163-1:2004)".

PART B

SHIPBUILDING AND REPAIR QUALITY STANDARD FOR EXISTING SHIPS

10 **References.** The Section is supplemented by new references B12, B13 reading as follows:

"B12. IACS UR W28 "Welding procedure qualification tests of steels for hull construction and marine structures"

B13. IACS UR W32 "Qualification scheme for welders of hull structural steels".

11 After the Section "References" a **new Section "Standards"** is introduced reading as follows:

"STANDARDS"

ANSI/AWS D1.1:2020 "Structural Welding Code – Steel".

ASME BPVC, Section IX:2019 "Boiler and Pressure Vessel Code, Section IX: Welding and Brazing Qualifications".

ASTM A 131:2019 "Standard Specification for Structural Steel for Ships".

EN 10025-2:2019 "Hot Rolled Products of Structural Steels - Part 2: Technical Delivery Conditions For Non-alloy Structural Steels".

EN 10025-3:2019 "Hot Rolled Products of Structural Steels - Part 3: Technical Delivery Conditions For Normalized/normalized Rolled Weldable Fine Grain Structural Steels".

EN 10025-4:2019 "Hot Rolled Products of Structural Steels - Part 4: Technical Delivery Conditions for Thermomechanical Rolled Weldable Fine Grain Structural Steels".

EN ISO 15607:2019 "Specification and Qualification of Welding Procedures For Metallic Materials - General Rules".

GB 712:2011 "Ship and ocean engineering structural steel".

ISO 4950-2:1995/Amd 1:2003 "High yield strength flat steel products — Part 2: Products supplied in the normalized or controlled rolled condition — Amendment 1".

ISO 9606 -1:2012/COR2:2013 "Qualification testing of welders — Fusion welding — Part 1: Steels — Technical Corrigendum 2".

ISO 15614-1:2017 "Specification and qualification of welding procedures for metallic materials — Welding procedure test — Part 1: Arc and gas welding of steels and arc welding of nickel and nickel alloys".

JIS G 3106:2015 /Amd 1:2017 "Rolled steels for welded structure (Amendment 1)".

12 **New para 1.4** is introduced reading as follows:

"1.4 IACS UR W33 (ref. B8) scope is for new construction only, however, for the purpose of NDT applicability within this Recommendation, UR W33 may be used as reference for NDT methods and acceptance standards."

13 **Para 3.1.1** is replaced by the following text:

"3.1.1 Welders are to be qualified in accordance IACS UR W32 (ref.B13) or to a recognized national or international standard, e.g., ISO 9606-1:2012/COR2:2013, ASME BPVC Section IX:2019, ANSI/AWS D1.1:2020. Recognition of other standards is subject to submission to the Classification Society for evaluation. Repair yards and workshops are to keep records of welders qualification and, when required, furnish valid approval test certificates."

14 **Para 3.2** is replaced by the following text:

"Welding procedures are to be qualified in accordance with IACS UR W28 (ref. B12) or a recognised national or international standard, e.g. EN ISO 15607:2019, ISO15614-1:2017, ASME BPVC, Section IX:2019, ANSI/AWS D1.1:2020. Recognition of other standards is subject to submission to the Classification Society for evaluation. The welding procedure should be supported by a welding procedure qualification record. The specification is to include the welding process, types of electrodes, weld shape, edge preparation, welding techniques and positions."

15 **Table 4.2.** Footnote (2) is replaced by the following text:

"(2) EN 10025:1990 is superseded by EN10025:2019 (e.g. EN 10025-2:2019, EN 10025-3:2019, EN 10025-4:2019)."

APPENDIX 4

INSTRUCTIONS ON INCLINING TEST OF SHIPS

16 **Para 3.2.1** is replaced by the following text:

"3.2.1 The ship's construction shall be close to its end by the time of the inclining test. Load of the ship during the inclining test shall be as nearly as possible to displacement of the light ship. The mass of missing cargoes shall not exceed 2 % of displacement of the light ship and the mass of surplus cargoes (excluding test weight and ballast for provision of the required trim and stability) — 4 %."

10 ELECTRICAL EQUIPMENT

17 **New paras 10.4.2.9, 10.4.2.9.1 and 10.4.2.9.2** are introduced reading as follows:

"10.4.2.9 Mooring trials of static sources of electrical power.

