



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 314-16-1390c

dated 12.05.2020

Re:

amendments to the Rules for the Cargo Handling Gear of Sea-Going Ships, 2020, ND No. 2-020101-129-E

Item(s) of supervision:

cargo handling gears of sea-going ships

Entry-into-force date:

01.06.2020

~~Valid till:~~

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

~~dated~~

Number of pages:

1 + 13

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to the Rules for the Cargo Handling Gear of Sea-Going Ships

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the Rules for the Cargo Handling Gear 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 to products installed on board the ships contracted for construction on or after 01.06.2020 as well as to products the technical documentation of which has been submitted for review on or after 01.06.2020.
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List of the amended and/or introduced paras/chapters/sections:

Paras 1.3.1, 1.3.2, 1.4.1.16, 1.5.4.5, 3.1.7, 4.2.11, 9.4.8, 9.5.1, 10.1.3, 10.1.7, 10.1.8, 10.2.3, 10.2.6, 10.3.1, 10.3.2, 10.3.4, 10.3.7, 10.3.12, 10.4.5, 10.5.1, 11.1.1, 11.1.3, 11.2.1, 11.2.2, 11.2.3, 11.2.4 and 11.2.8.

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**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 1.3.1	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
2	Para 1.3.2	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
3	Para 1.4.1.16	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
4	Para 1.5.4.5	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
5	Para 3.1.7	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
6	Para 4.2.11	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
7	Para 9.4.8	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
8	Para 9.5.1	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
9	Para 10.1.3	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
10	Para 10.1.7	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
11	Para 10.1.8	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
12	Para 10.2.3	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
13	Para 10.2.6	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
14	Para 10.3.1	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
15	Para 10.3.2	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
16	Para 10.3.4	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
17	Para 10.3.7	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
18	Para 10.3.12	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
19	Para 10.4.5	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
20	Para 10.5.1	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
21	Para 11.1.1	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
22	Para 11.1.3	Para has been supplemented by a full name of the Certificate	314-16-1390c of 12.05.2020	01.06.2020
23	Para 11.2.1	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
24	Para 11.2.2	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
25	Para 11.2.3	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
26	Para 11.2.4	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020
27	Para 11.2.8	Requirements have been specified in compliance with the provisions of Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships	314-16-1390c of 12.05.2020	01.06.2020

RULES FOR THE CARGO HANDLING GEAR OF SEA-GOING SHIPS, 2020

ND No. 2-020101-129-E

1 GENERAL

1 **Para 1.3.1** is replaced by the text reading as follows:

"1.3.1 Subject to survey by the Register are the following cargo handling gear:

.1 ship's derricks, ship's cranes and hoists (pulley blocks, telfers, etc.) having lifting capacity 1 t and more;

.2 upper structures of floating cranes and crane ships;

.3 cranes on floating docks and cranes mounted on mobile offshore drilling units and fixed offshore platforms intended for loading and unloading of supply vessels with safe working load 1 t and more;

.4 ship's cranes having lifting capacity 1 t and more for personnel convey;

.5 ship's cargo lifts with safe working load 250 kg and more and electrically driven passenger lifts intended for lifting and lowering of persons and/or loads in the car moved by the ropes with a speed not in excess of 1,0 m/s;

.6 ship's elevating platforms with a lifting capacity 1 t and more which move up and down with a speed not in excess of 0,1 m/s.

.7 fixed gear and interchangeable components of cargo handling gear;

.8 ropes of cargo handling gear;

.9 loose gear (slings, spreaders, lifting beams and frames, etc.) being part of the ship;

.10 appliances, being part of the ship, designed to convey the personnel.

Survey of cargo handling gear of other types and purposes shall be specially considered by the Register in each particular case."

2 **Para 1.3.2** is replaced by the following text:

"1.3.2 Register survey of cargo handling gear of other types covers:

.1 review and approval of technical documentation;

.2 survey of manufacture, installation on board ship (floating facility) and repairs of cargo handling gear;

.3 tests;

.4 issue of Register documents."

3 **Para 1.4.1.16** is replaced by the following text:

".16 documentation on marking of the cargo-handling gear and components subject to the RS survey."

