RUSSIAN MARITIME REGISTER OF SHIPPING

RULES

FOR TECHNICAL SUPERVISION DURING CONSTRUCTION OF SHIPS AND MANUFACTURE OF MATERIALS AND PRODUCTS FOR SHIPS

PART I

GENERAL REGULATIONS FOR TECHNICAL SUPERVISION

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RULES FOR TECHNICAL SUPERVISION DURING CONSTRUCTION OF SHIPS AND MANUFACTURE OF MATERIALS AND PRODUCTS FOR SHIPS

Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships have been approved in accordance with the established approval procedure and come into force on 1 January 2021.

The present edition is based on the latest version of the Rules, 2020.

The Rules are published in the following parts:

Part I "General Regulations for Technical Supervision";

Part II "Technical Documentation";

Part III "Technical Supervision during Manufacture of Materials";

Part IV "Technical Supervision during Manufacture of Products".

The Rules are published in electronic format in Russian and English.

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REVISION HISTORY[1]

(purely editorial amendments are not included in the Revision History)

Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
Section 16	New Section has been introduced regarding application of the rules in technical supervision during design and construction of the ship in a double or dual class arrangement in accordance with new revision of IACS procedural requirement (PR) 1B (Rev.6 Nov 2020)	312-12-1500c of 19.01.2021	01.02.2021
Appendix 1	New item of technical supervision with code 13393000 has been introduced	328-04-1479c of 08.12.2020	15.01.2021

[1] Amendments and additions introduced at re-publication or by new versions based on circular letters or editorial amendments.

1 TERMS, DEFINITIONS, ABBREVIATIONS

Definitions and explanations relating to general terminology of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships[1] are given in Part I "Classification" of the Rules for the Classification and Construction of Sea-Going Ships. For the purpose of these Rules, the following terms and definitions are applied.

1.1 DEFINITIONS AND EXPLANATIONS

1.1.1 Definitions.

Administration is the Administration in accordance with the definitions in international conventions.

RS Head Office is the management of the Register and departments of the Head Office.

Prototype ship is a single-built ship or the first ship of the series, which is built under the Register technical supervision.

In case of ships built under the same design at different shipyards, the first ship built at each shipyard is considered to be the prototype ship.

Prototype (first lot) is a material or product (lot) used by the Register to check and confirm by means of tests and surveys that it complies with the RS requirements and may be used for the intended purpose if produced at the firm (manufacturer) concerned.

Keel laying date or the date on which the ship was at a similar stage of construction — for the purposes of application of the RS Rules as well as IMO Conventions and Codes (quality standards, technical standards, resolutions and circular letters) is the date (day, month, year) on which the installation at the building berth of a base section or block (island) in section or block (island) construction respectively, or such a stage of construction at which construction identifiable with a specific ship begins and assembly of that ship has commenced comprising at least 50 t or 1 % of the estimated mass of all structural materials, whichever is less.

For fibre-reinforced plastic (FRP) ships the keel laying date shall be interpreted as the date that the first structural reinforcement of the complete thickness of the approved hull laminate schedule is laid either in or on the mould.

Date of delivery of the ship is the completion date (day, month and year) of the survey on which the certificate is based (i.e. the initial survey before the ship is put into service and certificate issued for the first time), provided SOLAS and MARPOL mandatory requirements are applied to new ships, and as entered on the relevant statutory certificates.

Date of build of the ship is the date, month and year at which the new construction survey process of the Register is actually completed, and the Classification Certificate is issued to the ship.

Where there is substantial delay between completion of construction survey process and the ship commencing active service, the date of commissioning may be also specified.

Date of build of the ship for the purpose of application of the requirements of international conventions is the day, month and year in accordance with the definitions in international conventions.

Contract on technical supervision is an agreement in the written form defining rights and responsibilities of the Register and organization (firm) during technical supervision of the items of supervision.

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[1] Hereinafter referred as "the Rules".

Additional requirements are the requirements caused by the item features or its operational conditions, which are not provided for by the rules imposed by RS in writing to ensure the safety of items of technical supervision.

Under safety in this particular case is meant safe navigation of ships, fixed offshore platforms, safety of life at sea, safe carriage of goods, environmental protection.

Applicant is an organization (firm) which applies to RS with a request to perform technical supervision. The Applicant can be a manufacturer, a designer, and/or other organization acting on behalf of the manufacturer.

Manufacturer is an organization (firm) that:

manufactures materials or products, or

performs part of operations (carries out part production) that determine the quality of the material or product, or

carries out the final assembly of the product.

The manufacturer is responsible for the material or product compliance with the applicable RS requirements.

Surveyor is an RS official authorized to perform certain types of the RS technical supervision.

Test is a technical operation on determination of one or more characteristics or operating parameters of an item of supervision in compliance with the established or defined procedure.

Competent organization is an organization recognized as having adequate knowledge and experience in the particular area.

Competent person is a person considered as adequately qualified to do a job in the particular area, using appropriate knowledge and experience.

Major nonconformity is a nonconformity affecting the safety of items of the RS technical supervision and a repeated (two or more times) non-compliance with the established requirements.

Minor nonconformity is a single non-compliance with some requirements of the RS normative documents, improper drawing up of records.

Normative documents are standards, regulations, technical requirements, norms, calculation procedures, instructions, guidelines and other documents, which provide design, technical or production requirements for design, construction (manufacture), installation, testing and service of the items of the RS technical supervision.

Items of technical supervision (items of supervision) are ships and other floating facilities, fixed offshore platforms, products, materials, works, services and processes within the RS terms of reference in compliance with the current legislation and the Charter.

Approval of a material, product or process is confirmation by branding and/or the RS document of a material, product or process compliance with the RS requirements based on the positive results of their survey.

Approval (agreement) of technical documentation is confirmation by the RS stamp and/or document of compliance of technical documentation with the RS requirements based on the positive results of its review.

Type approval of a material, product or process is an approval of a material, product, process considered by RS as a representative of the particular production without attribution to the particular item of technical supervision.

Pilot specimen (pilot lot) is a material or a product (lot) produced in accordance with newly developed technical documentation to determine a possibility of its use for the intended purpose in compliance with the RS requirements, based on review of technical documentation and checking in the course of tests or research of structural solutions as well as combination of properties and parameters.

Organization (firm) is a legal entity of any legal form, form of ownership and affiliation, as well as a physical person involved in business not being a legal person involved in activity related to the items of supervision.

Survey is an integral part of technical supervision, including:

checking availability of approved technical documentation on the items of technical supervision;

checking availability of the RS documents, recognized and competent organizations or persons on the items of technical supervision;

examinations, including (where necessary) opening-up and dismantling; participation in measurements and tests;

assessment of the measurement and test results;

drawing-up, endorsement, renewal and extension of the RS documents; branding and sealing (where necessary) of the item of technical supervision.

RS Branch Office is a branch office, a district office of the branch office, a representative office, an affiliated company. Regulations for the RS Branch Office determine its legal status, tasks and functions within the certain processes, duties, rights and responsibility of the Director as well as the area of the RS Branch Office activity.

RS rules are a code of normative technical requirements for items of technical supervision.

Recognition of a manufacturer is confirmation by the RS document of capability of a manufacturer to manufacture materials and products in compliance with the RS requirements.

Recognition of a testing laboratory is confirmation by the RS document of technical competence of a testing laboratory in conducting tests in compliance with the RS requirements.

Recognition of an organization (firm) is confirmation by the RS document of capability of an organization (firm) to render services (carry out work) in compliance with the RS requirements.

Plan approval documentation (technical detailed design) is a set of design documents that give full understanding of the ship design in the scope sufficient for determination of its conformity with the requirements of the Register and (if applicable) of international conventions, provision of technical supervision during its construction and class assignment.

Detailed (design) documentation is a set of design documents intended for construction (manufacture), checking, acceptance, delivery, service and repair of the item of supervision.

Single approval of a material, product, process is approval of a material, product, process to be used or installed on a particular item of supervision under construction or in service.

Review (expertise) of technical documentation is determination of an extent of documentation compliance with the RS requirements.

Recommendations of the International Maritime Organization (IMO) are provisions of resolutions, codes and other normative documents adopted by the governments, which have authorized the Register to supervise the fulfillment of those provisions.

Repair technical documentation is construction and production documentation as well as the normative documents required during repair of an item of supervision in accordance with the RS requirements.

Certificate of conformity (Certificate) is a RS document certifying the compliance of an item of supervision with the RS requirements.

Agreement on Survey is an agreement in a written form establishing interrelations between the Register and a firm (manufacturer), based on which technical personnel of the firm (manufacturer) is entrusted with performance of check tests or part thereof and filling-in of certificates of conformity, which are submitted to the Register for drawing-up (affirmation) together with the test reports.

Special consideration is determination of an extent of conformity of an item of technical supervision with the additional requirements.

Technical documentation is construction and production documentation as well as the normative documents on items of technical supervision, which contain the data necessary for checking the fulfillment of the RS requirements.

Technical supervision is checking of conformity of items of supervision with the RS requirements during:

review and approval (agreement) of technical documentation;

survey of items of supervision at manufacture, construction, service stages, including conversion, modernization and repair.

Technical design is a set of design documents that give understanding of the item design and engineering solutions.

Requirements of conventions are requirements of international conventions ratified by the governments, which have authorized the Register to supervise the fulfillment of those requirements.

RS requirements are requirements of the RS rules, international conventions and agreements, recommendations of the International Maritime Organization (IMO), governments having granted RS the relevant authorization, and additional requirements.

Type production process is a production process intended for specific field and conditions of application with no reference to a particular ship or item of supervision.

Operational documentation is a set of design documents that define individually or jointly with other documents the rules of operation of an item and/or detail the data certifying the manufacturer's guaranteed values for the main parameters and characteristics (properties) of an item, warranties and information on its operation during the specified life, operating conditions. The operational documents also include operating manuals, record keeping logs, stability booklets, software user manuals, trials programmes, lists of materials, etc. that shall be available on board and, if required, kept updated throughout the ship's service life.

Conceptual design is a set of design documents that give general understanding of the item design, operating principles, principal engineering solutions and provide data determining the item fitness for its purpose.

1.1.2 Explanations.

Measurement of distances — unless explicitly stipulated otherwise in the text of the regulations in SOLAS, Load Line and MARPOL Conventions and any of their mandatory codes and the RS rules and regulations, distances such as tank length, height, width, ship (or subdivision or waterline) length, etc. shall be measured by using moulded dimensions.

1.2 ABBREVIATIONS

Register, RS — Russian Maritime Register of Shipping.

Report 6.3.18 — Report on Survey of Prototype/Serial/Pilot Specimen of Product/Material/Type Structure (form 6.3.18).

Report 6.3.19 — Report on Survey of Firm (form 6.3.19).

RHO — RS Head Office.

M — Document drawn up by the manufacturer according to the standards of the firm; it shall contain data satisfactory to RS.

MARPOL 73/78 — International Convention for Prevention of Pollution from Ships as modified by the Protocol 1978 of relating thereto, having regard to the amendments adopted by the Marine Environment Protection Committee of the International Maritime Organization (IMO).

MC — Document drawn up by the manufacturer in which the material or product compliance with the RS requirements is declared.

RS Nomenclature — Nomenclature of Items of the Register Technical Supervision.

C — Certificate filled-in and signed by the Register (form 6.5.30).

СКК Certificate — Manufacturer's Quality Control System Certificate (form 7.1.28).

СДС — Welder Approval Test Certificate (form 7.1.30).

СЗ — Certificate (form 6.5.31) filled-in and signed by an official of a firm (manufacturer) and drawn up (endorsed) by the Register on the basis of the review of the product/equipment test results performed by the manufacturer and only upon signing of СЗ on behalf of the manufacturer.

СО — Agreement on Survey (form 430.1.7).

СООТ — Type Approval Certificate of Ballast Water Management System (forms 2.5.5, 2.5.5-1).

СОСМ — Certificate of Approval for Welding Consumables (form 6.5.33).

СОТИ — certificates of type test (forms 2.4.13 and 2.4.19).

СОТО — certificates of type approval (forms 2.4.11.1, 2.4.12, 2.4.12.1, 2.4.13.1, 2.4.13.2, 2.4.16.1, 2.4.17.1, 2.4.17.2 and 2.5.5).

СОТПС — Welding Procedure Approval Test Certificate (form 7.1.33).

СП — Recognition Certificate (form 7.1.4.2).

СПИ — Recognition Certificate for Manufacturer (form 7.1.4.1).

СПЛ — Recognition Certificate of Testing Laboratory (form 7.1.4.3).

СПП — Certificate of Vocational Training (form 7.1.34).

ССП — Certificate of Firm Conformity (form 7.1.27).

СТО — Type Approval Certificate (form 6.8.3).

СТО MR — European Union Recognized Organization (EU RO) Mutual Recognition Type Approval Certificate (form 6.8.3mr).

СТОП — Type Approval Certificate for Software (form 6.8.5).

СТПК — Type Approval Certificate for Fire-Proof Division (form 6.8.4).

EIAPP Certificate — Engine International Air Pollution Prevention Certificate (form 2.4.40).

MR — mutual recognition.

SECC — SO_x Emission Compliance Certificate/Certificate of Unit Approval for Exhaust Gas Cleaning Systems (form 2.4.42).

W — document(s) issued/signed by the manufacturer and verifying the material or product compliance with the RS requirements.

2 GENERAL

2.1 The RS activity on technical supervision during manufacture of materials and products, technical supervision of services, processes and construction, conversion, modernization and repair of ships is based on the Regulations for Classification of Ships and Offshore Fixed Platforms.

2.2 All technical supervision services are rendered by the Register based on requests and agreements with organizations, firms and individuals involved in design, manufacture of materials and products, production processes, construction, conversion, modernization and repair of ships, and rendering of services (refer to Section 4).

2.3 Items of the RS technical supervision and technical requirements thereto are defined in the Rules and are listed in the RS Nomenclature (refer to Appendix 1)[1].

2.4 Items, other than provided for in the RS rules, of a non-conventional design or intended for special operating conditions, as well as materials and production processes where special requirements are placed thereupon are specified by the Register as items of technical supervision in each particular case, and technical requirements for such items are specified as additional requirements.

Later, based on the results of technical supervision during manufacture and in service, the items of technical supervision may be introduced in the relevant parts of the RS rules and the RS Nomenclature.

2.5 New type materials, products and production processes, which are presented to RS for the first time and which are the items of technical supervision shall be approved by RS for application for the intended purpose.

2.6 Type production processes are subject to the RS review in the following cases:

.1 where the requirements for the particular production process are provided by the RS rules;

.2 where the tests required by the RS rules are provided for in the type production process.

2.7 A possibility of deviations from the RS requirements, where application of those requirements, methods and scope of supervision prescribed by RS is impracticable or unreasonable, is decided by RHO upon a request of the RS Branch Office responsible for carrying out technical supervision.

2.8 Items subject to the Register technical supervision in accordance with the RS Nomenclature may be used for their intended purpose only in case documents of the Register or manufacturer's documents, in cases provided for in the RS rules, or other classification societies issued on behalf of the Register are available.

2.9 Where defects are found or doubts arise in a possibility of using items of technical supervision for the intended purpose, necessary check surveys shall be conducted. If the results of check surveys are unsatisfactory, the items of technical supervision are not allowed to be used whether or not the documents required are available.

2.10 Construction of ships classed with the Register and manufacture of materials and products for the ships classed with the Register shall be in conformity with the technical documentation approved by the Register.

2.11 Where conformity of a material, product, ship with the requirements of conventions and IMO recommendations is required, the technical documentation shall be

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[1] All products and equipment intended for ships shall in general be new. Upon special consideration by RS, second hand products (except for ship hull structures) or equipment, for which the compliance with the applicable RS requirements is confirmed and appropriate tests are conducted, may be used for ships. The possibility to use second hand products or equipment for ships shall be confirmed by the customer or shipowner.

prepared with due regard to such requirements and recommendations and submitted to the Register for approval. After carrying out necessary surveys in compliance with these requirements and recommendations the Register issues documents prescribed by the international conventions or the Register certificates of the established form with indication of the conformity with those requirements and recommendations.

2.12 The procedure of review and approval by the Register of technical documentation on items of technical supervision, scope of surveys in the course of technical supervision at the firm (manufacturer) and production operations to be controlled as well as documents to be issued during supervision, and branding procedure are governed by the relevant sections and parts of these Rules.

2.13 Technical documentation on construction of ships and manufacture of materials and products is reviewed and approved in compliance with Part II "Technical Documentation".

2.14 The scope of the Register technical supervision in the course of construction of a particular ship and manufacture of a particular product is stated in the List of Items of Technical Supervision (refer to Section 13), which is elaborated as a working document of technical supervision at the particular firm (manufacturer).

2.15 Based on the agreement on mutual substitution, the Register may authorize another classification society (ACS) or competent body to perform technical supervision (totally or partially) of the construction of the ship classed with the Register and manufacture of products for the ships classed with the Register or be authorized by ACS to carry out technical supervision during construction of the ship or manufacture of materials and products.

In such cases, the scope and procedure of technical supervision and documents to be issued shall be specified in the appropriate agreements or authorizations.

2.16 A possibility of recognition of documents for materials and products manufactured under technical supervision of ACS without the Register authorization is decided by the Register in each particular case during survey of these materials and products to an extent sufficient to confirm their compliance with the RS requirements, conventions, IMO recommendations, standards and normative documents.

2.17 When carrying out technical supervision, the Register reserves the right to check the compliance of the design, technology and production standards, which are not required but affect the fulfillment of the RS rules.

2.18 Standards used in elaboration of technical documentation, in construction of ships and manufacture of materials and products referred to the items of the RS technical supervision, of production processes, calculation and design standards, testing, checking and quality control procedures shall be agreed upon with the Register. The Register checks the compliance with the standards agreed upon therewith only as regards the technical requirements, which are within its terms of reference.

2.19 Technical supervision during manufacture of materials and products is performed in relation of those properties, parameters and characteristics indicated in the approved technical documentation and regulated by the RS rules. During technical supervision the Register does not determine a grade and category of product quality or check the fulfillment of safety engineering, sanitary and labor organization requirements, or other production aspects, which are beyond the Register terms of reference.

2.20 In its activity the Register does not substitute the prescribed activity of the state supervision authorities or officials of shipowner, shipyard or firm.

2.21 The Register may impose in the course of technical supervision the necessary requirements for the items and production processes not supervised by the Register if it appears that application thereof has resulted or is likely to result in violation of the RS rules.

2.22 The Register carries out technical supervision during construction of ships at the shipyard and manufacture of materials and products at the firm (manufacturer) by means

of surveys. Thus all the questions shall be settled within the frames regulated by the RS requirements.

2.23 The Register can entrust technical personnel at the firm (manufacturer) with the check tests or part thereof aiming to check the compliance of materials or products with the RS requirements (refer to Section 4).

2.24 In case of the differences associated with requirements and decisions of the surveyor carrying out technical supervision, a designer, shipowner or firm may apply directly to the RS Branch Office to resolve the problem. In case of the differences with the RS Branch Office, an appeal containing justifications together with a copy of the RS Branch Office decision may be sent to RHO.

2.25 The Register performs its supervision activities on condition that manufacturers and individuals meet their commitments on manufacturing adequate products. In case of any deficiencies of the item of technical supervision, unsteady production process, low technological discipline and inadequate efficiency of quality system at the firm, the Register does not admit any claims for delays in production, caused by an increase in the scope of surveys of the products because of the above reasons.

2.26 For the services rendered the Register charges fees in accordance with the procedure established in the General Conditions for Rendering Services by Russian Maritime Register of Shipping.

3 SERVICES RENDERED IN TECHNICAL SUPERVISION DURING MANUFACTURE OF MATERIALS AND PRODUCTS. DOCUMENTS ISSUED

3.1 When carrying out technical supervision during manufacture of materials and products, construction, conversion, modernization and repair of ships, the Register carries out:

type approval of materials or products with issue of the Type Approval Certificate (СТО);

recognition of the manufacturer with issue of the Recognition Certificate for Manufacturer (СПИ);

recognition of the testing laboratory conducting tests and measurements in accordance with Table 10.1.1 with issue of the Recognition Certificate of Testing Laboratory (СПЛ);

recognition of service suppliers performing the activity in accordance with Table 9.1.1 with issue of the Recognition Certificate (СП);

audit of the firms performing the activity in accordance with Table 12.1.1 with issue of the Certificate of Firm Conformity (ССП);

approval of serial materials and products with issue of С, С3;

single approval of materials and products with issue of С;

approval of the quality control system with issue of the СКК Certificate;

survey of materials and products with issue of Report (form 6.3.29).