10.4.2.9.1 During mooring trials the following shall be checked:

proper operation of devices and elements of lithium-ion batteries (LIB), super capacitor systems (SCS), solar-cell arrays (SA) and fuel cells (FC):

protection actuation,

alarm system,

emergency shutdown functions,

switch-on and switch-off,

charging-discharging units;

operational check of the LIB, SCS and FC auxiliary systems:

ventilation systems,

gas detection systems,

cooling systems,
fire alarm systems,
fire extinguishing systems;
LIB, SCS, SA and FC functioning checks:
in autonomous mode (at idle running, under rated load, at load surge and load shedding relief, when consumers are activated),
in parallel mode with other sources (at idle running, under share and rated loads, at load surge and load shedding relief, when consumers are activated) (if provided),
in buffer mode (if provided).
Where it is impossible to perform separate checks during mooring trials they shall be carried out during sea trials.

10.4.2.9.2 During the FC mooring trials, apart from the above-mentioned checks, automatic changeover to the safe condition and initiation of emergency alarm when simulating following events shall be checked:

fire detection;
gas leakage detection;
failure of ventilation system;
disconnection of electric power supply;
protection actuation;
failure of control system."

18 **New paras 10.4.3.18 and 10.4.3.18.1** are introduced reading as follows:

"10.4.3.18 Sea trials of static sources of electrical power.

10.4.3.18.1 During the LIB, SCS, SA and FC sea trials, the following functioning checks shall be performed:

in autonomous mode (at idle running, under rated load, at load surge and load shedding relief, when consumers are activated);
in parallel mode with other sources (at idle running, under share and rated loads, at load surge and load shedding relief, when consumers are activated) (if provided);
in buffer mode (if provided)."

13 LIFE-SAVING APPLIANCES

19 **Para 13.4.1.1** is replaced by the following text:

"13.4.1.1 Except for free-fall lifeboats, it shall be demonstrated that the fully equipped lifeboat on cargo ships of 20 000 gross tons or more and rescue boat can be launched from a ship proceeding ahead at a speed of not less than 5 knots in calm water and on an even keel. There shall be no damage to the lifeboat or the rescue boat or their equipment as a result of this test."

17 ARRANGEMENTS FOR THE PREVENTION OF POLLUTION FROM SHIPS

20 **Para 17.6.1.4** is replaced by the following text:

"17.6.1.4 Ship's service systems, machinery, pumps, automatic equipment, electrical equipment, etc. operating directly or in association with the equipment and arrangements to be subjected to functional tests shall be tested in accordance with the provisions of the appropriate sections of the Guidelines."

18 MOORING AND SEA TRIALS

21 **Para 18.1.5** is replaced by the following text:

"18.1.5 Preparation and trials shall be carried out by the shipyard. The results of this work, namely: entries in ship forms dealing with deslushing of the equipment, measurements tables of

adjustment and alignment works shall be requested, where necessary, by the RS surveyor from the shipyard in advance of the commencement of mooring trials of relevant equipment.

The items of technical supervision shall be submitted for tests upon completion of all installation works and completion of main construction works, which are likely to affect the testing of the item.

The technical control body shall timely inform the RS surveyor of the readiness of the items of technical supervision for trials and of the date of their performance.

Surveys during trials of the item of technical supervision are carried out by the RS surveyor upon acceptance of the item by the technical control body."

22 **Paras 18.1.12 and 18.1.13** are replaced by the following text:

"18.1.12 Unless other terms of delivery are specified, the shipyard building the ship is responsible for safety during trials and safety of the ship itself.

The shipyard building the ship organizes performance of trials and conditions preventing any influence on trials results as well as ensures compliance with the requirements for safe navigation.

The shipyard constructing the ship shall provide for all necessary conditions for technical supervision by the RS surveyor in the course of mooring and sea trials in compliance with the requirements of the applicable RS rules and the Guidelines, and ensures the following:

- .1 ship and shipyard communication facilities;
- .2 transport means.

18.1.13 The equipment provided by the shipyard for use during the trials shall be operated in conformity with the technical operation regulations and maintenance instructions.

The RS surveyor is not entitled to operate the equipment himself/herself or interfere with the actions of the attending personnel. In case actions of the personnel may cause an accident or damage to the equipment, the RS surveyor is entitled to demand, via representatives of the technical control body, elimination of violations (up to the refusal to participate in the ongoing tests)."