4 **Para 1.5.4.5** is replaced by the text reading as follows:

"1.5.4.5 The hydraulic pipes between servomotors or hydraulic motors shall be made with a higher degree of safety. This also relates to all the devices connected thereto.

Flanged bolted connections shall be tested for tightness by a pressure equal to 1,5 times the design pressure or 1,5 times the maximum working pressure."

3 MATERIALS AND WELDING

5 **Para 3.1.7** is replaced by the text reading as follows:

"3.1.7 All steel castings and forgings used in cargo handling gear, as well as welded items with stressed closely spaced or intersecting welded joints shall be heat-treated for stress relieving (castings from alloyed steels shall be quenched and tempered, castings and forgings from carbon steels shall be quenched and tempered or normalized, and electrically welded items shall be annealed).

Heat treatment of items shall be carried out in muffle furnaces under efficient control of the temperature. Heat treatment conditions shall be specified depending on the steel grade, use and size of the items and shall be agreed upon with the Register.

Heat treatment shall be confirmed by the document drawn up by the manufacturer according to the standards of the firm. The particulars of heat treatment of interchangeable components shall be entered in the Certificate of Test and Thorough Examination of Interchangeable Components and Loose Gear (Form 5.1.4).

If heat treatment of the interchangeable components was supervised by a competent person, a relevant entry shall be made in Part II of the Register of Ship's Cargo Handling Gear Lifting Appliances and by the RS surveyor, based on the Certificate of Test and Thorough Examination of Interchangeable Components and Loose Gear signed by the competent person."

SHIP'S DERRICKS

6 **Para 4.2.11** is replaced by the text reading as follows:

"4.2.11 When several positions of a boom are possible, calculations shall be made for each position separately. Allowable angles of inclination shall be indicated in the Certificate of Test and Thorough Examination of Lifting Appliances (Form 5.1.2)."

9 GEAR AND ROPES

7 **Para 9.4.8** is replaced by the following text:

"9.4.8 Wire ropes for slings shall comply with the requirements of 3.15 and 6.6, Part XIII "Materials" of the Rules for the Classification and Construction of Sea-Going Ships and be manufactured to a recognized national and international standards.

Wire rope slings may be endless, formed by jointing two ends of the rope, or have a variety of terminations and splices.

Wire rope slings endless or with hand-spliced or mechanically secured eyes (with aluminium or steel ferrules), as well as with rope sockets used as a terminal fitting shall be manufactured to a recognized national or international standards and supplied according to the appropriate requirements of Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships together with the RS certificates or manufacturer's documents for wire ropes showing the minimum breaking load of the original rope before its termination or eye were made.

Bolted clamps shall not be used to form a terminal join.

Wire rope slings with ferrule secured eyes shall be subjected to a proof load test in accordance with 10.2.1 using straight pull."

8 **Para 9.5.1** is replaced by the following text:

"9.5.1 Ropes used in cargo handling gear, where not covered by the specific requirements of the present Rules, shall comply with the appropriate requirements of 3.15 and 6.6, Part XIII "Materials" of the Rules for the Classification and Construction of Sea-Going Ships.

The minimum breaking load of the rope certified by the manufacturer shall be stated in the RS certificates or documents for ropes drawn up by the manufacturer declaring compliance of the

material or product to the RS requirements issued in accordance with the requirements of Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships".

10 EXAMINATIONS, INSPECTIONS AND TESTING

9 **Para 10.1.3** is replaced by the following text:

"**10.1.3** Examinations and supervision of tests of the cargo handling gear, their machinery and gear after they have been built, re-rigged or repaired shall be carried out by the Register upon submission of the documents certifying the readiness for use and final acceptance by the manufacturer."

10 **Para 10.1.7** is replaced by the following text:

"**10.1.7** Certificates issued by the Register for the cargo handling gear as well as for interchangeable components and loose gear, become invalid in case the certificates on testing or thorough examination required by the Rules are not available or an entry on timely performance of periodical examinations has not been made or the cargo handling gear does not comply with its certificates or after an accident."

11 **Para 10.1.8** is replaced by the following text:

"**10.1.8** During the initial survey of the cargo handling gear constructed for the compliance with the rules of other classification societies, the shipowner shall submit the plans and calculations specified in 1.4.6, and also the certificates issued by classification societies or by the manufacturer and certifying that the cargo handling gear has been tested and accepted for use.