3.2 The Register keeps records of the above services and can give relevant information thereon.

3.3 Based on the results of technical supervision, the Register issues the following documents of the established form that certify the conformity of the item of technical supervision with the RS requirements, as well as its manufacture (construction) under the Register technical supervision:

the certificates (С, С3) are documents certifying the conformity of the particular materials, products or groups of products with the requirements of the RS rules and normative documents;

the Type Approval Certificate (СТО) is a document certifying the conformity of types of materials, products or groups of products, type production processes with the requirements of the RS rules (refer to Section 6);

the EU RO Mutual Recognition Type Approval Certificate (CTO MR) is a document certifying the conformity of types of materials, products or groups of products with the requirements of European Union Recognized Organization (EU RO) Mutual Recognition Procedure for Type Approval (refer to Section 6); certificates of type approval (СОТО), certificates of type test (СОТИ) are documents certifying the conformity of the type of ship's equipment and arrangements for the prevention of environment pollution with the requirements of MARPOL 73/78 and IMO resolutions;

the Type Approval Certificate of Ballast Water Management System (СООТ) is a document certifying the conformity of the type of ballast water management system with the requirements of the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004, as well as with the Guidelines for Approval of Ballast Water Management Systems (G8);

the Recognition Certificate for Manufacturer (СПИ) is a document certifying the recognition by the Register of the firm as manufacturer of materials and products for ships subject to the Register technical supervision (refer to Section 11);

the Recognition Certificate of Testing Laboratory (СПЛ) is a document certifying the competence of the laboratory in carrying out certain types of tests of the materials and products (refer to Section 10);

the Recognition Certificate (СП) is a document certifying the recognition of the service supplier rendering services (carrying out works) in compliance with the RS requirements (refer to Section 9);

the Certificate of Firm Conformity (ССП) is a document certifying the conformity of the firm with the RS requirements in rendering services (carrying out works) indicated in the request (refer to Section 12);

СКК Certificate is a document certifying the compliance of the manufacturer's quality control system with the RS rules;

the SO_x Emission Compliance Certificate/Certificate of Unit Approval for Exhaust Gas Cleaning Systems (SECC) is a document certifying the conformity with the requirements of Annex VI to MARPOL 73/78 for the exhaust gas cleaning systems.

3.4 Validity period of the СКК Certificate, Recognition Certificate for Manufacturer (СПИ), Recognition Certificate of Testing Laboratory (СПЛ), and Certificate of Firm Conformity (ССП) shall not exceed five years. Certificates are subject to endorsement not less than once a year. Endorsement shall be done within the period limited by thirty (30) days before and thirty (30) days after the specified date of endorsement of the certificate.

The Recognition Certificate (СП) shall be issued for three (3) years and is not subject to endorsement. Upon expiry of the validity period the certificates are renewed on request of the firm.

RS reserves the right to carry out occasional surveys of a firm having a valid RS certificate if an item of technical supervision has been found non-compliant with the RS requirements including third party information.

3.5 Certificate ceases to be valid (loses its validity) in case of its suspension or cancellation. Validity of the СКК Certificate, Recognition Certificate for Manufacturer (СПИ), Recognition

Certificate of Testing Laboratory (СПЛ), Recognition Certificate (СП) and Certificate of Firm Conformity (ССП) may be suspended for a period agreed upon with the firm but not more than ninety (90) days provided:

.1 major nonconformities of the firm activity have been found;

.2 the firm has not been submitted for endorsement of the certificate within the established period;

.3 the firm has not informed the Register of the changes in the activity specified in the certificate.

3.6 The СКК Certificate, Recognition Certificate for Manufacturer (СПИ), Recognition Certificate of Testing Laboratory (СПЛ), Recognition Certificate (СП) and Certificate of Firm Conformity (ССП) are cancelled:

.1 upon expiry of the certificate period of validity;

.2 in case causes of the certificate suspension have not been eliminated within the agreed period;

.3 in case the certificate has not been endorsed within the specified period;

.4 if the contract or agreement on technical supervision has become invalid in cases provided for in 4.5;

.5 in case of the firm bankruptcy or liquidation;

.6 where the firm failed to inform the Register in writing of any alterations to its quality system related to the RS area of recognition;

.7 where the firm submits information known to be false.

3.7 RS informs the firm in the written form of loss of validity of the certificate.

After certificate cancellation on the grounds specified in 3.6.2, 3.6.6, 3.6.7, the firm may re-apply for its issue not earlier than 3 months after the date of cancellation provided it has corrected the nonconformities which resulted in cancellation. The Register shall verify during the initial survey that the corrective actions have been effectively implemented. Such survey shall include a practical demonstration of the ability of the firm to perform works and specific services against which a nonconformity has been identified, as well as a verification of satisfactory reporting being carried out.

3.8 Compliance of the equipment with the requirements of MARPOL 73/78 as amended is certified by the Certificates of Type Approval (СОТО), Certificates of Type Tests (СОТИ), Type Approval Certificate of Ballast Water Management System (СООТ) and SO_x Emission Compliance Certificate/Certificate of Unit Approval for Exhaust Gas Cleaning System (SECC). Validity period of СОТО, СОТИ and SECC is not specified, except for СООТ (form 2.5.5) issued for 5 years.

3.9 Compliance of the marine engine with the requirements of Annex VI to MARPOL 73/78 is confirmed by the EIAPP Certificate. The EIAPP Certificate is issued to:

.1 the basic engine of the engine family or group;

.2 the member engine of the engine family or group (refer to 5.2).

3.10 Compliance of welding consumables and welding procedures with the requirements of the Rules for the Classification and Construction of Sea-Going Ships is certified by the Certificate of Approval for Welding Consumables (СОСМ) and Welding Procedure Approval Test Certificate (СОТПС).

3.11 In case of technical supervision on behalf of the Register, certificates and other documents of the organization carrying out of technical supervision on behalf of the Register in accordance with Section 14 are recognized.

3.12 The documents confirming the performance of the surveys of materials and products, firms and testing laboratories and being the basis for issuance of the Type Approval Certificate (СТО), Certificate of Approval for Welding Consumables (СОСМ), Recognition Certificate (СП), Recognition Certificate for Manufacturer (СПИ), Recognition Certificate of Testing Laboratory (СПЛ) and Certificate of Firm Conformity (ССП) are Report 6.3.18 and Report 6.3.19 (refer to 1.2) drawn up by the Register upon completion of surveys.

The reports are issued to the firms in the following cases:

when upon the results of surveys the requirements are established, which shall be met by the firm;

when the report is the only Register document confirming rendering of the Register technical supervision services.

In other cases, it is not required to issue the above reports to the firms.

3.13 Branding of items of technical supervision in cases specified in the RS Nomenclature is made in accordance with the Instructions on Branding of Items of the Register Technical Supervision (refer to Appendix 2).

3.14 In case of changing any detail of the valid certificate issued in compliance with the provisions of the Rules, except for the certificates (С, С3), the certificate becomes invalid. In such case, a new certificate may be issued based on the results of technical supervision, the scope of which is determined by the Register in each particular case.

4 REQUESTS, CONTRACTS AND AGREEMENTS ON TECHNICAL SUPERVISION

4.1 Where supervision of the Register is specified in the ordered (contracted) documentation on design, construction, conversion, modernization and repair of ships, manufacture of materials and products for shipbuilding and ship repairing, as well as rendering services referred to in 3.1, a firm shall apply to the Register with a written request to carry out technical supervision and to guarantee payment of the Register services, reimbursement of the Register expenses, as well as with the confirmation of familiarization and agreement with the General Conditions for Rendering Services by Russian Maritime Register of Shipping. The General Conditions for Rendering Services by Russian Maritime Register of Shipping are constituent and integral part of all the contracts concluded by the Register.

4.1.1 If in case of type approval the firm is not the manufacturer of the products, the firm shall, in addition to the provisions of 4.1, be authorized by the manufacturer (which shall be documented) to do the following:

.1 to submit technical documentation for the product for RS review and approval or to use the technical documentation approved by RS;

.2 to arrange for survey of the product within the necessary scope;

.3 to arrange for testing of the product within the necessary scope or to use reports of the tests earlier conducted by the manufacturer;

.4 to supply the product, and to install and mount it if necessary.

4.1.2 Deviations from the provisions of 4.1.1 shall be regulated with 2.7.

4.2 The request shall provide the information to an extent sufficient for review and execution thereof. In reviewing the request for technical supervision during manufacture of the material or product, a kind of approval (single or type approval) shall be identified.

The request for type approval of ICE shall additionally provide information submitted according to the form given in Appendix 3 to Section 5 of Part IV "Technical Supervision during Manufacture of Products". The specified form in electronic format to be filled-in is posted on the RS website.

4.3 Upon reviewing the request depending on the particular conditions of the future technical supervision (scope and item of supervision, duration, etc.), the Register, being guided by the regulations in force, decides on the necessity to conclude a contract on technical supervision or carries out technical supervision based on the request without concluding the contract.

4.4 The contract on technical supervision of the Register at the manufacturer specifies the items of technical supervision and regulates mutual relations, rights and responsibilities of the parties in the course of the Register technical supervision during construction of ships and manufacture of materials and products, as well as when rendering services specified in 3.1.

The contract specifies cost of technical supervision, procedure and terms of payment. Where technical supervision is carried out based on the request, without concluding the contract, services are paid and expenses reimbursed according to the invoices made out by the Register.

For concluding the contract for the Register technical supervision, use is made of the established forms or the contract may be drawn up in a free form.

4.5 The contract on technical supervision becomes invalid in case of inadequate fulfilment of the commitments under the contract, including payments for the RS services as well as in the following cases:

.1 upon expiry of type approval for material or product manufactured by the manufacturer;

.2 subject to non-compliance of the manufacturer with the requirements of survey;

.3 if the CKK Certificate becomes invalid in compliance with 3.6;

.4 upon expiry of validity of the contract;

.5 cancellation of the contract if desired by the parties who signed it.

5 TECHNICAL SUPERVISION DURING MANUFACTURE OF MATERIALS AND PRODUCTS

5.1 Materials and products used in construction of ships and floating facilities classed with the Register are permitted to be installed subject to the availability of the certificates of conformity or other documents confirming their compliance with the RS requirements, IMO conventions and recommendations, except for the cases listed in 1.5.7 of Part IV "Technical Supervision during Manufacture of Products" of these Rules.

The list of materials and products subject to mandatory technical supervision is given in the RS Nomenclature (refer to Appendix 1).

In separate cases, at the RS discretion, technical supervision may be performed of the materials and products not contained in the RS Nomenclature, which are newly developed or are the components of the products listed in the RS Nomenclature and which functionally provide the safety of the items of technical supervision (refer to 2.4).

5.2 When determining forms of technical supervision, items of technical supervision shall be divided into 5 groups. Possible schemes of technical supervision during manufacture of products for different groups are given in Table 5.2-1 for products and in Table 5.2-2 for materials. In case of a single approval given for the equipment of groups 2 — 4, the materials or products are surveyed to the extent of group 5. This procedure can also be used for statutory equipment if it is permitted by the provisions of conventions, resolutions and/or additional requirements of the Administration. Where a single approval is issued to single products, approval of technical documentation and survey results for the prototype cover only the material or product for which the certificates of conformity have been issued.

Table 5.2-1

Stage of technical supervision	Type of survey/ Issued document	Product groups							
		Group 1	Group 2	Group 3			Group 4		Group 5
		1.1	2.1	3.1	3.2	3.3	4.1	4.2	5.1
Type approval	Approval of technical documentation	—	×	×	×	×	×	×	×
	Type testing of a prototype	—	×	×	×	×	×	×	×[1]
	Type of a type approval certificate issued by RS	—	СТО/ СТПК	СТО			СТО		—
Survey of serial products	Survey of the manufacturer's quality control system	—	—	—	СКК 1	СКК 2	—	СКК 2	—
	Type of the Quality Control System Certificate, issued by RS	—	—	—	СКК 1 Cert.	СКК 2 Cert.	—	СКК 2 Cert.	—
	Survey of products by RS	—	—	×	—	—	×	—	×
	Certificate issued by RS	—	—	С	С3	—	С	С3	С
	Document issued by manufacturer	М	МС	—	—	МС	—	—	—

[1] Tests are performed to the extent prescribed by the RS rules. A part of tests can be rescheduled for the mooring trials, sea trials or operation tests if it is provided by the RS rules and/or documentation approved by RS.

Notes: 1. "×" — means "Required".

2. СКК 1 — refer to 7.3.

3. СКК 2 — refer to 7.4.

4. In case of a single approval given for the equipment of groups 2 — 4, the materials or products are surveyed to the extent of group 5.

5. "—" means "Not applicable" or "Not required".

6. Products of 1, 2 and 3 safety classes in accordance with the Rules for the Classification and Construction of Nuclear-Powered Vessels and Floating Facilities shall be surveyed to the extent of group 5 regardless of the code. In this regard, the product shall be supplied with the Quality Assurance Plan.

Table 5.2-2

Stage of technical supervision	Type of survey/ Issued document	Material groups									
		Group 1M	Group 2M***			Group 3M			Group 4M		Group 5M
		1.1	2.1	2.2	2.3	3.1	3.2	3.3	4.1	4.2	5.1
Manufacturer recognition/ type approval	Approval of technical documentation on material	×*	×	×	×	×	×	×	×	×	×*
	Tests at initial survey	—	×	×	×	×	×	×	×	×	—
	Type of a recognition certificate for manufacturer or a type approval certificate on material issued by RS	—	—	СОСМ	СТО	—	СТО		СПИ		—
Survey of serial materials	Survey of the firm's quality control system/periodical confirmation of СПИ/СОСМ	—	—	×	—	—	СКК 1	СКК 2	×	×	—
	Type of the Quality Control System Certificate issued by RS	—	—	—	—	—	СКК 1 Cert.	СКК 2 Cert.	—	СКК 1 Cert.	—
	Survey of material by RS	—	×	—	—	×	×	—	×	—	×**
	Certificate issued by RS	—	С	—	—	С	С3	—	С	С3	С
	Document issued by the manufacturer	М	М	МС	МС	М	М	МС	М	М	М

* Review of technical documentation on material is carried out simultaneously with approval of technical documentation on the item of technical supervision where the material is applied (item of application).

** Survey is carried out in the scope prescribed by technical documentation, as specified in the documentation on the item of application to be approved by the Register.

*** For welding materials, stages of technical supervision as for groups 2.1 and 2.2 shall apply, for other materials — as for groups 2.1 and 2.3.

5.3 Depending on the item belonging to the group of technical supervision, the compliance of materials and products with the RS requirements shall be confirmed by the following documents:

.1 Certificate filled-in and signed by the Register (С);

.2 Certificate filled-in and signed by an official of the firm (manufacturer) and drawn up (endorsed) by the Register (С3);

.3 МС — a document drawn up by the manufacturer in which the material or product compliance with the RS requirements is declared;

.4 М — a document drawn up by the manufacturer according to the standards of the firm; it shall contain data satisfactory for RS.

5.4 The contents of the certificates (С, С3) and the МС document shall identify the material or product, their types, main parameters, as well as the manufacturer of materials and products.

МС shall at least contain:

address of the manufacture place;

name of technical documentation on an item and date of its approval by RS;

name, type or grade of the material or product;

manufacturing or serial number, lot number (as relevant);

name of the document containing data on the surveys and tests performed by the firm (manufacturer);

number, issue date, and validity period of the Type Approval Certificate (СТО) or Certificate of Approval for Welding Consumables (СОСМ);

company statement of the item compliance with the approved type specified in the Type Approval Certificate (СТО)/Certificate of Approval for Welding Consumables (СОСМ)/Type Approval Certificate for Fire-Proof Division (СТПК);

signature of the authorized person of the firm (manufacturer).

Validity period of the certificates and documents (C, C3, MC, M) is not specified.

For the products of group 2, the contents of MC shall be coordinated during the type approval.

5.5 In order to obtain the Certificate (C), if there is no Type Approval Certificate (CTO) or Certificate of Approval for Welding Consumables (COCM), the request shall be applied together with the technical documentation on the materials or products to the extent regulated by the RS rules.

5.6 Upon review of the technical documentation, the Register shall send a conclusion letter to the applicant. Where deemed necessary, the applicant shall submit the testing programme to the Register to be agreed upon.

5.7 The items of technical supervision are surveyed by the Register at the final stage of production (finished products) after acceptance of the products by the manufacturer technical control body and issue of the appropriate documents.

In cases when it is motivated by the production process, the RS rules, and/or design of the product, at the discretion of the Register, surveys may be carried out on a step-by-step basis and simultaneously with the manufacturer's control.

Surveys at the intermediate stages of production of the items to technical supervision are carried out in the cases prescribed by the Register after completion of manufacturer's functional control or at the discretion of the Register, if motivated by the particular conditions of production.

Tests shall be witnessed by the RS surveyor or carried out in the laboratories recognized by the Register or in the nationally accredited for appropriate test laboratories that are independent from manufacturer, unless otherwise stated in the relevant parts of the Rules.

5.8 The manufacturer shall provide for the performance of technical supervision by the Register, i.e.:

provide the technical documentation necessary for work, particularly the factory records of the product quality control;

prepare the items of technical supervision to perform the survey to the extent required; ensure safety of surveys;

provide for the presence of the officials authorized to present the items of technical supervision to surveys and tests;

timely notify the Register on time and venue of surveys and tests of the items of technical supervision.

If the manufacturer fails to comply with the terms of the technical supervision performance, the Register may refuse to carry out the surveys to witness tests.

5.9 Where the firm (manufacturer) fabricates forgings, castings, machinery and equipment components, as well as mass-production products (ship fittings, hull fittings, etc.) for own production (further processing, assembling, construction), technical supervision may be confirmed by the manufacturer's documents endorsed by the Register.

Where the above products are fabricated by the same firm (manufacturer) for cooperation shipments or as the spare parts, the supervision shall be confirmed by the certificates and documents (C, C3, MC, M) according to the RS Nomenclature.

5.10 Signing of the issued certificates and manufacturer's documents are allowed to carry out by digital signature or by signing and stamping in hard copy.

5.11 Materials and products included in group 1 may be surveyed by the Register to confirm their compliance with the specified characteristics or technical documentation. The document confirming compliance is the Statement of Compliance (form 6.3.27).

6 TYPE APPROVAL OF MATERIALS, PRODUCTS, PRODUCTION PROCESSES AND SOFTWARE

6.1 The Type Approval Certificate (CTO) is a document of the Register, which certifies that a construction, properties, parameters, characteristics of a type material or product found in the course of surveys and indicated in the approved technical documentation, meet the RS requirements and may be used for ships and items of technical supervision for the intended purpose.

6.2 The Type Approval Certificate (CTO) can be issued to the manufacturer of a material or product, or to the firm that places these products on the market under its own trademark and asserts itself as the manufacturer of materials or products even if the design and/or manufacture and/or assembly are partially or completely given to another firm under the Agreement for Contract Manufacturing.

In this regard, the following terms shall be observed:

the firm is the technical documentation owner or has the documentary confirmation from the owner regarding the possibility to use the technical documentation in order to obtain a separate Type Approval Certificate (CTO);

the firm assumes liabilities for ensuring the compliance of a material or product with the RS requirements;

when submitting a request, the firm shall inform the Register about other firms engaged in the design, manufacture or assembly of the finished material or product.

N o t e . Contract manufacturing (OEM) is the manufacture of materials and products at the at the firms and manufacturer's production sites independent of the Type Approval Certificate (CTO) holder with the observance of the process cycle and quality control of the finished products according to the Register requirements.

6.3 The Type Approval Certificate (CTO) certifies that the approval of the technical documentation and satisfactory results of surveys of the material or product prototype are accounted for by the Register in technical supervision of these materials and products manufactured under the established production conditions and intended for multiple deliveries to ships and floating facilities of various types.

6.4 In order to obtain the Type Approval Certificate (CTO) the manufacturer shall apply to the Register with a request and submit the technical documentation on the material, product, software or production process, as well as the test programme, unless otherwise stated in the relevant parts of these Rules. When reviewing and approving this documentation, the scope of surveys during manufacture and testing of specimens shall be specified.

In case of approval of structurally similar materials or products which differ in operating parameters and/or dimensions, the representative samples with the least favorable (as regards loads and reliability) and the most favorable operating parameters are subject to testing. If operating parameters of all representative samples are the same, the smallest and largest samples are subject to testing. Other principles of taking samples for tests established by industry standards and regulatory documents may also be applied provided that references to these documents are given in the RS reporting documents. If sampling procedure for testing of materials or products of a certain type is established in the relevant section of these Rules, the provisions of this para shall not apply.