23 **Para 18.1.15** is replaced by the following text:

"18.1.15 The items of technical supervision, which trials results do not meet the requirements of the applicable RS rules or the RS-approved documentation, shall be subjected to repeated trials after elimination of causes of unsatisfactory trials results."

24 **Paras 18.1.17 and 18.1.18** are replaced by the following text:

"18.1.17 Measurements, which are taken by the technical control body and ascertain that the item of technical supervision is in good working order, shall be processed by the technical control body upon completion of the trials of the item of technical supervision and submitted to the RS surveyor.

In case of satisfactory results the RS surveyor signs the shipyard's document on completion of trials of the items of technical supervision, to which the tables of measurements are appended, where necessary.

18.1.18 An interruption in the trials of items of technical supervision under continuous modes shall be indicated in the test report, and a matter of continuation of the trials and the conditions of their performance (extension of time period and scope) shall be agreed upon with the RS surveyor, having regard to the causes of trials termination.

In case of the second forced interruption of the same continuous testing mode, the tests shall be terminated and the causes eliminated. Then repeated tests shall be conducted in full or extended scope, where necessary. The time for tests performance shall be agreed upon with the RS surveyor."

25 **Paras 18.2.2 and 18.2.3** are replaced by the following text:

"18.2.2 Fulfilment of the requirements for certain items of technical supervision, on agreement with the RS Branch Office, may be transferred (in exceptional cases) to the period of the sea trials or some other time, provided these requirements do not interfere with the sea trials or affect the safety of ship navigation and people on board.

18.2.3 In case the ship is not ready for sea trials according to the RS Branch Office, the RS Branch Office, prior to sea trials, shall send a notification addressed to the shipyard which contains the objective justification for such opinion."

26 **Para 18.3.2 and 18.3.3** are replaced by the following text:

"18.3.2 In case the Register confirmation of the ship readiness for sea trials is required by port authorities to issue a sea trial permit, the Register may issue an appropriate confirmation, on the shipyard's written inquiry, in which preparation the following shall be considered:

.1 confirmation shall be drawn up in an arbitrary form on the RS official letter form (using form 6.3.10 or form 3.1.11, or on the letter form upon agreement with the shipyard);

.2 confirmation shall include the statement that in accordance with specific contract on technical supervision, all new construction surveys of the Register have been completed and, according to the Register, the ship may be considered ready for sea trials.

18.3.3 Prior to the commencement of sea trials the shipyard shall submit to the RS surveyor the following documentation:

.1 programme of sea trials, including tests for validation of the attained EEDI (if applicable), approved by the Register;

.2 technical documentation necessary for surveys and trials;

.3 Stability Booklet and Damage Stability Booklet, developed as per results of inclination or light-weight check (for the ship of a series);

.4 designed Stability Booklet and Damage Stability Booklet, inclination report (for the prototype ship)."

27 **Paras 18.3.5 and 18.3.6** are replaced by the following text:

"18.3.5 Necessity of the additional sea trials shall be agreed with the RS surveyor and, generally, shall be determined by the following conditions:

.1 where the parameters determining proper operation of the item of technical supervision can be received in the course of the additional sea trials only;

.2 where, as a result of mooring and sea trials, the replacement of the whole item of supervision or some of its essential parts is required which serviceability may be confirmed only in the course of the additional sea trials;

.3 where it is impossible to attain the required rates by means of simulation, or where such means are not available.

18.3.6 Satisfactory results of the surveys performed under the List, no violation of the RS requirements upon results of the patrols, mooring and sea trials shall be the basis for drawing up the report (acts) on survey of the ship, on which basis the ship's documents are drawn up by the Register."

28 **New para 18.4.3** is introduced reading as follows:

"18.4.3 In case a list of arrangements to be made or recommended for use in the following ships of the series is elaborated upon completion of the prototype ship trials, such list shall be agreed upon with the Register."

29 **Existing para 18.4.3** and the references thereto are renumbered 18.4.4.

30 **Existing para 18.4.3 (new para 18.4.4)** is replaced by the following text:

"18.4.4 Where necessary, having regard to the purpose of the ship and in case of using prototypes of materials, products, machinery and equipment, and in other justified cases, the Register documents shall specify operational tests under the RS-approved programme (refer also to 1.8, Part IV "Technical Supervision during Manufacture of Products" of the Rules for Technical Supervision)."