Testing and examinations of cargo handling gear during the initial survey shall be carried out as specified in 10.3.

Where documents issued by other classification societies (refer to also 11.1.4) on testing of interchangeable components and loose gear, and ropes are available, repeated testing will not be needed, provided the proof loads applied conform to the requirements of 10.2.1."

12 **Para 10.2.3** is replaced by the text reading as follows:

"**10.2.3** After testing all components shall be thoroughly examined by a competent person to make sure that no defects or permanent deformations are left. Blocks shall be dismantled for inspection of axles and sheaves.

Upon satisfactory results of tests and examinations, a Certificate of Test and Thorough Examination of Interchangeable Components and Loose Gear (Form 5.1.4) shall be issued and an entry shall be made in Part II of the Register of Ship's Lifting Appliances and Cargo Handling Gear. If the tests have been supervised by a competent person, the Certificate according to Form 5.1.4 shall be issued by the RS surveyor on the basis of the Certificate of Test and Thorough Examination of Interchangeable Components and Loose Gear issued in accordance with 11.1.3 and signed by the competent person."

13 **Para 10.2.6** is replaced by the following text:

"**10.2.6** Tests of wire, natural and synthetic fibre ropes and chains shall be carried out in accordance with the requirements of 3.15, 6.6 and 7.1, Part XIII "Materials" of the Rules for the Classification and Construction of Sea-Going Ships.

Sockets and pressed clamps used to restrain the ends of wire ropes and preventer guy thimble with pressed bushes shall be tested together with the ropes after socketing.

The tests shall be confirmed by documents drawn up by the manufacturer according to the standards of the firm, and for chains and wire ropes with/without end sockets additionally by certificates (Forms 5.1.4 and 5.1.5).

If tests have been supervised by a competent person, certificates of Test and Thorough Examination according to Form 5.1.4 for chains and Form 5.1.5 for wire ropes are issued by a

Surveyor to the Register on the basis of the Certificate of Test and Thorough Examination signed by the competent person.

When the wire ropes are supplied in separate pieces with no rope end terminations or rope sockets etc., marked and stamped according to 11.2, it is necessary to provide a copy of the RS certificate or document for the rope drawn up by the manufacturer according to the standards of the firm issued in accordance with the requirements of Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships. In this case, the rope supplier is fully responsible for the identification of the supplied rope with indicated above-mentioned documents.

Slings with crate clamps, barrel hooks, plate shall be tested as nearly as possible in the manner in which they are used, i.e. at the angle at which the clamp or other device is designed to be used. The clamp or other devices shall be applied to a baulk of timber or special steel jig such that its holding or gripping strength is tested."

14 **Para 10.3.1** is replaced by the following text:

"10.3.1 The assembled cranes, winches and reels of the derrick boom gear shall be tested and examined by a competent person at the manufacturer's in accordance with the testing program approved by the Register, using the proof loads given in Table 10.3.4.

The tests and examinations shall be proved by the Certificate issued by the Register or document drawn up by the manufacturer declaring compliance of material or product to the RS requirements signed by a competent person.

Marking of the tested cranes, winches and reels shall be done as specified in 11.2.

Gear and assemblies subject to loading shall be thermally insulated and painted after testing and examination."

15 **Para 10.3.2** is replaced by the following text:

"10.3.2 Prior to testing and examination of the cargo handling gear upon installation on board the ship, the following documents shall be presented to the surveyor issued in accordance with the requirements of Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships—signed by a competent person; manufacturer's reports proving that the cargo handling gear is in conformity with the technical documentation approved by the Register, reports on quality control of works and quality of welded joints, RS certificates and documents for materials and products issued by the manufacturer in accordance with the requirements of Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships, and documents on heat treatment.

In case of structural alterations in cargo handling gear as a result of re-rigging or repairs, the scope of the technical documentation to be submitted shall be in accordance with structural alterations made.

For testing and inspection of cargo handling gear in service that have not been re-rigged, replaced or repaired, the scope of the technical documentation to be submitted shall be as specified in 11.1."