6.5 Unless otherwise stated in the relevant parts of the Rules, the Type Approval Certificate (CTO) is issued by the Register upon approval of the technical documentation and satisfactory results of the surveys of the material, product, software or production process submitted.

For the material or product manufactured according to the established production process the Type Approval Certificate (CTO) is issued, having regard to the data on earlier tests, production and operation experience. Account may be taken of the Type Approval Certificate (CTO) of ACS or competent body or results of the tests of a type specimen performed with the participation of the above organizations. The number of documents to be submitted is in each case specified proceeding from the material or product type.

6.6 The Type Approval Certificate (CTO) is issued for a period of up to 5 years.

6.7 Validity of the Type Approval Certificate (CTO) shall not exceed the period of approval of the technical documentation of the item of technical supervision.

6.8 After the expiry of validity, the Type Approval Certificate (CTO) is renewed on request of the manufacturer. The Type Approval Certificate (CTO) may be renewed based on documentation review without inspections and tests, provided that:

.1 the request shall be submitted 2 months prior to the Type Approval Certificate (CTO) expiry;

.2 the manufacturer confirms constancy of design, software and earlier specified technical characteristics of material or product, or that changes in design do not result in the change of work process, loads on the product components, resource or other significant parameters of the product operation;

.3 unless otherwise stated in the relevant parts of the Rules.

6.9 The Type Approval Certificate (CTO) is issued by the Register or the RS Branch Offices. The Type Approval Certificate (CTO) becomes invalid if design of the product, its properties, etc. have been changed without agreement with the Register; operational suitability of the material or product is not provided, requirements of the RS rules and international conventions, which have come into force after its issuance and which prescribe mandatory compliance with the requirements, are not met.

6.10 For welding consumables the Certificate of Approval for Welding Consumables (COCM) is issued, being at the same time the document certifying recognition by the Register of the firm as the manufacturer of welding consumables in accordance with the requirements of the RS rules.

The Certificate of Approval for Welding Consumables (COCM) is issued for a period of up to 5 years subject to its annual endorsement.

6.11 The Welding Procedure Approval Test Certificate (СОТПС) is a Register document certifying that a welding procedure used at a shipyard or manufacturer of welded structures has been tested and approved by the Register for application.

The Welding Procedure Approval Test Certificate (СОТПС) shall be endorsed not less than once every 2,5 years.

6.12 For software in accordance with Section 12, Part II "Technical Documentation", the Type Approval Certificate for Software (СТОП) is issued.

6.13 Certificate of Type Approval (СОТО), Certificate of Type Test (СОТИ), EIAPP Certificate are certificates issued by RS in accordance with the provisions of MARPOL 73/78 and applicable IMO resolutions. The certificates shall be drawn up by the RS surveyors and signed by heads of the RS Branch Offices. Validity period of the Certificate of Type Approval (СОТО), Certificate of Type Test (СОТИ), EIAPP Certificate is not specified.

6.14 The EU RO Mutual Recognition Type Approval Certificate (CTO MR) shall be issued to confirm compliance of the products with the requirements of European Union Recognized Organization (EU RO) Mutual Recognition Procedure for Type Approval (hereafter referred to as "the EU RO MR Procedure")[1]. The Validity period of the EU RO Mutual Recognition Type

[1] The EU RO Mutual Recognition Procedure and Technical Requirements for the products can be downloaded from the official website of the EU RO Mutual Recognition Group: *www.euromr.org*.

Approval Certificate (CTO MR) shall not exceed five years. Terms of the EU RO Mutual Recognition Type Approval Certificate (CTO MR) validity and suspension are specified in the EU RO MR Procedure.

6.15 Items of technical supervision for which the EU RO Mutual Recognition Type Approval Certificate (CTO MR) may be issued are specified in the RS Nomenclature. The application limitations and intended use of items of technical supervision are specified in the appropriate Technical Requirements of the EU RO MR Procedure.

6.16 The products approved by another classification society in accordance with the EU RO MR Procedure are permitted to be installed on ships being classed by RS provided they are manufactured during the period of validity of the type approval certificates issued by another classification society, which confirm compliance with the requirements of the EU RO MR Procedure. The EU RO MR Procedure shall not apply, and the products may be prohibited for installation on ships if there are instructions from the Administration that the installation of products approved under the EU RO MR Procedure is not applicable.

6.17 If it is found out during the survey that the material, product or its element do not comply with the EU RO Mutual Recognition Type Approval Certificate (CTO MR), the Register may reject the installation of this material or product on ship. In this regard, the classification society that issued the EU RO Mutual Recognition Type Approval Certificate (CTO MR) shall be immediately notified of the rejection and its reasons.

7 SURVEY OF SERIAL PRODUCTS

7.1 GENERAL

7.1.1 The Section contains the regulations on technical supervision during manufacture and tests of serial products at established production.

7.1.2 The Register technical supervision during manufacture and tests of serial materials and products at established production is carried out in compliance with the requirements of the relevant Sections of Part III "Technical Supervision during Manufacture of Materials" and Part IV "Technical Supervision during Manufacture of Products", and the RS Nomenclature.

7.1.3 Serial products are tested according to the Register approved test program.

7.1.4 The following types of technical supervision shall be provided.

.1 direct technical supervision. All prescribed surveys are carried out by the Register;

.2 survey based on the approval of the quality control system, Tier 1 (CKK 1) of the manufacturer. The technicians of the manufacturer are entrusted to perform check tests and fill in certificates (C3). The manufacturer shall submit the test results to the Register for review as well as certificates (C3) for endorsement;

.3 survey based on the approval of the quality control system, Tier 2 (CKK 2) of the manufacturer. Approval when RS evaluates the manufacturing processes of the manufacturer and/or its suppliers from the point of view of ensuring the performance of surveys and tests prescribed by the RS rules, at all stages of the manufacturing cycle. Depending on the group of technical supervision, an item belongs to, the document certifying the compliance with the requirements shall be either the document of the manufacturer (MC), or the certificate (C3).

7.1.5 The quality control system (CKK) is a set of procedures providing control of compliance of the production with the RS requirements and control of materials and products used by the manufacturer during the serial manufacture.

7.1.6 The quality control system (CKK) shall clarify:

the extent of the required examinations and tests;

to which extent and under which conditions the manufacturer may perform all or part of the required examinations and tests without the presence of the RS surveyor when the certificate (C3) is required.

7.1.7 If the materials or products specified in the Type Approval Certificate (CTO) are manufactured, completely or partially, at different enterprises (production sites), each enterprise (production site) where verifications, examinations and tests prescribed by the RS requirements are planned to be performed, shall be surveyed within the approval of the quality control system. In this case, a separate CKK Certificate can be issued for the surveyed enterprise (production site) in addition to the CKK Certificate issued to the manufacturer — the holder of the Type Approval Certificate (CTO)

In case of the manufacture of materials or products under the Agreements for Contract Manufacturing, the CKK Certificate of the manufacturer — the holder of the Type Approval Certificate (CTO) can include Type Approval Certificates (CTO) issued to the company which has signed the Agreement for Contract Manufacturing. Validity period of such Type Approval Certificates (CTO) shall not exceed the validity period of the Type Approval Certificate (CTO) issued to the manufacturer — the holder of the Type Approval Certificate (CTO).

7.1.8 Serial products shall be supplied with the certificates or documents (C, MC, or C3), depending on the technical supervision group (2 — 5) (refer to Tables 5.2-1 and 5.2-2) of an item and the scheme of technical supervision applicable to the group.

7.1.9 In order to evaluate the compliance of the quality control system with the RS requirements, the Register shall verify if there is a type approval for the manufactured products, approval of production processes (if applicable) and perform the initial survey of the manufacturer. In order to verify if the manufacturer observes the requirements to the quality control system, the Register shall perform periodical surveys.

7.1.10 In cases provided by these Rules, the Register can perform unscheduled surveys of the manufacturer and/or its supplier;

7.1.11 The CKK Certificate may be renewed subject to the survey. The scope of the renewal survey shall:

.1 verify if the conditions of the quality control system approval specified in 7.3 and 7.4 are observed; and

.2 verify that the check tests and examinations of the manufactured production included in the CKK Certificate are appropriately controlled.

7.2 DIRECT TECHNICAL SUPERVISION

7.2.1 As a rule, the survey shall be performed at the firm — manufacturer. During the survey, the manufacturer or applicant, in the presence of the Register representative, shall perform all examinations and tests specified in the preliminary agreed testing program.

7.2.2 In case of satisfactory results of the survey, the Register shall draw up the Certificate (C).

7.3 SURVEY BASED ON APPROVAL OF THE QUALITY CONTROL SYSTEM, TIER 1 — CKK 1

7.3.1 The Register can entrust the manufacturer's technicians with the performance of check tests or their part, which shall be drawn up by the Quality Control System Certificate (CKK 1 Certificate).

7.3.2 The CKK 1 Certificate can be drawn up based on the survey of the manufacturer to the extent and in accordance with Sections 8 and 11, as well as the type approval of the material or product (refer to Section 6).

7.3.3 When drawing up the CKK 1 Certificate, the Agreement on technical supervision shall be signed with the manufacturer. The Agreement on technical supervision shall include the manufacturer's rights and obligations, duties of the Register, and terms of payment to the Register for the implementation of technical supervision.

7.3.4 In order to ensure the compliance with the RS requirements to the manufactured products, drawing up of the supporting documentation, filling in and signing of the RS documents, and also the observance of the CKK 1 requirements, the manufacturer shall be an official who has a competent knowledge of the manufacture and quality control of items of technical supervision.

7.4 SURVEY BASED ON APPROVAL OF THE QUALITY CONTROL SYSTEM, TIER 2 — CKK 2

7.4.1 Application.

7.4.1.1 The procedure of the quality control system (CKK 2) approval is applied to the manufacturers of the materials and products of groups 3, 4 (refer to Tables 5.2-1 and 5.2-2) having the Type Approval Certificate of the Register.

7.4.1.2 Quality control system of the manufacturer shall define the incoming audit of the subcontracted materials and products which are items of the RS technical supervision (those that require the RS certificates or firm's (manufacturer's) documents). There can be the following forms of the incoming audit organization:

materials and products are supplied according to the RS Nomenclature, or the supplier can be included in the quality control system of the manufacturer.

7.4.2 Requirements for quality control system.

7.4.2.1 The manufacturer shall conform to the general requirements for the firms listed in Section 8.

7.4.2.2 The manufacturer shall have an implemented quality management system according to a national or international standard approved by an accredited certification body. The availability of the quality management system certified for compliance with the current version of ISO 9001 is sufficient to meet the condition.

7.4.2.3 The manufacturer shall have a quality control system, current drawings, as well as rules and standards that cover the materials and products to be certified.

7.4.2.4 The manufacturer assumes liabilities for ensuring the compliance of serial products with the type approval certificate.

7.4.2.5 The examinations and tests required by the RS rules are either to be included in procedures of the quality management system of the manufacturer, or to be separate documents agreed with RS.

7.4.2.6 The type of the documents (C/C3/MC/M) confirming the compliance of components of the manufactured products with the RS requirements shall be agreed with RS. If the documents on components do not correspond to the list agreed with RS, by the form and/or contents, such components shall not be allowed to be used.

7.4.2.7 Manufacturers assume liabilities for notification of the Register when changes to the design, manufacturing process or testing are made.

7.4.3 Information and documents to be submitted.

7.4.3.1 The Register shall evaluate the opportunity to perform technical supervision on the basis of approval of quality control system (CKK 2). The manufacturer shall provide the following data for the assessment:

.1 material or product details;

.2 the existing RS approvals of the manufacturer’s products;

.3 the procedures relating to the manufacturing process;

.4 data on all production sites where products are manufactured;

.5 a list of material suppliers and main components with an indication of their approval by the Register (as far as required by the RS rules) and the type of technical supervision in each case. Thus, the type of the RS and/or manufacturers′ documents these components are supplied with shall be agreed as well;

.6 quality control plans relating to the products and relevant components to be approved according to the requirements to the quality control system. The plans shall detail the types of surveys covered by the RS rules with an indication of which of them are delegated to the manufacturer and which shall be done in the presence of the RS surveyor;

.7 the procedures relating to the quality control, examinations and tests of the materials and products, including the methods, frequency of performance;

.8 forms of reporting documents on tests and examinations, and also forms of documents (МС) specified in 5.4;

.9 the quality management system details;

.10 list of the personnel assigned for:

marking/stamping of products;

tests and examinations (responsible persons);

drawing up of data and information (e.g. declaration of conformity, test reports, etc.);

.11 the manufacturers of items of the RS technical supervision with codes 06010100МК, 06020000, 07010008, 07010009, 07020300, 07020301, 08011400МК, 08030000, 08120000МК, 09010000, 09020000, 09024000, 09025000, 09030000, 09040000, 09050000, 09060000, 09060100, 09070000, 09080000, 09100000, 09120000, 10010000, 10020000, 10030000, 11000000 (as regards insulation materials), 12090000 and other items specified in IACS UI SC249 shall submit procedures for purchasing and controlling the supply of asbestos free material and components. This procedure shall include the following:

supplier evaluation and selection methods;

asbestos free verification practices for supplied products;

drawing-up of asbestos-free declarations as supporting documentation for the manufactured item of technical supervision;

.12 any other additional data that the Register may require in order to evaluate the manufacturing process and product quality control.

7.4.3.2 The documentation submitted shall be reviewed regarding the compliance with the requirements of Parts III "Technical Supervision during Manufacture of Materials" and IV "Technical Supervision during Manufacture of Products".

7.4.4 Manufacturer's survey procedure.

7.4.4.1 After completion of the review of the quality control system documentation set, the survey of the manufacturer's divisions involved in the production process shall be carried out by the Register. The survey shall verify that the incoming check of the materials and components, the manufacture and testing of the items of technical supervision are performed in accordance with the approved quality control system documentation, and comply with the requirements specified in this quality control system documentation and the RS rules. Upon satisfactory results of the survey, the СКК 2 Certificate shall be issued in which the extent, terms, and provisions of the quality control system are registered.

7.4.4.2 During the periodical survey:

information on products manufactured during the previous period, data on the examinations, inspections and tests performed during the manufacture, data on claims shall be provided;

availability of valid Type Approval Certificates (СТО), compliance of drawn up reporting documents on the manufactured materials and/or products shall be verified;

check inspections and tests of manufactured products and/or materials shall be performed.

8 GENERAL REQUIREMENTS FOR FIRMS

8.1 GENERAL

8.1.1 The requirements of this Section apply to all firms, which activity is associated with the items of the RS technical supervision and is subject to the RS audit or recognition.

8.1.2 Audit of conformity or recognition of the firm by the Register includes:

.1 review of the documents confirming the compliance of the firm with the RS requirements;

.2 survey of the firm, including practical demonstration of completion of the works indicated in the request, verification of the records to ascertain that the firm organization and management are in compliance with the submitted documents and that the firm is able to perform works and render services, for which the approval (recognition) is requested. During periodical or renewal survey, to comply with this requirement the results of works or services endorsed by the Register may be used instead of the practical demonstration. The works performed or services rendered after the preceding survey may be accepted for review.

If the firm is unable to demonstrate practically the performance of works and specific services during the initial survey, the Register may issue a short-term certificate of recognition for a period not exceeding 90 days. The works listed in the short-term certificate shall be witnessed by the RS surveyor. Satisfactory results of works will be considered as a demonstration of the practical ability of the firm to perform the types of works for which recognition is requested, after that a certificate can be issued for the full term.

8.1.3 The firm shall submit for review:

.1 documents or their copies confirming fulfillment of the requirements of 8.2.1, 8.2.2, 8.2.6, 8.2.7, 8.2.8.3 (with due regard to the requirements of the appropriate items in Sections 9 — 12);

.2 list of the activities performed (area of activity);

.3 lists of the personnel containing information on compliance of the personnel with the requirements of 8.2.2.1 (with due regard to the requirements of the appropriate items in Sections 9 — 12);

.4 lists of the equipment and facilities indicated in 8.2.3.1, 8.2.4.1 (with due regard to the requirements of the appropriate items in Sections 9 — 12);

.5 lists of the documents indicated in 8.2.4.3, 8.2.5.1 (with due regard to the requirements of the appropriate items in Sections 9 — 12);

.6 verification of approval/recognition by other authorities, if any;

.7 information on other activities, which may affect a conflict;

.8 list and documentation on manufacturer's licenses, where applicable;

.9 list of appointed agents;

.10 firm experience in the area of services rendered.

8.1.4 Survey of the firm aims at confirming the compliance of the firm with the requirements of 8.2. The requirements for the firms performing certain activities are set forth in the relevant sections.

8.1.5 Duration of the firm's documentation review shall comply with that indicated in 5.10, Part II "Technical Documentation".

8.2 REQUIREMENTS

8.2.1 Legal status.

8.2.1.1 Legal status of the firm shall comply with the current legislation.

8.2.1.2 The firm shall have organizational structure and the Head.

8.2.2 Personnel.

8.2.2.1 Personnel of the firm shall have an appropriate education, professional and special training, qualification and experience necessary for performance of activity in the area indicated in the request.

8.2.2.2 The firm is responsible for qualification and professional training of its personnel in compliance with the national, international and branch standards; in case of absence of these standards — in compliance with the standards of the firm. This requirement shall be established in the documents of the firm.

8.2.3 Technique.

8.2.3.1 The firm shall have the technique necessary for performance of the activity in the area indicated in the request, including appropriate equipment, premises and facilities certified in the established order.

8.2.3.2 The firm shall provide the maintenance of the equipment and facilities in compliance with their operating and maintenance documentation.

8.2.3.3 The firm shall perform the activity on the documentation corresponding to each activity in the area indicated in the request with regard to the environmental conditions.

8.2.4 Measurement assurance.

8.2.4.1 The firm shall have and apply necessary measurement assurance in compliance with the procedures for testing and checking of items of the RS technical supervision, including:

.1 measuring equipment checked (calibrated) in the established order;

.2 testing equipment certified in the established order;

.3 reference and standard specimens;

.4 appropriate consumables (chemicals, substances, etc.).

8.2.4.2 The firm shall provide the maintenance of measuring and testing equipment in compliance with their operating and maintenance documentation.

8.2.4.3 The firm shall have and adhere to the current standards and certified in the established order procedures:

.1 for testing of items of technical supervision with the required accuracy;

.2 for handling of samples.

8.2.5 Files of the firm documents.

8.2.5.1 The firm shall have the valid normative and technical documents necessary to perform activity in the area indicated in the request, including:

.1 documents containing requirements for items of technical supervision, including the RS rules;

.2 technical documentation on items of technical supervision;

.3 production documentation on performance, checking and control of each kind of activity.

8.2.5.2 The documentation shall be available for the firm personnel where necessary.

8.2.6 Reporting.

8.2.6.1 Form and content of reports in the area indicated in the request shall be acceptable for RS and shall include:

.1 name and address of the firm;

.2 identification of the report, e.g. report number;

.3 name and address of the customer;

.4 reference to the documents, in compliance with which the activity has been performed;

.5 description (name) of the item, in relation to which the activity has been performed;
.6 place where the activity has been performed;
.7 date when the activity has been performed;
.8 information on conditions, under which the activity has been performed;
.9 information on deviations from the requirements of the documents, in compliance with which the activity has been performed;
.10 entry to the effect that the activity has been performed under the RS technical supervision;
.11 full name, position and signature of the person who approved the report;
.12 number of every page and the total number of pages in the report.

8.2.6.2 Reports shall be stored in the firm for not less than five years under conditions of confidentiality. This requirement shall be specified in the firm documents.

8.2.7 Checking and control.

8.2.7.1 The firm shall do the checking and exercise control specified in the documentation for each kind of activity.

8.2.7.2 The firm shall take measures on elimination and prevention of non-conformities and claims against the firm activity in the area indicated in the request. This requirement shall be specified in the firm documents.

8.2.8 Subcontractors.

8.2.8.1 Subcontractors recruited by the firm for performance of activity in the area indicated in the request shall fulfill the requirements of Section 8.

8.2.8.2 The firm shall provide the audit of subcontractors' activity in the area indicated in the request.

8.2.8.3 The firm shall have agreements with subcontractors in the area indicated in the request.

8.2.9 Information on alterations to the certified service operation system.

8.2.9.1 In case where any alteration to the certified service operation system of the supplier is made, such alteration shall be immediately informed to the Register. Re-audit may be required when deemed necessary by the Register.

9 RECOGNITION OF SERVICE SUPPLIERS

9.1 GENERAL

9.1.1 The requirements of this Section apply to the firms involved in the activities related to the items of the RS technical supervision. Kinds of the activities are indicated in Table 9.1.1.

Table 9.1.1

Code	Kinds of activity
22001000	**Thickness measurements on ships and offshore installations under supervision of the RS surveyor:**
22001001	Category I: thickness measurements under supervision of the RS surveyor on all ships regardless of their gross tonnage
22001002	Category II: thickness measurements under supervision of the RS surveyor on fishing vessels regardless of their gross tonnage and non-**ESP** ships less than 500 gross tonnage
22002000	Tightness testing of hatches, doors etc. with ultrasonic equipment
22003000	In-water survey on ships and offshore installations by diver or remotely operated vehicle (ROV)
22004000MK	Inspection and maintenance of fire-extinguishing equipment, systems and outfit
22005000	**Survey and maintenance of life-saving appliances:**
22005001MK	inflatable liferafts
22005002	containers for inflatable liferafts
22005003MK	hydrostatic release units
22005004	lifebuoys
22005005	position-indicating lights of life-saving appliances, self-activating smoke signals
22005006MK	inflatable lifejackets
22005007MK	inflated rescue/fast rescue boats
22005008	equipment of lifeboats and liferafts
22005009	other life-saving appliances
22005010MK	marine evacuation systems, inflatable means of rescue
22005011	weak link, automatic gas inflation system, embarkation and pilot ladders, lifelines
22005012	non-inflatable lifejackets, immersion suits, anti-exposure suits, thermal protective aids
22006000	**Servicing and inspection of radio and navigational equipment:**
22006001	shore-based maintenance and repair of GMDSS equipment in compliance with the requirements of regulation IV/15 of SOLAS 74, as amended and IMO resolution A.702(17)
22006002MK	servicing and testing of radio equipment on board ships or mobile offshore drilling units and fixed off shore platforms for compliance with the requirements of SOLAS 74, as amended (preliminary survey of radio equipment)
22006003	installation, commissioning, maintenance and repair of radio and navigational equipment, replacement of built-in power supply components, programming of radio equipment
22006004MK	annual performance testing of voyage data recorders (VDR) and simplified voyage data recorders (S-VDR) in accordance with regulation V/18.8 of SOLAS 74, as amended
22006006MK	annual testing of EPIRBs of the satellite system COSPAS-SARSAT
22006007MK	shore-based maintenance of EPIRBs of the satellite system COSPAS-SARSAT
22006008MK	inspection, testing and maintenance of automatic identification system (AIS)
22008000MK	Inspection and maintenance of self-contained breathing apparatus
22012000	Examination of ro-ro ships bow, stern, side and inner doors

Code	Kinds of activity
22015000MK	Inspections of low location lighting systems using photo luminescent materials and evacuation guidance systems used as an alternative to low-location lighting systems
22016000MK	Sound pressure level measurements of public address and general alarm systems on board ships
22021000MK	Maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats, launching appliances and release gear
22022000	Underwater thickness measurements of ships and offshore installations under supervision of the RS surveyor
22023000MK	Expertise of safe carriage of bulk cargoes by sea
22024000MK	Measurements of noise level onboard ships
22025000	Tightness testing of primary and secondary barriers of gas carriers with membrane cargo containment systems for ships in service
22025600	Survey using remote inspection technique(s) (RIT) as an alternative means for close-up survey of the structure of ships and offshore installations
22026000	Visual and/or sampling checks, development of hazardous material inventories

9.1.1.1 For the purpose of this Section, the following definitions shall apply:

.1 Manufacturer [1] is a firm that manufactures equipment required to be periodically serviced and/or maintained;

.2 Service supplier (a service supplier or a category of service supplier may be referred to hereafter simply as "the Supplier") is a person or a firm not employed by the Register, who at the request or on behalf of an equipment manufacturer, a shipyard, a shipowner, an owner of offshore installation or other client (customer) provides services for a ship or an offshore installation, such as measurements, tests, repair or maintenance of safety systems and equipment, the results of which are used by the RS surveyors in making decisions affecting classification or statutory certification of a ship or an offshore installation and services provided thereto;

.3 Agent is a person or firm authorised to act for or to represent a manufacturer or approved/recognized service supplier;

.4 Subsidiary is a firm partly or wholly owned by a manufacturer or approved/recognized service supplier;

.5 Subcontractor is a person or firm providing services to a manufacturer or approved/recognized service supplier, with a formal contract defining the assumption of the obligations of the service supplier;

.6 Ship and offshore installation is any ship (including floating dock, mobile offshore drilling unit (MODU), floating offshore oil-and-gas production unit (FPU)) and fixed offshore platform (FOP).

9.1.2 The firms that perform the activities listed in Table 9.1.1 shall be recognized by RS.

9.1.3 The firms that perform the activities related to the items of the RS technical supervision shall comply with the applicable general requirements listed in Section 8, the requirements in 9.2, appropriate specific requirements in 9.3 and those of Maritime Administrations, if any.

9.1.4 Recognition is conditional on a practical demonstration of the performance of the specific service as well as satisfactory reporting being carried out.

9.1.5 Recognition of the firm by the Register shall be confirmed by the Recognition Certificate (СП) issued in compliance with 3.4 — 3.7 and with regard to specific requirements depending on the area of the firm activities. The issued Recognition Certificate (СП) shall

[1] For *www.iacs.org.uk*, the definition "Manufacturer" given in 1.1.1 shall be used.

certify that the procedure for rendering the service by the firm complies with the RS Rules in the scope prescribed by the RS Rules and that the results of rendering services prescribed by the RS Rules may be recognized and used by the Register in making decisions affecting classification or statutory certification and services, as applicable. The Recognition Certificate (СП) shall clearly indicate the type and scope of services as well as any restrictions imposed. When an authorization, license, agreement or any other document governing relations between the service supplier and equipment manufacturer is required, these documents shall be valid and/or their validity shall be timely endorsed throughout the validity period of the Recognition Certificate (СП).

In case of loss of validity of the specified documents, the service supplier shall apply to the Register to amend the Recognition Certificate (СП).

9.1.5.1 When any alteration to the certified service operating system of the supplier is made, such alteration is to be immediately informed to the Register. Re-audit may be required when deemed necessary by the Register.

9.1.5.2 The Register reserves the right to cancel the recognition and to inform another classification society (ACS) — IACS member accordingly.

9.2 REQUIREMENTS

9.2.1 Extent of recognition.

9.2.1.1 The firm shall demonstrate, as required by 9.2.2 — 9.2.11, that it has the competence and control needed to perform the services for which recognition is sought.

9.2.1.2 Where several servicing stations are owned by a given firm, each station shall be assessed and approved except as specified in 9.2.12.3.

9.2.2 Training of personnel.

The firm is responsible for the qualification and training of its personnel to a recognised national, international or industry standard as applicable. Where such standards do not exist, the firm shall define standards for the training and qualification of its personnel relevant to the functions each is authorised to perform. The personnel shall also have adequate experience and be familiar with the operation of any necessary equipment. Operators/technicians/inspectors shall have had a minimum of one year tutored on-the-job training. Where it is not possible to perform internal training, a program of external training may be considered as acceptable.

9.2.3 Supervision.

The firm shall provide supervision for all services provided. The responsible supervisor shall have had a minimum of two years of experience as an operator/technician/inspector within the activity for which the supplier is recognized. For a supplier consisting of one person, that person shall meet the requirements of a supervisor.

9.2.4 Personnel records.

The firm shall keep records of the approved operators/technicians/inspectors. The record shall contain information on age, formal education, training and experience for the services for which they are recognized.

9.2.5 Equipment and facilities.

The firm shall have the necessary equipment and facilities for the service to be supplied. A record of the equipment used shall be kept and available. The record shall contain information on maintenance and results of calibration and verifications. The Register shall assess and record the validity of previous measuring results when the equipment is found not to conform to requirements. The Register shall take appropriate action on the equipment affected.

9.2.6 Control of data.

When computers are used for the acquisition, processing, recording, reporting, storage, measurement assessment and monitoring of data, the ability of computer software to satisfy the intended application shall be documented and confirmed by the service supplier. This shall be undertaken prior to initial use and reconfirmed as necessary.

Note. Commercial off-the-shelf software (e.g. word processing, database and statistical programmes) in general use within their designed application range may be considered to be sufficiently validated and do not require any subsequent confirmation.

9.2.7 Files of the firm documents.

The firm shall have the valid normative and technical documents necessary for performance of the activity in the area indicated in the request, including:

.1 outline of firm, e.g. organization and management structure, including subsidiaries to be included in the recognition/certification;

.2 list of nominated agents, subsidiaries and subcontractors;

.3 experience of the firm in the specific service area;

.4 for categories of firms that require authorization from manufacturers, manufacturer's documentary evidence that the firm has been authorised or licensed to service the particular makes and models of equipment for which recognition is sought shall be provided;

.5 list of operators/technicians/inspectors documenting training and experience within the relevant service area, and qualifications according to recognised national, international or industry standards, as relevant;

.6 description of equipment used for the particular service for which recognition is sought;

.7 guides for operators of such equipment;

.8 training programmes for operators/technicians/inspectors;

.9 check lists and record formats for recording results of the services;

.10 Quality Manual and/or documented procedures covering requirements in 9.2.12;

.11 documented procedures for communication with the crew prior to commencing work, so that it is safe to decommission the equipment being maintained, and to provide a safe system of work in place;

.12 evidence of approval/recognition by other bodies, if any;

.13 information on the other activities which may present a conflict of interest;

.14 record of customer claims and corrective actions;

.15 documented procedures and instructions shall be available for the recording of damages and defects found during inspection, servicing and repair work. This documentation shall be made available upon request.

9.2.8 Procedures.

The firm shall have documented work procedures covering all services supplied.

9.2.9 Subcontractors.

The firm shall give information of agreements and arrangements if any parts of the services provided are subcontracted. Subcontractors providing anything other than equipment shall also meet the general requirements in 9.2.

9.2.10 Verification.

The firm shall verify that the services provided are carried out in accordance with approved procedures.

9.2.11 Reporting.

Reports on the results of activity performed shall contain a copy of the Recognition Certificate (СП), in addition to the information specified in 8.2.6.1. The reports shall detail the results of inspections, measurements, tests, maintenance and/or repairs carried out.

9.2.12 Quality management system.

9.2.12.1 The firm shall have a documented system covering at least the following:

.1 the Code of Ethics to conduct the relevant activity;

.2 maintenance of equipment;

.3 measurement assurance, checking (calibration) of measuring equipment;

.4 training programmes for operators/technicians/inspectors;

.5 supervision and verification to ensure compliance with operational procedures;

.6 recording and reporting of information;

.7 quality management of subsidiaries, agents and subcontractors;

.8 job preparation;

.9 corrective and preventive actions related to complaints;

.10 periodic review of work process procedures, complaints, corrective actions, and issuance, maintenance and control of documents.

9.2.12.2 A documented management quality system complying with the most current version of ISO 9000 series and including the above items, would be considered acceptable according to 9.2.12.1.

9.2.12.3 If a manufacturer of equipment (and/or its service supplier) applies to the Register for inclusion of its nominated agents and/or subsidiaries in the Recognition Certificate (СП), then it shall implement a quality management system certified in accordance with the most current version of ISO 9000 series. The quality management system shall contain effective controls of the manufacturer's (and/or service supplier's) agents and/or subsidiaries. The nominated agents/subsidiaries shall also have in place an equally effective quality management system complying with the most current version of ISO 9000 series. Such recognition shall be based upon an evaluation of the quality management system implemented by the parent company against the most current version of ISO 9000 series. The Register may require follow-up audits on such agents or subsidiaries against the most current version of ISO 9000 series to confirm adherence to this quality system.

9.2.13 Service suppliers relations with the equipment manufacturer.

9.2.13.1 A firm, which works as a service station for manufacturer(s) of equipment (and as a service supplier in this field), shall be assessed by the manufacturer(s) and nominated as their agent. The manufacturer shall ensure that appropriate instruction manuals, material etc. are available for the agent as well as proper training of the agent's technicians. Such suppliers shall be recognized either on a case by case basis, or in accordance with 9.2.12.3.

9.3 SPECIAL REQUIREMENTS

9.3.1 Requirements for firms engaged in thickness measurements on ships and offshore installations (codes 22001001, 22001002).

Firms engaged in thickness measurements on ships and offshore installations (hereinafter referred to as "the TM firm (TM service supplier)") are subdivided into the following categories:

category I: firms engaged in thickness measurements under supervision of the RS surveyor on any ship types, other floating facilities (including floating docks, mobile offshore drilling units (MODUs), floating offshore oil-and-gas production units (FPUs)) and fixed offshore platforms (FOPs) regardless of their gross tonnage;

category II: firms engaged in thickness measurements under supervision of the RS surveyor on fishing vessels, regardless of their gross tonnage, and non-**ESP** ships of less than 500 gross tonnage.

9.3.1.1 Requirements for Category I firms.

9.3.1.1.1 Supervisor.

The responsible supervisor shall be qualified according to the recognized national or international industrial NDT standard (e.g. Level II, ISO 9712 as amended).

The supervisor shall have adequate knowledge of ship structures and be able to assess the results of measurements performed in compliance with the RS normative documents.

9.3.1.1.2 Operators.

The operators carrying out the measurements shall be certified to a recognised national or international industrial standard (e.g. Level I, ISO 9712 as amended) and shall have adequate knowledge of ship structures sufficient to elect a representative position for each measurement.

9.3.1.1.3 Operator/supervisor shall have appropriate qualification documents in ultrasonic testing (ultrasonic thickness measurements) issued by the accredited body for training and certification of NDT personnel (hereinafter referred to as the NDT training and certification body) specified in 9.3.1.1.4.

For each service provided, an operator/supervisor shall have the power of attorney duly signed and sealed by a TM firm to enable him/her carrying out thickness measurements of hull structures on a particular ship. The validity of the power of attorney shall be established by the firm management. This term shall not exceed the term of the validity of the qualification document in ultrasonic testing (ultrasonic thickness measurements) or the Recognition Certificate (СП) issued for the operator/supervisor, whichever is earlier.

9.3.1.1.4 NDT training and certification bodies.

Pursuant to EN ISO 9712, NDT training and certification bodies (operators/supervisors) shall be accredited by the international or national NDT certification authority for compliance with ISO/IEC 17024.

Self-declaration of compliance is not allowed.

The list of NDT accreditation bodies — members of the following international associations for NDT, can be found by the links below:

the European Federation for Non-Destructive Testing (EFNDT): http://www.efndt.org/Members

the International Committee for Non-Destructive Testing (ICNDT): http://www.icndt.org/Directory

Asia Pacific Federation for Non Destructive Testing (APFNDT): http://apfndt.org/apfndt3.html

Certification bodies accredited for training and certification of NDT personnel for items of the RS technical supervision (e.g. in shipbuilding and repair sector) according to EN ISO 9712 may be additionally certified by the RS in compliance with the requirements of Section 12 upon their request on the voluntary basis.

Certification bodies that are not accredited by the NDT accreditation bodies for personnel training and certification in non-destructive testing of items of the RS technical supervision according to EN ISO 9712 shall be certified by RS on a mandatory basis.

9.3.1.1.5 Equipment.

On coated surfaces, instruments using pulsed echo technique (either with oscilloscope or digital instruments using multiple echoes, single crystal technique) are required. Single echo instruments may be used on uncoated surfaces, which have been cleaned and ground.

9.3.1.1.6 Procedures.

Documented work procedures are at least to contain information on inspection preparation, selection and identification of test locations, surface preparation, protective coating preservation, calibration checks, and report preparation and content.

9.3.1.1.7 Reporting.

In addition to 9.2.11, the report shall be based on the requirements of Appendix 2 to the Rules for the Classification Surveys of Ships in Service.

9.3.1.1.8 Details of Category I TM firm recognition.

TM firm recognition and issuance of the Recognition Certificate (СП) (form 7.1.4.2) are conditional on a practical demonstration of thickness measurements on board the ship, other floating facility or fixed offshore platform (FOP) performed under supervision of the RS surveyor, as well as satisfactory reporting being carried out based on the results of thickness measurements.

Information on operators/supervisors shall be entered in the Annex to the Recognition Certificate.

An entry on the type of service shall be made in the Annex to the Recognition Certificate (СП) reading as follows: "22001001 — Category I: firms engaged in thickness measurements under supervision of the RS surveyor on any ship types, other floating facilities (including floating docks, mobile offshore drilling units (MODUs), floating offshore oil-and-gas production units (FPUs)) and fixed offshore platforms (FOPs) regardless of their gross tonnage". During survey of recognized TM firms for renewal of the Recognition Certificate (СП), it shall be confirmed that they fully comply with the applicable requirements of the RS normative documents concerning the TM firm recognition, and that the residual thickness measurements during the period of validity of the Recognition Certificate (СП) have been carried out on particular ships, other floating facilities, FOPs under supervision of the RS surveyor or under supervision of the ACS — IACS member surveyors, whose Recognition Certificates (СП) are also available at the TM firm. It shall be also confirmed that thickness measurement reports have been duly signed and stamped by the RS or ACS — IACS member surveyors. Particular attention shall be paid to the relevance of the list of the TM firm operators/supervisors and to the availability of the necessary documents confirming the NDT personnel qualification.

9.3.1.1.9 Supervision for services rendered by a recognized TM firm.

Thickness measurements on the RS-classed ships carried out by the TM firm shall be provided under supervision of the RS surveyor or the surveyor to ACS — IACS member if the ship is submitted in location inaccessible for survey by the Register.

9.3.1.1.10 Information on the TM firms recognition status.

9.3.1.1.10.1 The IACS website provides links to the databases of official websites of classification societies participating in IACS PR No. 23 (hereinafter referred to as the participating society), which contain the information on the recognized TM firms (*www.iacs.org.uk* in "Ship/Company data/Thickness Measurement Firms" Section). Each participating society is responsible to provide information on alterations of the links in order to update the IACS website.

9.3.1.1.10.2 ACS — IACS member, including the Register, shall notify the other classification societies (participating societies) and the IACS Permanent Secretary on cancellation of the Recognition Certificates (СП) of the TM firms due to any reasons specified in 3.6.2 and 3.6.7. RHO shall send a notification of cancellation of the recognition (Recognition Certificate (СП)) in the form given in IACS PR No. 23 to classification societies via e-mails

posted in the "PR23 Contact Details" Section on the IACS website as well as to the IACS Permanent Secretary via e-mail: efs@iacs.org.uk within five (5) working days from the date of cancellation. On receipt by the Register of notification on cancellation of the recognition (Recognition Certificate (СП)) of the TM firm from ACS or other classification societies, RHO shall request ACS or other classification societies for any additional information on the reason for cancellation of the recognition (Recognition Certificate (СП)), if required. The obtained information is subject to the RHO review, and the decision is taken with regard to the possibility of maintaining the TM recognition by the Register, if any, or the possibility of issuance of the Recognition Certificate if the TM firm applies to RS for the first time.

The RHO and participating societies shall timely advise IACS Permanent Secretary on amendments made to their contact details in order to update information in the "PR23 Contact Details" Section in the IACS website accordingly.

9.3.1.1.10.3 Prior to issuance of a new Recognition Certificate (СП) to a TM firm or renewal of a valid one, the RS surveyor shall check the information on cancellation of the TM firm recognition by ACS on the RS internal website in Section "Information Systems/Industry Database/Information on Supervision in Industry/List of TM Firms Recognized by Other Classification Societies, whose Certificates are Cancelled" by link: http://gur.rs-head.spb.ru/win/survey/sto/tmcan.htm. In cases where the RS surveyor reveals that the recognition of any TM firm has been cancelled by ACS, he/she (if necessary) may contact RHO for further instructions on this occasion.

9.3.1.2 Requirements for Category II TM firms — limited recognition.

9.3.1.2.1 The objective of this limited recognition is recognition programme is verify that the TM firm has qualified personnel that are able to measure thicknesses, recognize types of wear, understand hull structural drawings, have adequate knowledge of ship structures in addition to having the necessary technical equipment to render professional assistance.

The firm recognition by the Register with regard to 9.3.1.2.6 shall include the following:

.1 review of the documents confirming the firm compliance with the RS requirements;

.2 survey of the firm.

9.3.1.2.2 Submission of documents.

The following documents shall be submitted to the Register for review:

organization and management structure;

list of operators supervisors having documented training tutorial, qualifications and experience;

description of the equipment used, including maintenance and calibration procedures;

operator's manual for such equipment.

9.3.1.2.3 NDT personnel documents.

The TM firm shall keep NDT personnel documents. These documents shall contain information on age, education, training and experience in thickness measurements.