16 **Para 10.3.4** is replaced by the following text:

"10.3.4 Upon installation on board and prior to being taken into use, all cranes, hoists and derricks with their winches and all the accessories shall be tested with a proof load the weight of which shall not be less than the figure determined from Table 10.3.4 depending on the SWL and shall not exceed it by more than 2,5 %.

Table 10.3.4

SWL, t	Proof load
Under 20	1,25×SWL
20 to 50	SWL+5 t
Over 50	1,1×SWL

The tests during the initial and periodical surveys shall be carried out with a proof load only. Between the periodical tests conducted after replacement or repair of any load bearing item and in case where a need in additional test arises (e.g. upon closing out the remarks and/or upon fulfilling the requirements set forward by the surveyor after the proof load tests have been carried out), use of securely fixed spring or hydraulic dynamometers instead of proof load is allowed during periodic surveys. The dynamometers may be used, provided that the rigging allows to subject the particular item to the same stresses (to be determined by calculation) as if the cargo handling gear had been tested by a proof load and the SWL of the cargo handling gear had not exceeded 15 t.

The dynamometers shall be calibrated with an accuracy within +2 per cent. During the tests their readings shall remain constant for at least five minutes.

Where, owing to pressure limitations, the hydraulically operated hoisting machinery fails to hoist the proof load as specified in Table 10.3.4, it is sufficient to hoist the greatest possible load at the maximum permissible hydraulic pressure if the testing of the hoisting machinery with a proof load at the manufacturer's is proved by the Certificate issued in accordance with the requirements of Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships. In this case, at the manufacturer's the assembled cranes may be tested with a proof load by suspension of a load on the hoisted hook by means of another cargo handling gear.

If the winch pull is not sufficient to hoist the proof load, the latter is allowed to be hoisted by another winch; however, braking and keeping the proof load in suspension shall be done by the winch to be tested.

If the rigging of the heavy-lift derrick includes the detachable stays and shrouds, these shall be fitted when the derrick is tested.

Collapsible derricks shall be tested with a proof load on every prop with which they are normally used.

Where stationary derricks are intended for operation at two hatches, they shall be tested in the operating position at each hatch separately. The derricks with two eye plates shall be tested with a proof load on each plate.

The proof load shall be hoisted with the derrick booms inclined at an angle of 15° to the horizontal for the light-lift derricks and 25° for the heavy-lift derricks; where the angles in service exceed the above values, the actual angles shall be used in tests.

Derrick cranes shall be tested with a proof load at the maximum angles allowable in service.

Inclination angles of derrick booms shall be stated in the Certificate of Test and Thorough Examination of Lifting Appliances (Form 5.1.2).

For derrick cranes and cranes with a variable jib radius and constant safe working load the proof load shall be hoisted at the maximum and minimum radii of the jib; where the safe working load of the crane varies with the jib radii, the proof load shall be hoisted at the maximum and minimum jib radii for each particular safe working load.

The crane jib radii shall be stated in the Certificate of Test and Thorough Examination of Lifting Appliances (Form 5.1.2).

After the proof load has been hoisted, it shall be swung to the extreme positions in both directions by slewing the derrick or the crane and or by moving the crane (hoist, crab).

Operation of the brakes of the derrick and crane cargo winches shall be tested by quick lowering of the load, the weight of which is equal to the SWL, for about 3 m and its sharp braking. The test shall be carried for at least two positions of the derrick.

Keeping the proof load in suspension with the winch drive disconnected as well as manual release of the brakes shall also be tested.

For heavy-lift derricks the derrick boom radius shall be varied under the proof load and functioning of the span winch brake shall be checked.

The test shall also include a functional check of the emergency switches and interlocking of the cargo winches, and span rope and preventer guys reels with an independent drive.

Where the derrick is fitted with a span winch, the winch shall be tested with the derrick it serves and each sprocket shall be subjected to load.

Upon completion of tests with the proof load, each winch serving the derrick shall be tested with its safe working load suspended and the derrick placed in various positions, such that each winch has the maximum working length of rope layered on its drum.

When a gantry crane is tested on board ship, the proof load shall be slowly traversed along the entire length of the track with the proof load so far as possible on one side, and then again with the proof load as far as possible on the other side."