An operator carrying out the measurements shall be certified in non-destructive testing minimum at Level I, according to a recognized national and international standard for qualification and certification of NDT (i.e. ISO 9712, as amended). An operator shall have a minimum of one year tutored on-job, a program of external training may be considered as acceptable. An operator shall have adequate knowledge of ship structure, sufficient to select a representative position for each measurement.

An operator shall have relevant qualification documents in ultrasonic testing (ultrasonic thickness) issued by the accredited body (refer to 9.3.1.1.4).

For each of service provided, an operator shall have a power of attorney duly signed and sealed by the TM firm, to enable him/her to carry out thickness measurements of hull structures on a particular ship.

9.3.1.2.4 Equipment.

Requirements for equipment are similar to those specified in 9.3.1.1.5.

9.3.1.2.5 Reporting.

In addition to 9.2.11, the report shall be based on Appendix 2 to the Rules for the Classification Surveys of Ships in Service.

9.3.1.2.6 Details of Category II firm recognition.

Upon reviewing the submitted documents with satisfactory results, the TM firm shall be audited to ascertain that the supplier (TM firm) is duly organized and managed in accordance with the submitted documents, and is capable of rendering the services which recognition of supplier (TM firm)/issuance of the Recognition Certificate (СП) is required.

The TM firm recognition and issuance of the Recognition Certificate (СП) are conditional on a practical demonstration of thickness measurement on board the ship performed under supervision of the RS surveyor, as well as satisfactory reporting being carried out based on the NDT results. Upon satisfactory completion of survey of the TM firm, the demonstration test and proper reporting, the Register shall issue relevant reports on survey and Recognition Certificates (СП) stating that the procedures and methods for carrying out thickness measurements used by the TM firm have been recognized by the Register and may be accepted and used by the RS surveyors in making decisions during ship surveys. The following shall be specified in the Appendix to the Recognition Certificate (СП) (form 7.1.4.2):

"22001002 — Category II: thickness measurements under supervision of the RS surveyor on fishing vessels, regardless of their gross tonnage, and non-**ESP** ships of less than 500 gross tonnage". The Register shall issue the Certificate of Vocational Training (СПП) (form 7.1.34) to the operator who has carried out thickness measurements confirming his/her training in thickness measurements on board ships as per the RS normative documents.

During survey of recognized TM firms for renewal of the Recognition Certificate (СП), it shall be confirmed that they comply with the applicable requirements of the RS normative documents concerning the TM firm recognition, and that the residual thickness measurements during the period of validity of the Recognition Certificate (СП) have been carried out on particular ships under supervision of the surveyors to the Register or under supervision of the surveyors to ACS — IACS member whose Recognition Certificates (СП) are also available at the TM firm. It shall be verified that thickness measurement reports are signed and sealed by the RS or ACS surveyors. Special consideration shall be given to the relevance of the list of operators employed in the TM firm and availability of required documents confirming the qualification of NDT personnel.

The Recognition Certificate (СП) shall be renewed according to Section 3.

The Register shall be immediately notified of any amendment made to the system for service rendering by the supplier, if any. The repeated check may be required as deemed necessary by the Register.

9.3.1.2.7 Supervision for services provided by the recognized TM firm.

The fact of supervision and performance of works in compliance with the requirements of the RS normative documents shall be certified by signature and stamp of the RS surveyor on the cover page of thickness measurement report (refer to 9.3.1.2.5).

9.3.2 Requirements for firms engaged in tightness testing of closing appliances such as hatches, doors etc. with ultrasonic equipment (code 22002000).

9.3.2.1 Extent of engagement — ultrasonic tightness testing of closing appliances such as hatches, doors etc.

9.3.2.2 Operators.

The operator shall have the following qualifications:

have knowledge of different closing appliances, including their design, functioning and sealing features;

have experience with the operation and maintenance of different closing appliances;

be able to document theoretical and practical training onboard in using the ultrasonic equipment specified.

9.3.2.3 Equipment.

It shall be demonstrated for the RS surveyor that the equipment is fit for the purpose of detecting leakages in losing appliances such as hatches, doors etc.

9.3.2.4 Procedures.

The supplier shall have documented work procedures, which shall include the manual for the ultrasonic equipment specified, its adjustment, maintenance, operation and approval criteria.

9.3.3 Requirements for firms carrying out an in-water survey on ships and offshore installations by diver or remotely operated vehicle (ROV) (code 22003000).

9.3.3.1 Extent of engagement — in-water survey in lieu of a docking survey and/or the internal hull survey of compartments filled with water on ships and offshore installations by diver or ROV.

9.3.3.2 Training of personnel.

The firm is responsible for the qualification of its divers, ROV operators and supervisors and for their training in the use of the equipment utilized when carrying out inspection. Knowledge of the following shall be documented:

ship's underwater structure and appendages, propeller shaft, propeller, rudder and its bearings, etc.;

non-destructive testing in accordance with a recognized national or international industrial NDT standard. This requirement only applies if an in-water survey firm performs non-destructive testing (visual testing (VT), ultrasonic testing (UT) (ultrasonic thickness measurements), etc.);

certification as a firm when conducting thickness measurements under water on ships and offshore installations;

bearing clearance measurements on rudders and propeller shaft;

underwater video monitoring with TV-monitors on deck, as well as still picture work;

operation of underwater communication system;

any special equipment necessary for the work carried out.

9.3.3.3 A plan for training of personnel in the reporting system, minimum requirements of the RS rules for relevant ship and offshore installation types, ship's and offshore installation's underwater structure, measuring of bearing clearances, the recognition of corrosion damage, buckling and deteriorated coatings, etc. shall be included.

9.3.3.4 Supervisor.

9.3.3.4.1 Diving supervisor.

Diving supervisor shall be qualified according to the firm's general requirements and shall have a minimum of two years' experience as a diver carrying out inspection.

9.3.3.4.2 ROV supervisor.

ROV supervisor shall have a minimum of two (2) years of experience conducting inspections with ROVs.

9.3.3.5 Divers and operators.

9.3.3.5.1 Divers carrying out inspection.

The diver carrying out the inspection shall have had at least one year's experience as an assistant diver carrying out inspections (including participation in a minimum of 10 different assignments).

9.3.3.5.2 ROV operators.

ROV operators shall have at least one year of experience working with ROVs conducting inspections on ships and offshore installations.

9.3.3.6 Equipment.

9.3.3.6.1 The following shall be available for firms:

closed circuit colour television with sufficient illumination equipment; two-way communication between diver and surface staff;

video recording device connected to the closed circuit television; still photography camera;

equipment for carrying out thickness gauging, non-destructive testing and measurements (e.g. clearances, indents, etc., as relevant to the work to be performed);

equipment for cleaning of the hull.

9.3.3.6.2 In addition to above 9.3.3.6.1, the following shall be available for firms carrying out survey by ROV:

ROV;

adequate controls or programming for the ROV functions required.

9.3.3.7 Procedures and guidelines.

9.3.3.7.1 The firm shall have documented operational procedures and guidelines for how to carry out the inspection and how to handle the equipment. These shall include:

two-way communication between diver and surface;

video recording and closed circuit television operation;

guidance of the diver along the hull to provide complete coverage of the parts to be inspected.

9.3.3.7.2 In addition to above 9.3.3.7.1, documented operational procedures and guidelines for firms carrying out in-water survey by ROV shall also include:

guidance for the operation and maintenance of ROV, if applicable;

methods and equipment to ensure the ROV operator can determine the ROV's location and orientation in relation to the ship or offshore installation.

9.3.3.8 Verification of services rendered by the recognized firm.

All in-water surveys of ships and offshore installations shall be performed by the firm under supervision of the RS surveyor. The firm shall have the surveyor's verification of each separate job performed in accordance with the RS normative documents, documented in the report of the firm by the attending surveyor(s) signature and stamp.

9.3.4 Requirements for firms engaged in inspection and maintenance of fire-extinguishing equipment and systems (code 2200400МК).

9.3.4.1 Extent of engagement.

Inspections and maintenance of fire-extinguishing equipment and systems such as fixed fire extinguishing systems, portable fire extinguishers and fire detection and alarm systems.

9.3.4.2 Files of the firm documents.

9.3.4.2.1 The firm shall have access to the following documents:

.1 manufacturer's servicing manuals, servicing bulletins, instructions and training manuals, as appropriate;

.2 Type Approval Certificates showing any conditions that may be appropriate during the servicing and/or maintenance of fire-extinguishing equipment and systems;

.3 SOLAS, MSC.1/Circ.1318 "Guidelines for the Maintenance and Inspections of Fixed Carbon Dioxide Fire-Extinguishing Systems", International Code for Fire Safety Systems (FSS Code), ISO 6406 "Periodic Inspection and Testing of Seamless Steel Gas Cylinders", and any documentation specified in the authorization or license from the equipment manufacturer;

.4 MSC/Circ.670 "Guidelines for the Performance and Testing Criteria and Surveys of High Expansion Foam Concentrates for Fixed Fire-Extinguishing Systems";

.5 MSC/Circ.798 "Guidelines for the Performance and Testing Criteria and Surveys of Medium Expansion Foam Concentrates for Fixed Fire-Extinguishing Systems";

.6 MSC/Circ.799 "Guidelines for the Performance and Testing Criteria and Surveys of Expansion Foam Concentrates for Fixed Fire-Extinguishing Systems of Chemical Tankers";

.7 MSC.1/Circ.1312 "Revised Guidelines for the Performance and Testing Criteria and Surveys of Foam Concentrates for Fixed Fire-Extinguishing Systems as corrected by MSC/Circ.1312/Corr.1";

.8 MSC.1/Circ.1432 "Revised Guidelines for the Maintenance and Inspection of Fire Protection Systems and Appliances";

.9 IMO resolution A. 951(23) "Improved Guidelines for Marine Portable Fire Extinguishers";

.10 MSC.1/Circ.1370 "Guidelines for the Design, Construction and Testing of Fixed Hydrocarbon Gas Detection Systems";

.11 Guidelines adopted by IMO for fire-extinguishing equipment and systems specifically intended for service by service suppliers.

9.3.4.2.2 In addition to the documents listed in 9.3.4.2.1, the firm shall have applicable documents specified in 4.3 of Part IV "Technical Supervision during Manufacture of Products" as well as recognized international and/or national standards prescribing the requirements and test procedures for items under technical supervision.

9.3.4.3 Extent of recognition.

9.3.4.3.1 Representatives of the firm shall have professional knowledge of fire theory, fire-fighting and fire-extinguishing appliances sufficient to carry out the maintenance and/or inspections, and to make the necessary evaluations of the condition of the equipment.

9.3.4.3.2 In demonstrating professional knowledge, representatives of the firm shall have an understanding of the various types of fires and the extinguishing media to be used on them.

9.3.4.3.3 For fixed fire-extinguishing systems, representatives of the firm shall demonstrate an understanding of the principles involved with gas, foam, deluge, sprinkler and water-mist systems, as relevant for the approval being sought.

9.3.4.4 Procedures.

The firms shall have documented procedures and instructions on how to carry out the servicing of the equipment and/or system. These are to either contain or make reference to the manufacturer's servicing manuals, servicing bulletins, instructions and training manuals, as appropriate, and to international requirements. Additionally they shall make reference to valid requirements (e.g. what markings shall be appended to the equipment/system).

9.3.4.5 Equipment and facilities.

9.3.4.5.1 General requirements.

If the firms undertake shore-based inspecting and maintenance, they shall maintain and implement procedures for workshop cleanliness, ventilation and arrangement, with due cognizance of the spares and extinguishing media being stored, to ensure safe and effective working procedures. The firms undertaking inspecting and maintenance of equipment and systems onboard shall provide the appropriate facilities to either complete the work onboard or remove the necessary items to their workshops.

9.3.4.5.2 Equipment.

Sufficient and appropriate spares and tools shall be available as applicable, which shall include:

.1 various scales to weigh items;

.2 means to hydrostatically pressure test components/systems/storage bottles;

.3 liquid/gas, flow meters, as appropriate;

.4 pressure gauges;

.5 in the cases of foam concentrates and portable fire-extinguishers, chemical analysis equipment and a testing bay, respectively; and

.6 specific equipment/spares as may be specified by the manufacturer;

.7 level measuring equipment for bottles;

.8 recharging facilities for pressurized bottles, extinguishers and cartridges.

9.3.5 Requirements for firms engaged in survey and maintenance of life-saving appliances (codes 22005001МК, 22005002, 22005003МК, 22005006МК, 22005007МК, 22005008, 22005009, 22005010МК).

9.3.5.1 Extent of engagement.

.1 servicing of inflatable liferafts, inflatable lifejackets, hydrostatic release units and/or inflated rescue boats;

.2 servicing of marine evacuation systems.

9.3.5.2 Equipment and facilities.

IMO resolution A.761(18) as amended by IMO resolution MSC.55(66) gives recommendations on conditions for the approval of servicing stations for inflatable liferafts which shall be observed as relevant. Where inflatable liferafts are subject to extended service intervals, MSC.1/Circ.1328 shall also be followed.

9.3.5.3 Procedures and instructions.

The firm shall have documented procedures and instructions for how to carry out service of equipment. Where inflatable liferafts are subject to extended service intervals in accordance with the requirements of SOLAS Regulation III/20.8.3, MSC.1/Circ.1328 shall be followed in addition to IMO resolution A.761(18) as amended by IMO resolution MSC.55(66).

9.3.5.4 The firm shall provide evidence that it has been authorised or licensed to service the particular makes and models of equipment for which recognition is sought by the equipment's manufacturer.

9.3.5.5 Reference documents.

The firm shall have access to the following documents:

.1 IMO resolution A.761(18) "Recommendation on Conditions for the Approval of Servicing Stations for Inflatable Liferafts" (adopted on 4 November 1993), amended by IMO resolution MSC.55(66);

.2 IMO resolution MSC.55(66);

.3 MSC.1/Circ.1328 "Guidelines for the Approval of Inflatable Liferafts Subject to Extended Service Intervals Not Exceeding 30 Months";

.4 manufacturer's servicing manuals, servicing bulletins, instructions and training manuals, as appropriate;

.5 Type Approval Certificates, showing any conditions that may be appropriate during the servicing and/or maintenance of inflatable liferafts, inflatable rescue boats, inflatable lifejackets, and hydrostatic release units;

.6 International Life-Saving Appliances Code (LSA Code) Chapter IV, 1995 SOLAS Conference Resolution 4 regarding marine evacuation systems.

9.3.6 Requirements for firms engaged in survey and maintenance of life-saving appliances (codes 22005004, 22005005, 22005011, 22005012).

9.3.6.1 A firm engaged in activities with code 22005011 (weak link, automatic gas inflation system) shall meet applicable requirements of IMO resolution A.761(18) as amended by IMO resolution MSC.55(66).

9.3.6.2 The firm shall have documented procedures and instructions on methods of equipment maintenance. The procedures shall include requirements to record the nature and dimensions of damages as well as defects revealed during maintenance and repair. The shipowner shall be notified of all revealed defects affecting further use of this equipment. In case of differences, relevant information from the firm (service supplier) shall be forwarded to the nearest RS Branch Office to settle the differences. These data shall be made available to the Register upon request.

9.3.7 Requirements for firms engaged in servicing and inspection of radio and navigational equipment with codes 22006000 (22006001 — 22006008МК).

9.3.7.1 Special requirements for firms engaged in activities with codes 22006001, 22006003, 22006004МК and 22006007МК.

9.3.7.1.1 Legal status.

The firm shall submit agreements with the equipment manufacturers entitling the firm to perform specific kinds of activities and laying down the procedure for providing the firm with spare parts.

9.3.7.1.2 Personnel.

The firm shall submit documents certifying that the firm's personnel have completed training in the equipment manufacturer's premises entitling them to perform specific kinds of activity.

9.3.7.2 Requirements for firms engaged in inspection of radio and navigational equipment (codes 22006002МК, 22006008МК).

9.3.7.2.1 Extent of engagement.

Inspection and tests of radio equipment and automatic identification system (AIS) on board ships or mobile offshore drilling units for compliance with SOLAS 74/78 as amended.

9.3.7.2.2 Reference documents.

The firm shall have access to the following documents:

.1 SOLAS 74, as amended;

.2 IMO resolution A.789(19) "Specification on the Survey and Certification Functions of Recognised Organisations Acting on Behalf of the Administration";

.3 MSC.1/Circ.1252 "Guidelines on Annual Testing of the Automatic Identification System (AIS)";

.4 SN/Circ.227, SN/Circ.227/Corr.1 and SN/Circ.245 "Guidelines for the Installation of a Shipborne Automatic Identification System (AIS)" and amendments thereto;

.5 ITU Radio Regulations;

.6 IMO Performance Standards for radio communication equipment;

.7 Flag State Administration requirements;

.8 relevant parts, if any, of the Register rules and guidelines.

9.3.7.2.3 Supervisor.

The supervisor shall have a minimum two years education from a technical school, experience as inspector, and shall preferably hold a General Operator's Certificate (GOC) or a GMDSS Radioelectronic Certificate (REC), recognised by the ITU, to operate or test radio transmitters. He shall be aware of any local conditions for radio signal propagation, of regional radio stations and their facilities, and of the GMDSS infrastructure.

9.3.7.2.4 Radio inspector.

The inspector carrying out the inspection shall have passed the internal training of the supplier in Radiotelephony, GMDSS, and initial and renewal surveys, as applicable. The inspector shall also have at least one year's technical school training or as alternative hold evidence that he followed a technical course approved by the relevant Administration, at least one year's experience as an assistant radio inspector and should preferably hold an appropriate National Radio Operators Certificate, recognised by the ITU, such as the GMDSS General Operator's Certificate (GOC) or GMDSS Radioelectronic Certificate (REC). He shall be aware of any local conditions for radio signal propagation, of regional radio stations and their facilities, and of the GMDSS infrastructure.

9.3.7.2.5 Equipment.

9.3.7.2.5.1 The firm shall have the major and auxiliary equipment required for correctly performing the inspection. A record of the equipment used shall be kept. The record shall contain information on manufacturer and type of equipment, and a log of maintenance and calibrations.

9.3.7.2.5.2 A standard which is relevant to the radio equipment to be tested shall be available for the equipment and shall be cited in the inspection report.

9.3.7.2.5.3 For equipment employing software in conjunction with the testing/examination, this software shall be fully described and verified.

9.3.7.2.5.4 Minimum required instruments:

.1 equipment for measuring frequency, voltage, current and resistance;

.2 equipment for measuring output and reflect effect on VHF and MF/HF;

.3 equipment for measuring modulation on MF/HF and VHF;

.4 acid tester for checking specific gravity of lead batteries;

.5 equipment for testing the performance of automatic identification system (AIS).

9.3.7.2.6 Procedures and instructions.

The firm shall have documented procedures and instructions for how to carry out testing and examination of radio equipment. Procedures and instructions for operating each item of the testing/inspection equipment shall also be kept and be available at all times.

9.3.7.3 Firms engaged in annual performance testing of Voyage Data Recorders (VDR) and simplified Voyage Data Recorders (S-VDR) in accordance with SOLAS Chapter V Regulation 18.8 (code 22006004МК).

9.3.7.3.1 Extent of engagement.

Testing and servicing of Voyage Data Recorders (VDR) and Simplified Voyage Data Recorders (S-VDR) in accordance with SOLAS Chapter V Regulation 18.8 and MSC.1/Circ.1222 "Guidelines on Annual Testing of Voyage Data Recorders (VDR) and Simplified Voyage Data Recorders (S-VDR)", as applicable.

9.3.7.3.2 The firm shall provide evidence that he has been authorised or licensed by the equipment's manufacturer to service the particular makes and models of equipment for which recognition is sought.

9.3.7.3.3 Where the firm is also the manufacturer of VDR or S-VDR and has elected to apply MSC.1/Circ.1222 in its entirety for the purpose of acting as a service supplier engaged in annual performance testing, the following shall apply:

.1 the manufacturer is responsible for appointing manufacturer's authorised service stations to carry out annual performance testing;

.2 the manufacturer is required to be a recognized service supplier and shall satisfy the requirements for the firms engaged in annual performance testing of VDR and S-VDR, as applicable;

.3 the manufacturer's authorised service station is not required to be a recognized service supplier;

.4 the manufacturer shall demonstrate that MSC.1/Circ.1222 is applied in its entirety.

9.3.7.3.4 Procedures.

9.3.7.3.4.1 The firm shall have documented procedures and instructions.

9.3.7.3.4.2 Where the firm is also the manufacturer of VDR or S-VDR and has selected to apply MSC.1/Circ.1222 in its entirety for the purpose of acting as a service supplier engaged in annual performance testing, the following shall apply:

.1 the manufacturer shall have documented procedures for the assessment and authorization of manufacturer's authorised service stations who carry out annual performance testing;

.2 the manufacturer shall have documented procedures for the review of manufacturer's authorised service stations annual performance test reports, analysis of the VDR/S-VDR 12-hour log and the issue of annual performance test certificates to the shipowner/operator;

.3 the manufacturer shall maintain a list of manufacturer's authorised service stations that can be accessed (by any available means, e.g. via a nominated contact point or from the manufacturer's website) upon request.

9.3.7.3.5 Reference documents.

9.3.7.3.5.1 The service supplier shall have access to the following documents:

.1 IMO — SOLAS 74/78, Chapter V, Regulation 18.8 "Approval, Surveys and Performance Standards of Navigational Systems and Equipment and Voyage Data Recorder";

.2 MSC.1/Circ.1222 "Guidelines on Annual Testing of Voyage Data Recorders (VDR) and Simplified Voyage Data Recorders (S-VDR)" (11 December 2006);

.3 IMO resolution A.861(20) as amended by IMO resolutions MSC.214(81) and MSC.333(90);

.4 IMO resolution MSC.163(78) "Performance Standards for Shipborne Simplified Voyage Data Recorders (S-VDRs)" (adopted on 17 May 2004) as amended by IMO resolution MSC.214(81).

9.3.7.3.5.2 The service supplier shall have access to applicable industry performance standards, e.g.:

.1 IEC 61996 "Maritime Navigation and Radio Communication Equipment and Systems — Shipborne Voyage Data Recorder (VDR)";

.2 IEC 61996-2 "Maritime Navigation and Radio Communication Equipment and Systems — Shipborne Voyage Data Recorder (VDR) — Part 2: Simplified Voyage Data Recorded (S-VDR) — Performance Requirements, Method of Testing and Required Test Results".

9.3.7.3.5.3 The service supplier shall also have access to any documentation specified in the authorization or license from the equipment manufacturer.

9.3.7.3.6 Equipment and facilities.

The service supplier shall have equipment as specified in the authorization or license from the equipment manufacturer.

9.3.7.3.7 Reporting — Test Report.

9.3.7.3.7.1 The firm shall issue a certificate of compliance as specified in SOLAS 74, as amended, Chapter V, Regulation 18.8.

9.3.7.3.7.2 Annual performance test of VDR and S-VDR shall be recorded in the form of the model test report given in the Appendix to MSC.1/Circ.1222, signed and stamped by the firm and attached to the annual performance test certificate.

9.3.7.3.7.3 Where the service supplier is also the manufacturer of VDR/S-VDR and has selected to apply MSC.1/Circ.1222 "Guidelines on Annual Testing of Voyage Data Recorders (VDR) and Simplified Voyage Data Recorders (S-VDR)" in its entirety for the purpose of acting as a service supplier engaged in annual performance testing, the manufacturer shall make arrangements for the following:

.1 review of the manufacturer's authorised service station annual performance test report;

.2 analysis of the recorder's 12-hour log;

.3 checking of the master record/database for the recorder.

9.3.7.3.7.4 Issue of the annual performance test certificate to the shipowner/operator within 45 days of completion of the annual performance test.

9.3.7.4 Requirements for firms engaged in shore-based servicing and testing of EPIRBs of COSPAS-SARSAT satellite system (code 22006006МК, 22006007МК).

9.3.7.4.1 Extent of engagement.

Shore-based servicing emergency radio beacons (EPIRB-406) of the COSPAS-SARSAT satellite system. Annual tests of EPIRBs of COSPAS-SARSAT satellite system.

9.3.7.4.2 Operator.

The firm personnel shall undergo the relevant training and hold the Certificate for EPIRB manufacturer confirming its right for EPIRB-406 shore-based servicing performance.

9.3.7.4.3 Equipment.

The firm shall have the following:

.1 set of calibrated equipment for servicing the EPIRB-406 in accordance with the provisions of MSC/Circ.1039;

.2 screened room or the relevant screening equipment preventing the transmission of a signal from the EPIRB-406 being checked to a satellite;

.3 set of spare parts, spare supply units approved by the manufacturer, as well as the reserve stock of EPIRB-406 in amounts agreed with the manufacturer (for a temporary EPIRB-406 replacement on a ship for a period of servicing).

9.3.7.4.4 Procedures and guidelines. The firm shall have the following:

.1 documented operating procedures and guidelines regulating EPIRB-406 servicing performance;

.2 log of servicing with details of the scope of inspections carried out and the components replaced;

.3 set of technical documentation for those types of EPIRB-406, which the firm is authorised to service;

.4 service-bulletins distributed by the EPIRB-406 manufacturer;

.5 last version of the software provided by the EPIRB-406 manufacturer or the manufacturer of the equipment used during inspection, as well as access to the renewal of that software.

9.3.7.4.5 Confirmation of authorities.

Firms shall present the confirmation of authority, i.e. contractual relations with the manufacturer for supply of spare parts, power supply units and consumables, as well as the document authorizing shore-based servicing performance for the specific EPIRB-406 type(s) on behalf of the EPIRB-406 manufacturer.

9.3.7.4.6 Annual testing of EPIRB-406.

Annual tests of EPIRB-406 shall be performed according to IMO circulars MSC.1/Circ.1040/Rev.1 and/or MSC.1/Circ.1123.

9.3.8 Requirements for firms engaged in surveys and maintenance of self-contained breathing apparatus (code 22008000МК).

9.3.8.1 Extent of engagement.

Inspections and maintenance of self-contained breathing apparatus and emergency escape breathing devices (EEBD).

9.3.8.2 The firm shall document and demonstrate that it has knowledge of the equipment and systems sufficient to carry out the inspections and testing of self-contained breathing apparatus to identify standards and to make the necessary evaluation of the condition of the equipment.

In demonstrating professional knowledge, firms shall have an understanding of the operational requirements involved with self-contained breathing apparatus and how these shall be maintained.

Additionally, the firms shall demonstrate the necessary safety requirements applicable to such equipment.

9.3.8.3 Files of the firm documents.

The firm shall have documented procedures and instructions on how to carry out the servicing of the equipment and/or system. These are to either contain or make reference to the manufacturer's servicing manuals, servicing bulletins, instructions and training manuals, as appropriate.

Additionally they shall make reference to any requirements (e.g. what markings shall be appended to the equipment/system) and how they shall be applied.

9.3.8.4 Reference documents.

The firm shall have access to the following documents:

manufacturers' servicing manuals, servicing bulletins, instructions and training manuals, as appropriate;

Type Approval Certificates showing any conditions, which may be appropriate during the servicing and/or maintenance of self-contained breathing apparatus.

9.3.8.5 Equipment and facilities.

9.3.8.5.1 General requirements.

If firms undertake shore-based inspecting and maintenance, they shall maintain and implement procedures for workshop cleanliness, ventilation and arrangement, with due cognisance of the spares and pressurised bottles being stored, to ensure safe and effective working procedures.

The firms undertaking inspecting and maintenance of equipment and systems onboard shall provide the appropriate facilities to either complete the work onboard or remove the necessary items to their workshops.

9.3.8.5.2 Equipment.

Sufficient and appropriate spares and tools shall be available for repair, maintenance and servicing of self-contained breathing apparatus in accordance with the requirements of the manufacturers.

These shall include, as required by the self-contained breathing apparatus equipment and/or systems:

.1 various scales to weigh items;

.2 means to hydrostatically pressure test components/systems/storage bottles;

.3 flow meters;

.4 pressure gauges;

.5 equipment for checking air quality;

.6 recharging facilities for breathing apparatus.

9.3.9 Requirements for firms engaged in examination of ro-ro ships bow, stern, side and inner doors (code 22012000).

9.3.9.1 Extent of engagement.

Inspection of securing and locking devices, hydraulic operating system, electric control system for the hydraulics, electric indicator systems, and supporting, securing and locking devices and tightness testing.

9.3.9.2 The firm shall be certified to the most current version of ISO 9000 series.

9.3.9.3 Reference documents.

The firm shall have access to the following reference documents:

SOLAS 74/78, as amended;

ISO 9001 "Quality systems — Model for quality assurance in production, installation and servicing"; IACS Unified Requirement (UR) Z24 "Survey Requirements for Shell and Inner Doors of Ro-Ro Ships";

the Register normative documents related to inner doors.

9.3.9.4 Supervisor.

In addition to 9.2.3, a technician/supervisor shall have a minimum two years related education from a technical school.

9.3.9.5 Training of personnel.

Operators carrying out non-destructive testing shall be qualified to a recognised national or international standard for the methods used.

9.3.9.6 Required equipment.

9.3.9.6.1 For inspection of supporting securing and locking devices, hinges and bearings, the equipment for measuring clearances (i.e. feeler gauges, vernier calipers, micrometers) shall be provided.

Inspection shall be performed by non-destructive testing (i.e. dye penetrant, magnetic particle inspection).

9.3.9.6.2 For tightness testing ultrasonic leak detector or equivalent shall be provided.

9.3.9.6.3 For inspection of hydraulic operating system, the following shall be provided:

pressure gauges;

particle counter for analysing the quality of hydraulic fluid.

9.3.9.6.4 For inspection of electric control system and indication system, the following shall be provided:

digital multi-meter;

earth fault detector.

9.3.9.7 Procedures and instructions.

9.3.9.7.1 The supplier shall have access to drawings and documents, including the Operating and Inspection Manual.

9.3.9.7.2 The firm shall have access to access to the service history of the doors.

9.3.9.7.3 The supplier shall use, complete and sign a checklist which has been found acceptable by the Register.

9.3.10 Requirements for firms engaged in inspections of low location lighting systems using photo luminescent materials and evacuation guidance systems used as an alternative to low-location lighting systems (code 22015000МК).

9.3.10.1 Extent of engagement.

Luminance measurements on board ships of low location lighting systems using photo luminescent materials.

9.3.10.2 Operators.

The operator shall have the appropriate qualification, adequate knowledge of the applicable international requirements (namely SOLAS 74/78/00, regulation II-2/13.3.2.5, IMO resolution A.752(18), ISO 15370-2010, FSS Code Chapter 11), shall be able to document theoretical and practical training onboard in using equipment specified.

9.3.10.3 Equipment.

The measuring instrument shall incorporate a fast-response photometer head with CIE (International Commission on Illumination) photopic correction and have a measurement range of at least 10^{-4} to 10 cd/m^2.

9.3.10.4 Procedures.

Documented work procedures are at least to contain information on inspection preparation, selection and identification of test locations.

9.3.10.5 Reporting.

The report shall conform to Annex C of ISO 15370-2010.

9.3.10.6 Verification.

The supplier shall have the RS surveyor's verification of each separate job, documented in the report by the attending surveyor's signature.

9.3.10.7 Reference documents.

The service supplier shall have access to the following documents:

.1 IMO — SOLAS 74/78, Chapter II-2, Part D, Regulation 13.3.2.5 "Marking of escape routes";

.2 IMO — Fire Safety Systems (FSS Code), Chapter 11 "Low-location lighting systems";

.3 IMO resolution A.752(18) "Guidelines for the Evaluation, Testing and Application of Low-Location Lighting on Passenger Ships" (adopted on 4 November 1993);

.4 ISO 15370:2010 "Ships and Marine Technology — Low-Location Lighting on Passenger Ships — Arrangement";

.5 MSC/Circ.1168 "Interim Guidelines for the Testing, Approval and Maintenance of Evacuation Guidance Systems Used as an Alternative to Low-Location Lighting Systems".

9.3.11 Requirements for firms engaged in sound pressure level measurements of public address and general alarm systems on board ships (code 22016000МК).

9.3.11.1 Extent of engagement.

Sound pressure level measurements of public address and general alarm systems on board ships.

9.3.11.2 Operators.

The operator shall have the appropriate qualification, have adequate knowledge of the applicable international requirements (namely, regulations III/4 and III/6 of SOLAS 74/78, as amended, LSA Code, Chapter VII/7.2, Code on Alarms and Indicators, 1995), shall be able to document theoretical and practical training onboard in using equipment specified.

9.3.11.3 Equipment.

The measuring instrument shall be an integrating sound level meter with frequency analyser capabilities complying with IEC 60651 and IEC 691672, type 1 precision class with, at least an A-weighting frequency response curve and 1/3 octave and 1 octave band filters, complying to IEC 61260, as appropriate for the measurements to be carried out. In addition, microphones shall be of the random incidence type, complying with IEC 60651.

9.3.11.4 Procedures.

Documented work procedures are at least to contain information on inspection preparation, calibration, selection and identification of test locations.

9.3.11.5 Reporting.

The report shall describe, as a minimum, the environmental conditions of the tests and, for each test location, the ambient noise level or the speech interference level, as appropriate for the measurements to be carried out. The report shall conform to any other specific requirement of the Register.

9.3.11.6 Verification.

The supplier must have the RS surveyor's verification of each separate job, documented in the report by his signature.

9.3.11.7 Reference documents.

The service supplier shall have access to the following documents:

.1 SOLAS 74/78, Chapter III, Part A, Regulation 4 "Evaluation, Testing and Approval of Life-Saving Appliances and Arrangements";

.2 SOLAS 74/78, Chapter III, Part B, Regulation 6 "Communications";

.3 LSA Code, Chapter VII, Regulation 7.2 "General Alarm and Public Address System";

.4 Code on Alarms and Indicators, 1995 as amended;

.5 IEC 60651 (2001-10) "Sound Level Meters";

.6 IEC 61672 "Electroacoustics — Sound Level Meters";

.7 IEC 61260 "Electroacoustics — Octave-Band and Fractional-Octave-Band Filters".

9.3.12 Requirements for firms engaged in maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats, launching appliances and release gear (code 22021000МК).

9.3.12.1 Extent of engagement.

Maintenance, thorough examination, operational testing, overhaul and repair of:

.1 lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats;

.2 launching appliances and on-load and off-load release gear for lifeboats (including primary and secondary means of launching appliances for free-fall lifeboats), rescue boats, fast rescue boats and davit- launched liferafts.

9.3.12.2 Extent of recognition.

9.3.12.2.1 The contents of this procedure apply equally to manufacturers when they are acting as service suppliers.

9.3.12.2.2 Any firm engaged in maintenance, thorough examination, operational testing, overhaul and repair of lifeboats, rescue boats, launching appliances and release gear in

accordance with SOLAS 74 regulation III/20 shall be authorized to perform works for each make and type of equipment in accordance with IMO resolution MSC.402(96)/Corr.1 (Annex, Section 7).

Approval shall include, as a minimum, demonstration of:

.1 employment and documentation of personnel certified in accordance with a recognized national, international or industry standard as applicable, or a manufacturer's established certification programme;

.2 compliance with the requirements of 9.3.12.8, 9.3.12.9, 9.3.12.10.

9.3.12.3 In cases where an equipment manufacturer is no longer in business or no longer provides technical support, the firm may be authorized for specific makes and types of equipment on the basis of prior authorization for such makes and types of equipment and/or long-term experience and demonstrated expertise as an authorized service supplier.

9.3.12.4 Certification of personnel.

Personnel of the firm shall be certified by the manufacturer or authorized service supplier for each make and type of the equipment to be worked on in accordance with the provisions in this section.

9.3.12.4.1 The education for initial certification of personnel shall be documented and address, as a minimum:

.1 causes of lifeboat and rescue boat accidents;

.2 relevant rules and regulations, including international conventions;

.3 design and construction of lifeboats (including free-fall lifeboats), rescue boats and fast rescue boats, including on-load release gear and launching appliances;

.4 education and practical training in the procedures specified in Section 6 of the Annex to IMO resolution MSC.402(96)/Corr.1 for which certification is sought;

.5 detailed procedures for thorough examination, operational testing, repair and overhaul of lifeboats (including free fall lifeboats), rescue boats and fast rescue boats, launching appliances and on-load release gear, as applicable;

.6 procedures for issuing a report of service and statement of fitness for purpose based on IMO resolution MSC.402(96)/Corr.1 (Annex, paragraph 5.3);

.7 work, health and safety issues while conducting activities on board.

9.3.12.5 The training for the personnel shall include practical technical training on thorough examination, operational testing, maintenance, repair and overhaul techniques using the equipment for which the personnel shall be certified. The technical training shall include disassembly, reassembly, correct operation and adjustment of the equipment.

Classroom training shall be supplemented by field experience in the operations, for which certification is sought, under the supervision of a certified person.

9.3.12.6 Prior to issuance of personnel certification, a competency assessment shall be satisfactorily completed, using the equipment for which the personnel shall be certified.

9.3.12.7 A competency assessment shall be conducted to renew the certification. In cases where refresher training is found necessary a further assessment shall be carried out after completion.

9.3.12.7.1 Upon completion of training and competency assessment, a certificate shall be issued defining the level of qualification and the scope of the certification (i.e. makes and types of equipment and specifically state which activities in 9.3.12.1 are covered by the certification).

The expiry date shall clearly be written on the certificate and shall be three years from the date of issue. The validity of any certificate shall be suspended in the event of any shortfall in performance and only revalidated after a further competency assessment.

9.3.12.8 Reference documents.

9.3.12.8.1 The service supplier shall have access to the following documents:

.1 IMO resolution MSC.402(96)/Corr.1 "Requirements for Maintenance, Thorough Examination, Operational Testing, Overhaul and Repair of Lifeboats and Rescue Boats, Launching Appliances and Release Gear";

.2 IMO resolution A.689(17) "Recommendation on Testing of Life-Saving Appliances" for life-saving appliances installed on board on or after 1 July 1999;

.3 IMO resolution MSC.81(70), as amended, "Revised Recommendation on Testing of Life-Saving Appliances";

.4 manufacturer's instructions (including updates, amendments and safety notices) for repair work involving disassembly or adjustment of launching appliances with release gear (release mechanisms);

.5 Type Approval Certificate showing any conditions that shall be appropriate during the servicing and/or maintenance of lifeboats, launching appliances and on-load release gear.

9.3.12.9 Equipment and facilities.

9.3.12.9.1 The firm (service supplier) shall have the following:

.1 sufficient tools, and in particular any specialized tools specified in the equipment manufacturer's instructions, including portable tools as needed for work to be carried out on board ship;

.2 access to appropriate parts and accessories as specified by the equipment manufacturer for maintenance and repair;

.3 for servicing and repair work involving disassembly or adjustment of on-load release mechanisms, availability of genuine replacement parts as specified or supplied by the equipment manufacturer.

9.3.12.10 Reporting.

The report shall conform to the requirements of IMO resolution MSC.402(96)/Corr.1 (Annex, paragraph 5.3). When repairs, thorough examinations and annual servicing are completed, a statement confirming that the lifeboat arrangements remain fit for purpose shall be promptly issued by the firm (service supplier) that conducted the work. A copy of valid documents of certification and authorization as appropriate shall be included with the statement.

9.3.13 Requirements for firms engaged in underwater thickness measurements of ships and offshore installations under supervision of the RS surveyor (code 22022000).

9.3.13.1 Firm.

The firm shall comply with requirements for firms engaged in in-water surveys of ships and offshore installations (code 22003000) and in thickness measurements of ships under supervision of the RS surveyor (code 22001000).

9.3.13.2 Personnel.

9.3.13.2.1 In addition to the requirements in 9.3.1, the personnel involved in underwater thickness measurements of ships shall be qualified both as a diver and an operator/supervisor on thickness measurements (refer to 9.3.3).

9.3.13.2.2 In addition to applicable requirements in 9.3.1.1, divers-operators/supervisors on thickness measurements shall have a Certificate of Vocational Training (form 7.1.34), confirming that they are trained in thickness measurements on board ships.

9.3.13.2.3 For underwater thickness measurements, special-purpose instruments shall be used capable of providing at least the following:

metal thickness measurements without preliminary preparation of the surface and removal of protective coating;

option to use the equipment together with the data display and storage unit on board the ship such as digital repeater or personal computer with customized software. The thickness gauge data shall be transmitted to the ship through a connecting cable and displayed on a digital repeater or a personal computer to facilitate monitoring of thickness measurements by the RS surveyor.

9.3.14 Special requirements for firms engaged in expertise of safe carriage of bulk cargoes by sea (code 22023000МК).

9.3.14.1 Recognition Certificate (СП) is issued for a period of up to 5 years and is subject to annual endorsement.

9.3.14.2 The firm whose recognition was cancelled due to major nonconformities of the firm activity with the RS requirements, may apply for re-recognition, provided it complies with the requirements of 9.1.5.3. With this regard, the Register shall carry out direct supervision of the firm activity for 5 years.