17 **Para 10.3.7.** The last paragraph is replaced by the following text:

"Upon satisfactory results of tests and examinations, a Certificate of Test and Thorough Examination of Derricks Used in Union Purchase (Form 5.1.3) shall be issued and an entry shall be made in Part I of the Register of Ship's Lifting Appliances and Cargo Handling Gear."

18 **Para 10.3.12.** The last paragraph is replaced by the following text:

"Upon satisfactory results of tests and examinations of the shift lifts, a Certificate of Test and Thorough Examination of Lifts (Form 5.1.6) shall be issued and an entry shall be made in Part I of the Register of Ship's Lifting Appliances and Cargo Handling Gear."

19 **Para 10.4.5.** The last paragraph is replaced by the following text:

"The tests and associated examinations shall be confirmed by a Certificate of Test and Thorough Examination of Lifting Appliances (Form 5.1.2)."

20 **Para 10.5.1** is replaced by the following text:

"10.5.1 In case of placement, re-rigging or repair of the cargo handling gear, their machinery, metal structures or gear, the mounted cargo handling gear shall be examined and tested in accordance with appropriate requirements of 10.3. Such examinations and tests shall, in particular, be carried out in the following cases:

- .1 after the replacement of the cargo handling gear as a whole or putting it in another place;
- .2 after the re-rigging of the cargo handling gear, major overhaul or repair after an accident;
- .3 after major overhaul of machinery and fixed gear of the cargo handling gear, alterations or replacement of their metal structures;
- .4 if the height of the span rope fastening has been changed or fastenings of shrouds or stays have been shifted;
- .5 after replacement or major repair of a winch or a brake, after replacement of the car, counterweight, electric motor, suspension ropes, winch drum, after repair or replacement of the traction sheave;
- .6 after removal of a cargo handling gear because of certain reasons and its re-positioning in the original place.

After replacement of loose and interchangeable components and ropes, testing of the mounted cargo handling gear is not needed, however, they must have a Certificate of Test and Thorough Examination of Interchangeable Components and Loose Gear and Certificate of Test and Thorough Examination of Wire Rope.

After replacement of spreaders the cargo handling gear shall be subjected to operational tests with a suspended spreader and a container in service conditions.

After replacement of cargo-gripping devices, overspeed governors or a buffer static tests of a ship's lift may be omitted.

In case of alterations in the wiring diagram or replacement of cables in the control circuit, as well as of modifications in the design of limit switches, door contacts, automatic locks, deck switches, centralized deck apparatus or any other devices performing the same functions, the static and dynamic tests of the ship's lift may be dispensed with. In such case, it is sufficient to run the tests in accordance with 10.3.12.

Occasional examinations and tests shall be confirmed by an appropriate Certificate of Test and Thorough Examination (Forms 5.1.2 and 5.1.4)."

11 DOCUMENTATION AND MARKING

21 **Para 11.1.1** is replaced by the following text:

"11.1.1 Ships and mobile offshore drilling units, cargo handling gear of which are subject to survey by the Register shall be provided (as required for the appliances installed) with the following documents:

- .1 Register of Ship's Lifting Appliances and Cargo Handling Gear, Form 5.1.1;
- .2 Certificate of Test and Thorough Examination of Lifting Appliances, Form 5.1.2;
- .3 Certificate of Test and Thorough Examination of Derricks Used in Union Purchase, Form 5.1.3;
- .4 Certificate of Test and Thorough Examination of Interchangeable Components and Loosing Gear, Form 5.1.4;
- .5 Certificate of Test and Thorough Examination of Wire Rope, Form 5.1.5;
- .6 Certificate of Test and Thorough Examination of Lifts, Form 5.1.6;
- .7 documents for ropes drawn up by the manufacturer declaring compliance with the RS requirements or RS Certificates issued according to the requirements of Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships;
- .8 Instructions on Operation of Ship's Derricks Used in Union Purchase."