9.3.14.3 In making a decision on the possibility of service rendering by the firm in compliance with the RS requirements for safe navigation, the following shall be considered:

.1 competence and qualification of the firm's personnel in compliance with the requirements of 9.2.2 — 9.2.11 and 9.3.14;

.2 previous activity of the firm in the area indicated in the request;

.3 review results of the current activity of the firm on implementation of provisions of the international contracts of the Russian Federation (RF) and the RF legislation in the area of merchant shipping and marine environment protection;

.4 results of control and supervision over the firm activity by the authorized RF bodies;

.5 complaints by citizens, public organizations and other interested persons, including foreign ones, as regards the firm activity.

9.3.14.4 Legal status.

9.3.14.4.1 The firm and its personnel shall not be involved in any activities that may impair their independence and impartiality in respect of services rendered. The firm and its personnel involved in this kind of activity shall not interact with the developer, manufacturer, supplier, purchaser, owner, user or accompanying person (forwarder/agent), shipowner and underwriter or any representative thereof.

9.3.14.4.2 The firm activities on expertise of safe carriage of bulk cargoes by sea shall be independent on any other kind of commercial activities.

9.3.14.4.3 The firm shall have representatives in all sea basins to ensure the possibility of service rendering in all RF ports for handling bulk cargoes.

9.3.14.5 Personnel.

9.3.14.5.1 The firm shall have a sufficient number of technical, managing and attending personnel capable of providing up-to-date expertise of safe carriage of bulk cargoes by sea including those specialized in the following areas:

.1 cargo carriage by sea;

.2 analysis of physical and chemical properties of bulk cargoes;

.3 general ship design and arrangement.

9.3.14.5.2 The firm personnel involved in development of Declarations of the Transportation Characteristics and Conditions for the Safe Shipment of Bulk Cargoes by Sea and Certificates of Cargo Characteristics at the Time of Loading as well as in development and implementation of the procedures for sampling, testing and controlling the moisture content shall have:

.1 higher education and field-specific continuing professional education corresponding to the area of recognition;

.2 appropriate skills and competence with regard to the expertise of safe carriage of bulk cargoes by sea and monitoring of safety precautions during the cargo carriage by sea;

.3 confirmed work experience in expertise of safe carriage of bulk cargoes by sea and development of Declarations on Transportation Characteristics and Conditions for the Safe Carriage of Bulk Cargoes by Sea and Certificates of Cargo Characteristics at the Time of Loading not less than 3 years.

9.3.14.5.3 The firm shall have at least five employees involved in full-time activities complying with 9.3.14.5.2.

9.3.14.5.4 Employees not complying with 9.3.14.5.2 may be involved in activities, provided that they perform these activities under supervision of the employees complying with these requirements.

9.3.14.5.5 The firm shall submit the following documents confirming fulfilment of the established requirements:

.1 employment agreements (or their copies);

.2 civil law agreements (or their copies);

.3 certificates on higher education, secondary vocational education or continuing professional education (or their copies);

.4 employment record books or their copies.

9.3.14.6 Measurement assurance.

The firm shall incorporate a testing laboratory complying with 10.3.9 and accredited by the Federal Accreditation Service (RusAccreditation) or the International Laboratory Accreditation Cooperation (ILAC). The scope of laboratory accreditation shall cover transportable moisture limit tests (flow moisture tests).

9.3.14.7 Files of the firm documents.

9.3.14.7.1 The firm shall develop and keep its own register and information files of national and international rules and regulations applicable to the expertise of safe carriage of bulk cargoes by sea including cargo handling operations in ports.

9.3.14.7.2 The firm shall have valid normative and technical documents required for performance of activities in the expertise of safe carriage of bulk cargoes by sea including the following:

.1 national and international normative documents regulating carriage of bulk cargoes by sea;

.2 technical regulations, interstate, state and industry standards, technical specifications, safety data sheets for materials to be declared and certified;

.3 international and national standards regulating sampling, sample preparation and laboratory tests of materials to be declared and certified.

9.3.14.7.3 The firm shall keep, store for a period of 10 years and submit to the Register the following records both in Russian and English:

.1 list of the personnel authorized to perform bulk cargo sampling with their specimen signatures;

.2 training record books for the personnel involved in sampling and sample preparation;

.3 reports on internal review of procedures for sampling and sample preparation;

.4 records of increments (subsamples) and representative samples;

.5 records of calibration and maintenance of equipment for sampling and sample preparation;

.6 reports on deviations from the approved sampling and sample preparation procedures and any modification to the procedures.

9.3.14.8 Quality management system.

9.3.14.8.1 The firm shall develop, implement and maintain as well as certify the quality management system for compliance with the effective version of ISO 9001 by the certification authority accredited in compliance with the effective version of ISO/IEC 17021 or its national equivalent.

9.3.14.8.2 The firm shall develop and implement the procedures prescribing the following:

.1 development of Declaration on Transportation Characteristics and Conditions for the Safe Carriage of Bulk Cargoes by Sea and Certificates of Cargo Characteristics at the Time of Loading with regard to international and national normative documents as well as the Register procedures;

.2 development and implementation of procedures for sampling, testing and controlling the moisture content as per International Maritime Solid Bulk Cargoes (IMSBC Code), IMO circular MSC.1/Circ.1454;

.3 sampling and sample recording, preparation of bulk cargo samples. The procedures shall be approved by the Register, comply with the effective edition of the IMSBC Code and provide for liability of a person, involved in sampling and sample preparation, for compliance with applicable procedures and liability of the head of the firm for fulfilment of the sampling and sample preparation procedures by the personnel and assignment of only qualified personnel for the sampling. The sampling documents (reports, certificates) shall be signed by a person having directly performed the sampling.

The sampling procedure shall take into account the following:

at taking samples from each stockpile, the stockpile plan shall be drawn up and kept for a certain period of time (it may be stored in electronic form to avoid the loss and misinterpretation of information), such plan shall indicate the following:

identification number of the stockpile plan;

name of the ship into which the lot is loaded; stockpile location;

identification of cargo (mark, grade); quantity of cargo in the stockpile;

date and time of sampling commencement and completion;

required number and size of increments (subsamples);

location (in the stockpile) where the increment shall be taken;

sample packaging method, seal number (during sealing), or another label identification; sampler's full name.

Period of storage of stockpile plans shall be not less than 1 year. The plans shall be kept at the firm division directly involved in sampling, their copies shall be made available at the firm's office;

maintenance of records of increments (subsamples) and representative samples. The records of increments (subsamples) and representative samples shall include the following information, but may not be limited to:

terminal attendance time;

number and size of obtained increments;

performance location of sample preparation; mass of representative sample;

stockpile plan number;

number of seal or label on the sample.

The period of storage of records of increments (subsamples) and representative samples shall be not less than 10 years. These records shall be kept at the firm division directly involved in sampling, their copies shall be made available at the firm's office;

in case of sampling outside of the laboratory, the transport documents (contracts, delivery notes, waybills) for transportation of samples shall be kept for at least 1 year;

photographic evidence (unless prohibited by port regulations) of sampling with automatic indication of photographing date and time and automatic geotagging: photo of the filled-in stockpile plan against the stockpile from where the samples are taken, stockpile location with reference to landmarks, a general view of the stockpile, selected samples;

.4 liability of the firm management and personnel for failure to comply with international and national documents and the Register procedures when carrying out the activities on the expertise of safe carriage of bulk cargoes by sea;

.5 development and implementation of measures to prevent and settle the conflict of interest;

.6 guarantees of the firm independence from commercial, financial, administrative or other pressures that may affect the quality of the activities performed;

.7 responsibility for impartial decision-making of the firm when performing works/rendering services as well as methods to provide impartiality;

.8 disclosure of information on affiliates of the recognized firm as per antitrust laws of the Russian Federation;

.9 identification of risks related to impartiality during work, elimination and minimization of the specified risks;

.10 assurance of the firm independence from the manufacturers, sellers, executors and purchasers including consumers;

.11 requirements to firm employees regarding the obligation to notify the firm on the previous and actual relations with designers, developers, manufacturers, sellers, product (work/service) operators, or other circumstances, which may result in a potential conflict of interest.

9.3.15 Special requirements for firms engaged in measurements of noise level onboard ships (code 22024000MK).

9.3.15.1 Extent of engagement.

Sound pressure level measurements onboard ships.

9.3.15.2 Supervisor.

The supervisor shall have a minimum of 2 years of experience as an operator in sound pressure level measurements.

9.3.15.3 Operators.

The operator shall have the following qualifications:

.1 knowledge in the field of noise, sound measurements and handling of measurement equipment;

.2 adequate knowledge of the applicable international requirements (SOLAS regulation II-1/3-12, as amended, and Code on Noise Levels on Board Ships, as amended);

.3 at least 1 year's experience, including participation in a minimum of 5 measurement campaigns as an assistant operator;

.4 training concerning the procedures specified in the Code on Noise Levels on board Ships;

.5 be able to document theoretical and practical training onboard in using a sound level meter.

9.3.15.4 Equipment.

9.3.15.4.1 Sound level meters.

Measurement of sound pressure levels shall be carried out using precision integrating sound level meters. Such meters shall be manufactured to IEC 61672-1(2002-05) "Recommendation for Sound Level Meters", as amended, type/class 1 standard as applicable, or to an equivalent standard acceptable to the Administration. At that sound level meters class/type 1 manufactured according to IEC 651/IEC 804 may be used until 1 July 2016.

9.3.15.4.2 Octave filter set.

When used alone, or in conjunction with a sound level meter, as appropriate, an octave filter set shall conform to IEC 61260 (1995) "Octave-Band and Fractional-Octave-Band Filters", as amended, or an equivalent standard acceptable to the Administration.

9.3.15.4.3 Sound calibrator.

Sound calibrators shall comply with IEC 60942 (2003-01), as amended, and shall be approved by the manufacturer of the sound level meter used.

9.3.15.4.4 Calibration.

Sound calibrator and sound level meter shall be verified at least every two years by a national standard laboratory or a competent laboratory accredited according to ISO 17025 (2005), as amended. A record with a complete description of the equipment used shall be kept, including a calibration log.

9.3.15.4.5 Microphone wind screen.

A microphone wind screen shall be used when taking readings outside, e.g. on navigating bridge wings or on deck, and below deck where there is any substantial air movement.

The wind screen shall not affect the measurement level of similar sounds by more than 0,5 dB(A) in "no wind" conditions.

9.3.15.5 Procedures and instructions.

9.3.15.5.1 The firm shall have documented procedures and instructions to carry out service of the equipment. Documented work procedures shall at least contain information on inspection preparation, selection and identification of sound level measurement locations, calibration checks and report preparation.

9.3.15.5.2 The supplier shall have access to the following documents:

.1 SOLAS 1988, as amended (regulation II-1/3-12);

.2 IMO resolution A.468(XII) and IMO resolution MSC.337(91) "Code on Noise Levels on Board Ships";

.3 IMO resolution A.343(IX) "Recommendation on Methods of Measuring Noise Levels at Listening Posts";

.4 the Register rules and guidelines.

9.3.15.6 Reporting.

A noise inspection report shall be made for each ship. The report shall comprise information on the noise levels in the various spaces on board. The report shall show the reading at each specified measuring point. The points shall be marked on a general arrangement plan, or on accommodation drawings attached to the report, or shall otherwise be identified.

The format for noise inspection reports is set out in Appendix 1 of the Code on Noise Levels on Board Ships and may conform to any other specific requirement of the society (refer to IMO resolution MSC.337(91)).

9.3.15.7 Verification.

The supplier shall have the surveyor's verification of each separate job, documented in the report by his signature.

9.3.16 Requirements for firms engaged in tightness testing of primary and secondary barriers of gas carriers with membrane cargo containment systems for ships in service (code 22025000MK).

9.3.16.1 Extent of engagement.

.1 global vacuum testing of primary and secondary barriers;

.2 acoustic emission (AE) testing;

.3 thermographic testing.

9.3.16.2 Requirements for firms engaged in global testing of primary and secondary barriers.

9.3.16.2.1 Testing procedures.

Testing shall be carried out in accordance with cargo containment system designer's procedures as approved by the Register.

9.3.16.2.2 Authorization.

The supplier shall be authorized by the system designer to carry out the testing.

9.3.16.2.3 Equipment.

Equipment shall be maintained and calibrated in accordance with recognized national or international industrial standards.

9.3.16.2.4 Reporting.

The report shall contain the following:

.1 date of testing;

.2 identity of test personnel;

.3 vacuum decay data for each tank;

.4 summary of test results.

9.3.16.3 Requirements for firms engaged in AE testing.

9.3.16.3.1 Testing procedures.

The firm shall have documented procedures based upon recognized national or international industrial standards to perform ultrasonic leak test using AE sensors for the secondary barrier of membrane cargo containment systems. The procedures shall include details of personnel responsibilities and qualification, instrumentation, test preparation, test method, signal processing, evaluation and reporting.

N o t e . The differential pressure during testing shall not exceed the containment system designer's limitations.

9.3.16.3.2 Supervisor.

The responsible supervisor shall be certified to a recognized national or international industrial standard (e.g. Level II, ISO-9712 as amended or SNT-TC-1A as amended) and have one year experience at Level II.

9.3.16.3.3 Operators.

The operators carrying out the AE testing shall be certified to a recognized national or international industrial standard (e.g. Level I, ISO-9712 as amended or SNT-TC-1A as amended) and shall have adequate knowledge of ship structures sufficient to determine sensor placement.

9.3.16.3.4 Equipment.

Equipment shall be maintained and calibrated in accordance with recognized national or international industrial standards or equipment manufacturer's recommendations.

9.3.16.3.5 Evaluation of AE testing.

Evaluation of AE testing shall be carried out by the supervisor or individuals certified to a recognized national or international industrial standard (e.g. Level II, ISO-9712 as amended or SNT-TC-1A as amended) and have one year experience at Level II.

9.3.16.3.6 Reporting.

The report shall contain the following:

.1 date of testing;

.2 supervisor and operator(s) certifications;

.3 description of time and pressure of each cycle of test;

.4 list and sketch detailing location of possible defects.

9.3.16.4 Requirements for firms engaged in thermographic testing.

9.3.16.4.1 Testing procedures.

Testing shall be carried out in accordance with the cargo containment system designer's procedures as approved by the Register.

9.3.16.4.2 Authorization — The firm shall be authorized by the system designer to carry out the testing.

9.3.16.4.3 Supervisor.

The responsible supervisor shall be certified to a recognized national or international industrial standard (e.g. Level II, ISO-9712 as amended or SNT-TC-1A as amended) with additional certification in infrared/thermal testing. SNT-TC-1A certified personnel shall provide evidence that training on Level II or above has been administrated by an independent training body centrally certified to ASNT or comparable nationally recognized certification scheme.

9.3.16.4.4 Operators.

The operators carrying out the imaging shall be certified to a recognized national or international industrial standard (e.g. Level I, ISO-9712 as amended or SNT-TC-1A as amended) with additional certification in infrared/thermal testing and shall have adequate knowledge of ship structures sufficient to determine position for each identified image, and of the containment system to understand the basis of the testing. SNT-TC-1A certified personnel

shall provide evidence that training on Level I or above has been administered by an independent training body centrally certified to ASNT or a comparable nationally recognized certification scheme.

9.3.16.4.5 Equipment.

Thermal cameras and sensors shall be in accordance with the system designer's procedures with regards to sensitivity, accuracy and resolution.

Equipment shall be in accordance with recognized standard (IEC, etc.) with regard to their safety characteristics for the use in hazardous areas (in gas explosive atmosphere), maintained and calibrated in accordance with the manufacturer's recommendations.

9.3.16.4.6 Evaluation of thermographic images shall be carried out by the supervisor or individuals certified to a recognized national or international industrial standard (e.g. Level II, ISO-9712 as amended or SNT-TC-1A as amended) with additional certification in infrared/thermal testing. SNT-TC-1A certified personnel shall provide evidence that training on Level II or above has been administered by an independent training body centrally certified to ASNT or a comparable nationally recognized certification scheme.

9.3.16.4.7 Reporting.

The report shall contain the following:

.1 date of testing;

.2 supervisor and operator(s) certifications;

.3 differential pressures of all phases;

.4 list and sketch detailing location of thermal indications;

.5 thermographic images of all phases of testing for thermal indications;

.6 evaluation of thermal images indicating possible leaks.

9.3.17 Requirements for firms engaged in survey using remote inspection techniques (RIT) as an alternative means for close-up survey of the structure of ships and offshore installations (code 22025600).

9.3.17.1 Terms and definitions.

Close-up survey is a survey where the details of structural components are within the close visual inspection range of the RS surveyor i.e. normally within reach of hand.

Remote inspection techniques (RIT) is a means of survey that enables examination of any part of the structure without the need for direct physical access of the RS surveyor (refer to IACS Rec. No. 42 — the latest revision). RIT may include the use of:

unmanned robot arms;

remotely operated platforms, including ROV;

unmanned aerial vehicles (UAV/drones);

climbers;

other means acceptable to RS.

9.3.17.2 Extent of engagement — close-up survey of ships' structure and offshore installations' structure by RIT. For in-water close-up survey of the internal compartments by ROV, firms shall also hold separate approval as a "Firm carrying out an in-water survey on ships or offshore installations by diver or ROV" (refer to 9.3.3).

9.3.17.3 Training and qualification of operators.

The firm is responsible for the training and qualification of its operators to undertake the remote inspections. UAV and drone pilots shall be qualified and licensed in accordance with applicable national requirements or an equivalent industrial standard acceptable to RS.

Knowledge of the following shall be documented:

marine and offshore nomenclatures;

the structural configuration of relevant ships types, other floating facilities and offshore installations including internal structure;

the remote inspection equipment and its operation;

survey plans for examination of hull spaces of various configurations, including appropriate flight plans if using a UAV or drones;

thickness measurement (TM) and non-destructive testing (NDT) in accordance with a recognized national or international industrial NDT standard when these are part of the service. Firms undertaking TMs shall hold separate approval as a "Firm engaged in thickness measurements on ships and offshore installations".

9.3.17.4 Training plan.

The firm shall maintain a documented training plan for personnel. The plan shall include requirements for training in the minimum RS rules requirements for the structure of relevant ships types and offshore installations, the recognition of structural deterioration (including corrosion, buckling, cracking and deteriorated coatings) and use of the reporting system.

9.3.17.5 Supervisor.

The supervisor shall be certified according to the recognized national requirements or an equivalent industrial standard (e.g. XXX Level) if that is required by national legislation and shall have a minimum of two years' experience in the inspection of ship's and offshore installation's structure.

9.3.17.6 Operators.

The operator carrying out the inspection shall be certified according to the recognized national requirements or an equivalent industrial standard (e.g. YYY Level) if that is required by national legislation and have had at least one year's experience as an assistant carrying out inspections of ship's and/or offshore installation's structure (including participation in a minimum of five different assignments). The operators of those RIT which require, according to the international and national legislations, to be licensed for their use shall hold valid documentation issued by the appropriate bodies (e.g. UAV and drone pilots shall be qualified and licensed in accordance with applicable national requirements).

9.3.17.7 Equipment.

The following shall be available for the firm:

remotely operated platform with data capture devices capable of operation within an enclosed space;

means of powering the platforms with sufficient capacity to complete the required inspections, including spare batteries if applicable;

data collection devices which may include cameras capable of capturing in high definition both video images and still images;

illumination equipment;

high definition display screen with live high definition feed from inspection cameras (when this is part of the RIT);

means of communication;

data recording devices, as applicable;

equipment for carrying out thickness gauging and/or NDT, as relevant to the work to be performed (when this is part of the service).

9.3.17.8 Procedures and guidelines.

The firm shall have documented operational procedures and guidelines for how to plan, carry out and report inspections; how to handle/operate the equipment; collection and storage of data. These shall include:

requirements for preparation of inspection plans when UAV or drones are part of the equipment.

operation of the remotely operated platforms;

operation of lighting;

calibration of the data collection equipment; operation of the data collection equipment;

two-way communication between the operator, platform, RS surveyor, other personnel such as support staff and ships officers and crew;

guidance of the operator to provide complete coverage of the structure to be inspected;

guidance for the maintenance of the remotely operated platforms, data capture and storage devices and display screens, as applicable;

requirements for the collection and validation of data;

if data shall be stored, then requirements for location attribution (geo-tagging), validation and storage of data;

requirements for the reporting of inspections, including the recording of damages and defects found during inspection and repair work.

9.3.17.9 Documentation and records. The firm shall maintain the following:

records of training;

operator statutory and regulatory certificates and licenses;

equipment register for UAVs, robots, data collection devices, data analysis devices and any associated equipment necessary to perform inspections;

equipment maintenance manuals and records/logbook; records of calibration;

UVA/Drone/Robot operation logbook.