22 **Para 11.1.3** is replaced by the following text:

"11.1.3 Particulars of the tested item to be given in the Certificate of Test and Thorough Examination of Interchangeable Components and Loosing Gear (Form 5.1.4) shall contain a designation according to the standard or safe working load for non-standard parts, type of material and of heat treatment together with the following dimensions:

- .1 for shackles – diameter of pin, and in case of an uncommonly sized jaw opening, also the clear jaw opening and the diameter of shackle in the middle of the bow;
- .2 for swivel suspensions of blocks, swivels and turnbuckles – diameter of thread;
- .3 for blocks – diameter measured in the bottom of sheave and axle diameter;
- .4 for chains – gauge and type of link (short-link, long-link);
- .5 connecting links – gauge of link and its length."

23 **Para 11.2.1** is replaced by the following text:

"11.2.1 Upon satisfactory results of testing with a proof load in accordance with 10.2 each interchangeable component and loose gear shall be marked. The marking shall be legible, reliable and durable and shall contain the following particulars:

- .1 load mass corresponding to the safe working load with indication of the letters SWL, t, in front of it;
- .2 month and year of test;
- .3 individual identification number of the item;
- .4 own mass, in t, with letters *TW* in front (for lifting beams, frames and spreaders);
- .5 steel grade (refer to Table 11.2.1.5).

Table 11.2.1.5

Steel grade marking

Steel marking	Grade of steel	Stress in a sample at the breaking load specified in ISO standard, R_m^1 , N/mm ²
L	Low carbon	300
M	Higher tensile	400
P	Alloyed	500
S	»	630
T	»	800
¹ R_m – tensile strength.		

The stamps and marking shall be positioned on items as follows:

hooks – on one of the side, on ramshorn hooks, on the wider portion between the horns;

swivels – on the wider side of the bow-piece close to the eye shank;
shackles – on any side of the shackle close to the eye;
blocks – on the strap or on the cheek plate (if there is no strap, between the eye and the sheave axle pin);
cross – heads of blocks – in the middle of the side surface;
swivels of blocks – on the side portion of casing close to the pin;
wire rope sockets – on the cone portion;
chains – on end link of each chain length;
connecting links – on one side surface, and identification number – on the centre insert on the lock;
rigging screws – on tubular body; identification number also on the eye or lug;
cargo-gripping devices – on clearly visible and protected place of load-carrying frame or beam near the support.

Twistlocks of container spreaders shall be marked with their identification number. Examples of marking are shown in Figs. 11.2.1-1 – 11.2.1-5.

Where small dimensions of items make stamping difficult, month and year of testing may be omitted."

24 **Para 11.2.2** is replaced by the following text:

"**11.2.2** Upon satisfactory results of testing in accordance with 10.3.1, cranes, cargo winches, reels shall be legibly and durably marked. The marking shall contain the following particulars:

- .1 safe working load with indication of the letters *SWL*, t, in front of it (pull, tension in span rope, kN);
- .2 month and year of test;
- .3 individual identification number of the item."

25 **Para 11.2.3** is replaced by the following text:

"**11.2.3** Upon satisfactory results of examination after testing each cargo handling gear tested with a proof load in accordance with 10.3.4 shall be legibly and durably marked and stamped. The marking shall contain the following particulars:

- .1 safe working load with indication of the letters *SWL*, in t, for derricks also the minimum allowable inclination angle to the horizontal; for cranes and derrick cranes with a variable jib radius, the allowable maximum and minimum jib radii;

where the safe working load varies with a jib radius, the marking shall contain the maximum and minimum jib radii for each appropriate safe working load; for passenger lifts, allowable number of passengers.

Each derrick shall be legibly marked with its *SWL*, as follows:

used only in a single purchase – *SWL xt*;

used additionally with the lower cargo block – *SWL x/xt*;

used in union purchase – *SWL(U) xt* where *x* is safe working load;

- .2 month and year of test;
- .3 identification number."

26 **Para 11.2.4** is replaced by the following text:

"**11.2.4** Winches of lifts shall be provided with the plate containing manufacturer's name, type, rated traction force, manufacturer's number, date of manufacture."

27 **Para 11.2.8** is replaced by the following text:

"**11.2.8** The marking shall be clear and durable and the places of marking shall be distinctively painted.

Where marking on the item may affect safe operation, marking shall be put on a plate, disc, etc. made of acceptable material and permanently fixed to the item."