9.3.17.10 Verification.

The firm shall have the RS surveyor's verification of each separate job, documented in the report by the RS attending surveyor(s) signature.

9.3.18 Requirements for firms engaged in visual and/or sampling checks, development of hazardous material inventories (code 22026000).

9.3.18.1 Extent of engagement.

Visual and/or sampling checks for hazardous materials onboard ships as specified in the 2015 Guidelines for the Development of the Inventory of Hazardous Materials (IMO resolution MEPC.269(68)) and Appendix 1 and 2 of the Annex to the Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009, in the Regulation (EU) No 1257/2013 of the European Parliament and the Council of 20 November 2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC, as well as evaluation of checks results and development of hazardous material inventories for a specific ship at the shipowner's request. The above-mentioned documents can advise on quantities and locations of samples, taking of samples in a safe manner as well as prepare reports on the quantities, locations and estimates of these onboard materials.

9.3.18.2 Personnel qualifications.

Visual and/or sampling checks onboard ships shall be executed by persons with professional knowledge of hazardous materials licensed as required and, who are trained and equipped experts, in particular with regards to the evaluation and sampling of hazardous materials and materials containing hazardous materials.

Personnel carrying out visual and/or sampling checks of relevant hazardous materials onboard ships, developing hazardous material inventories shall have professional knowledge of ship structures, equipment, machinery and arrangements, as well as hazardous materials and materials used for ship structures and equipment, taking of samples and handling of such materials.

9.3.18.3 Sample analysis shall be carried out in appropriate laboratories accredited or certified according to recognized standards and competent to perform testing of samples by specific test methods provided in Appendix 9 of IMO resolution MEPC.269(68). Specific equipment used on-board the ship for the purpose of sampling checks shall be duly calibrated and/or certified according to recognized standards.

9.3.18.4 Work shall be executed in accordance with documented work and safety procedures that contain at least the following:

information on survey preparation;

safety procedures relevant to the hazards;

selection and identification of visual and/or sampling check locations; material preparation; sample removal;

reinstatement of safe conditions for the material once the sample is taken; sample storage, identification and transport requirements; and report preparation and content.

9.3.18.5 Reports shall be based on the 2015 Guidelines for the Development of the Inventory of Hazardous Materials (IMO resolution MEPC.269(68)).

9.3.18.6 Each job on visual and/or sampling checks shall be documented by including the signatures of the operator or the operator's designated responsible person in the final report.

10 RECOGNITION OF TESTING LABORATORIES

10.1 GENERAL

10.1.1 The requirements of this Section apply to the testing laboratories conducting tests and measurements specified in Table 10.1.1.

Table 10.1.1

Codes	Tests and measurements
21001000	Vibroacoustic measurements and tests
21001100	Physical and chemical measurements and tests
21001101МК	Sampling and check tests (analysis) of anti-fouling system in accordance with AFS Convention
21001200	Fire tests of products and materials
21001300	Electromagnetic measurements and tests:
21001301	electrical measurements and tests
21001302	electromagnetic compatibility (EMC) tests
21001400	Ionizing measurements
21001500	Mechanical measurements and tests
21001600	Radio measurements
21001700	Non-destructive tests
21001800	Optical measurements
21001900	Heat engineering measurements and tests
21002000	Equipment protection tests
21002100	Climatic tests
21002200	Oily water analysis
21002300	Fuel and oil analysis
21002400	Analysis of gaseous emissions from marine diesel engines
21002500	Checking of software and/or performance algorithms of radio and navigational equipment
21002600	Tests of fire extinguishing systems and fire-fighting outfit
21002700	Tests and periodical checks of foam concentrates
21002800	Oil product cargo analysis
21002900МК	Sampling and check test (analysis) of ballast water in compliance with the International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (BWM Convention)
21003000МК	Testing of coating systems in accordance with IMO resolution MSC.215(82) and/or MSC.288(87)
21003100	Full-scale tests during survey of onshore facilities: GMDSS sea areas A1 and A2; NAVTEX service; vessel traffic service (VTS)
21004000МК	Testing of bulk cargoes to determine transport performance
21004100	Testing of bulk cargoes to determine transport performance carried out by testing laboratories of the firms having the Recognition Certificate (СП) under code 22023000МК "Expertise of safe carriage of bulk cargoes by sea"

10.1.2 Tests of items of the RS technical supervision shall be conducted by the testing laboratories recognized by RS.

10.1.3 The testing laboratory shall meet general requirements listed in Section 8, requirements of 10.2, relevant special requirements of 10.3 and the requirements of Administrations (if any).

10.1.4 Recognition of the testing laboratories by the Register shall be confirmed by the Recognition Certificate of Testing Laboratory (СПЛ) issued in accordance with 3.4 — 3.7.

10.1.5 In individual cases, at the RS discretion, tests may be conducted in the testing laboratories not recognized by RS. At that prior to performance of tests, compliance of the testing laboratory with the requirements of Section 8 and requirements of 10.2.1.1, 10.2.2.1, 10.2.2.2, 10.2.4.1, 10.2.4.2, 10.2.5, 10.2.6 shall be verified.

10.1.6 The testing laboratories carrying out activities with code 21003000МК shall comply with the requirements of 10.3.11.

10.2 REQUIREMENTS

10.2.1 Personnel.

10.2.1.1 Personnel of testing laboratory shall have not less than two years of practical training.

10.2.1.2 The testing laboratory shall have documents on its personnel containing the following information:

.1 functional duties;

.2 education;

.3 experience;

.4 re-training and terms of its validity;

.5 certification and terms of its performance.

10.2.1.3 The testing laboratory shall have the regular staff of specialists.

10.2.1.4 The testing laboratory shall have and adhere to the plans (schedules) of the following:

.1 training and re-training;

.2 refresher training;

.3 certification of the personnel with respect to performance of certain tests.

10.2.2 Technique.

10.2.2.1 The technique of testing laboratories shall comply with the testing procedures, according to which tests specified in the RS requirements are conducted for items of technical supervision.

10.2.2.2 Tests shall be conducted in accordance with the relevant testing procedures, including those having regard to the environmental conditions, corresponding to each type of tests in the area indicated in the request. Use shall be made of the following:

.1 measuring equipment checked (calibrated) in the established order;

.2 certified testing equipment;

.3 ancillary equipment;

.4 references and standard specimens for technical support and measurement assurance of measuring equipment;

.5 appropriate consumables (chemicals, substances, etc.).

10.2.2.3 The testing laboratory shall have valid contracts for rented measuring and testing equipment.

10.2.2.4 The testing laboratory shall have the lists of the following:

.1 measuring equipment, including those used for certification of the testing equipment;

.2 testing and ancillary equipment;

.3 references and standard equipment.

10.2.2.5 The testing laboratory shall have and adhere to the schedules of the following:

.1 maintenance of measuring and testing equipment;

.2 checking (calibration) of measuring equipment;

.3 certification of testing equipment.

10.2.3 Files of the testing laboratory documents.

10.2.3.1 The testing laboratory shall have the valid normative and technical documents necessary for performance of tests in the area of recognition indicated in the request, including:

.1 list of activities performed (area of recognition);

.2 the Quality Manual or another similar document;

.3 duty regulations;

.4 operating and maintenance instructions on measuring and testing equipment;

.5 documents on records keeping and archives maintenance.

10.2.4 Reporting.

10.2.4.1 In addition to the information specified in 8.2.6.1, test reports shall contain the following:

.1 designation: "Test Report" or "Conclusion";

.2 name and address of the testing laboratory;

.3 designation of the testing method with reference to the documents, in accordance with which the tests have been conducted;

.4 reference to the Sampling Report;

.5 test results with indication of units of measurements in accordance with the testing procedures;

.6 indication that the test results are valid only for the products tested;

.7 entry that the tests have been witnessed by the RS representative.

10.2.4.2 Sampling reports, where applicable, shall contain:

.1 date of the specimen selection (sampling);

.2 information that allows for unambiguous identification of specimens (samples) taken;

.3 place of the specimen selection (sampling);

.4 information on conditions of the specimen selection (sampling);

.5 reference to the documents, in accordance with which the specimens have been taken (sampling has been done).

10.2.4.3 Data (documents) confirming performance of tests (sampling reports, test reports, etc.) shall be kept in the testing laboratory for not less than five years under conditions of confidentiality. This requirement shall be established in the documents of the testing laboratory.

10.2.5 Checking and control.

10.2.5.1 The testing laboratory shall do the checking and exercise control over the performance of tests and their results.

10.2.5.2 The personnel of the testing laboratory responsible for checking (control) shall have not less than two years of experience as a performer in the area of activity indicated in the request.

10.2.5.3 The testing laboratory shall conduct check tests in compliance with the area of recognition indicated in the request witnessed by the RS representative.

10.2.6 Conditions of taking, transport and storage of samples.

10.2.6.1 Conditions of taking, transport and storage of samples shall meet the requirements of the testing procedures.

10.2.6.2 The testing laboratory shall identify the samples.

10.3 SPECIAL REQUIREMENTS

10.3.1 Special requirements for testing laboratories engaged in penetrant testing (PT), radiographic testing (RT), ultrasonic testing (UT), magnetic particle testing (MT) of materials, products, weld quality (code 21001700).

10.3.1.1 Abbreviations.

For the purpose of this Chapter, the following abbreviations apply:

NDT — non-destructive testing. Comprising, but not limited to the methods and techniques MT, PT, RT, RT-D, VT, UT, PAUT, TOFD, ET and/or ACFM.

MT — magnetic particle testing.

PT — penetrant testing.

RT — radiographic testing.

RT-D — digital radiography (several techniques within the method RT, e.g. computed radiography or direct radiography).

UT — ultrasonic testing.

PAUT — phased array ultrasonic testing (technique within the method UT).

TOFD — time of flight diffraction (technique within the method UT).

ET — electromagnetic testing (i.e. eddy current testing and/or alternating current field measurements [ACFM]).

VT — visual testing.

10.3.1.2 Personnel.

Non-destructive testing (NDT) and quality assessment shall be performed by the specialists who have passed the appropriate training, have the proper qualification and practical experience in a particular NDT method which shall be documented.

The testing laboratory shall document that it has the competence and control needed to perform the specified services.

The testing laboratory is responsible for the qualification and preferably third party certification of its supervisors and operators to a recognised certification scheme based on ISO 9712:2012.

Personnel qualification to an employer based qualification scheme as e.g. SNT-TC-1A, 2016 or ANSI/ ASNT CP-189, 2016 may be accepted if the testing laboratory's written practice is reviewed and found acceptable. The testing laboratory's written practice shall as a minimum, except for the impartiality requirements of a certification body and/or authorised body, comply with ISO 9712:2012.

The supervisors' and operators' certificates and competence shall comprise all industrial sectors and techniques being applied by the testing laboratory.

Level 3 personnel shall be certified by an accredited certification body.

10.3.1.2.1 Supervisor.

The testing laboratory shall have a supervisor or supervisors, responsible for the appropriate execution of NDT operations and for the professional standard of the operators and their equipment, including the professional administration of the working procedures.

The testing laboratory shall employ, on a full-time basis, at least one supervisor independently certified to Level 3 in the method(s) concerned as per the requirements of 10.3.1.2. It is not permissible to appoint Level 3 personnel; they must be certified by an accredited certification body. It is recognised that a testing laboratory may not directly employ a Level 3 in all the stated methods practiced. In such cases, it is permissible to employ an external, independently certified, Level 3 in those methods not held by the full-time Level 3(s) of the testing laboratory.

The supervisor shall be directly involved in review and acceptance of NDT procedures, NDT reports, calibration of NDT equipment and tools. The supervisor shall on behalf of the testing laboratory re-evaluate the qualification of the operators annually.

10.3.1.2.2 Operators.

The operator carrying out the NDT and interpreting indications, shall as a minimum, be qualified and certified to Level 2 in the NDT method(s) concerned and as described in 10.3.1.2.

However, operators only undertaking the gathering of data using any NDT method and not performing data interpretation or data analysis may be qualified and certified as appropriate, at Level 1.

The operator shall have adequate knowledge of materials, weld, structures or components, NDT equipment and limitations that are sufficient to apply the relevant NDT method for each application appropriately.

10.3.1.3 Equipment and facilities.

If the testing laboratory hires equipment, such equipment shall have updated calibration records, and the operators shall be familiar with the specific equipment type prior to using it.

Under any circumstance, the testing laboratory shall possess sufficient equipment to carry out the services being a part of the NDT scope.

Where the equipment is of unique nature, the NDT operators shall be trained by competent personnel in the operation and use of the equipment before carrying out NDT using this equipment.

10.3.1.4 Files of the testing laboratory documents.

In addition to 10.2.3, the testing laboratory shall have the following documents:

.1 organization and management structure, including subsidiaries;

.2 information on the structure of the quality management system of the testing laboratory;

.3 Quality Manual and documented procedures covering the requirements given in 10.3.1.5;

.4 for companies with in-house certification of persons scheme, a written practice developed in accordance with a recognised standard or recommended practice;

.5 operational work procedures for each NDT method including selection of the NDT technique;

.6 training- and follow-up programmes for NDT operators including practical training;

.7 procedure for supervisor's authorisation of NDT operators;

.8 experience of the testing laboratory in the specific service area;

.9 a list of documented training and experience for NDT operators within the relevant service area, including qualifications and third party certification per ISO 9712:2012 based certification schemes;

.10 a guide for NDT operators to use equipment mentioned above;

.11 record formats for recording results of the services referred to in 10.3.1.6;

.12 information on other activities which may present a conflict of interest;

.13 record of customer claims and corrective actions;

.14 any legal proceedings against the company in the past/currently in the courts of law;

.15 instructions on performing assessment of the quality of welds taking into account the RS requirements.

10.3.1.4.1 The testing laboratory shall produce written procedures for the NDT being applied. These procedures shall be written, verified or approved by the testing laboratory having Level 3 personnel. Procedures shall define all relevant information relating to the inspection including defect evaluation against acceptance criteria in accordance with the RS rules. All NDT procedures and instructions shall be properly documented in such a way that the performed testing can be easily retraced and/or repeated at a later stage.

10.3.1.5 Quality management system.

The testing laboratory shall have a documented quality management system covering at least the following:

.1 work procedures for all tasks and operations, including the various NDT methods and NDT techniques for which the testing laboratory is involved;

.2 preparation, issuance, maintenance and control of documents;

.3 maintenance and calibration of the equipment;

.4 training programs for the NDT operators and the supervisors;

.5 maintenance of records for NDT operators' and the supervisors' training, qualification and certification;

.6 certification of NDT operators including re-validation and recertification;

.7 procedure for test of operators' visual acuity;

.8 supervision and verification of operation to ensure compliance with the NDT procedures;

.9 quality management of subsidiaries;

.10 job preparation;

.11 order reference system where each engagement is traceable to when, who and where the test was carried out;

.12 recording and reporting of information, including retention time of records;

.13 code of conduct for the testing laboratory's activities, especially the NDT activities;

.14 periodic review of work process procedures;

.15 corrective and preventive actions;

.16 feedback and continuous improvement;

.17 internal audits;

.18 the provision of accessibility to required codes, standards and procedures to assist NDT operators. A documented quality system complying with the most current version of ISO/IEC 17020:2012 and including the above would be considered acceptable. The testing laboratory should satisfy the requirements of Type A or Type B inspection body, as described in ISO/IEC 17020:2012.

10.3.1.6 Reporting.

10.3.1.6.1 The testing laboratory shall have and maintain examination results logs.

10.3.1.6.2 A Statement (Test Report), in addition to the information specified in 10.2.4.1, and examination results logs shall contain:

.1 a reference to the RS rules or other normative document as agreed with RHO regarding the use of criteria for assessing the quality of welds at RT;

.2 a reference to normative documents regarding the use of criteria for assessing the quality of welds at UT, PT, and MT;

.3 thickness of components at UT and RT (refer to Part XIV "Welding" of the Rules for the Classification and Construction of Sea-Going Ships);

.4 description of defects in accordance with the applicable national or international standards.

10.3.1.6.3 Designation of checked lengths for duplicating radiographic examination shall correspond to the designation of the checked lengths.

10.3.1.7 Subcontractors.

The testing laboratory shall give information of agreements and arrangements if any part(s) of the services provided are subcontracted. The testing laboratory, in the following-up of subcontracts shall give emphasis to the quality management system of the subcontractor.

Subcontractors shall meet the same requirements placed on testing laboratories for any NDT performed.

10.3.2 Special requirements for testing laboratories carrying out fire tests of products and materials (code 21001200).

10.3.2.1 In general, the testing laboratory shall be recognized by the Register. The Recognition Certificate of Testing Laboratory (СПЛ) is issued to the testing laboratory, carrying out fire tests, by RHO or the RS Branch Offices on behalf of RHO.

Fire tests carried out by the testing laboratories not recognized by RS shall be witnessed by the RS surveyor.

10.3.2.2 Legal status.

10.3.2.2.1 The testing laboratory, as its routine activity, carries out checks and tests identical to those in the relevant parts of the International Code for Application of Fire Test Procedures (FTP Code) (refer to 1.2, Part VI "Fire Protection" of the Rules for the Classification and Construction of Sea-Going Ships) or similar to them.

10.3.2.2.2 The testing laboratory shall not belong to the manufacturer, seller or supplier of the product/material to be tested and shall not be under their control.

10.3.2.3 Facilities.

10.3.2.3.1 The testing laboratory has access to arrangements, equipment, personnel and calibrated instrumentation needed for checks and tests performance.

10.3.2.4 Checking and control.

10.3.2.4.1 The testing laboratory shall use the quality control system being audited by competent bodies.

10.3.3 Special requirements for testing laboratories carrying out tests of fire extinguishing systems and fire-fighting outfit (code 21002600).

10.3.3.1 Facilities.

10.3.3.1.1 The testing laboratory facilities shall be consistent with the test procedures specified in applicable documents mentioned in 4.3, Part IV "Technical Supervision during Manufacture of Products".

10.3.4 Special requirements for testing laboratories carrying out tests and periodical checks of foam concentrates (code 21002700).

10.3.4.1 Facilities.

10.3.4.1.1 The testing laboratory facilities shall be consistent with the test procedures specified in the guidelines for performance and testing criteria and surveys of foam concentrates (refer to IMO circulars MSC.1/Circ.1312, MSC/Circ.670, MSC/Circ.798).

10.3.5 Special requirements for the testing laboratories carrying out sampling and check tests (analysis) of anti-fouling system in accordance with AFS Convention (code 21001101МК).

10.3.5.1 Facilities.

10.3.5.1.1 The testing laboratory facilities shall be consistent with the procedures for sampling and check tests (analysis) of anti-fouling system specified in IMO resolution MEPC.104(49) "Guidelines for Brief Sampling of Anti-Fouling Systems on Ships".

10.3.6 Special requirements for the testing laboratories carrying out oily water analysis (code 21002200).

10.3.6.1 Legal status.

10.3.6.1.1 While carrying out oily water analysis the testing laboratory with the status of the legal entity shall be independent of the parties interested in the analysis results.

10.3.6.1.2 The testing laboratory carrying out analysis during tests of equipment, systems and arrangements for the prevention of pollution by oily water shall not belong to the manufacturer, seller or supplier and shall not be under their control.

10.3.6.1.3 The testing laboratory shall bear responsibility for the impartiality and objectivity of the oily water analysis results.

10.3.6.2 Technique.

10.3.6.2.1 The testing laboratory technique shall comply with the methods of oily water analysis prescribed by the international and national documents regarding the environment pollution prevention (IMO resolutions MEPC.60(33), MEPC.107(49), etc.).

In some cases on agreement with RS provisional application of other time-tested methods and relevant measuring and testing equipment is allowed. Meanwhile, the analysis results shall comply with the requirements of the international documents in respect of the reliability and accuracy.

10.3.6.2.2 Measuring and testing equipment belonging to other firms, organizations or individuals as well as being the property of the testing laboratory shall be identified and registered in the documents of the testing laboratory (passport, record sheet or card).

10.3.6.3 Files of the testing laboratory documents.

10.3.6.3.1 The testing laboratory shall have instructions on the procedure of sampling, testing, issue of testing results and normative documentation on oily water analysis (bilge water, dirty ballast and flushing water).

10.3.7 Special requirements for the testing laboratories carrying out fuel and oil analysis (code 21002300), oil product cargo analysis (code 21002800).

10.3.7.1 Legal status.

10.3.7.1.1 While carrying out fuel, oil and oil product cargo analysis the testing laboratory with the status of the legal entity shall be independent of the parties interested in the analysis results.

10.3.7.1.2 The testing laboratory shall bear responsibility for the impartiality and objectivity of the results of fuel, oil and oil product cargo analysis.

10.3.7.2 Personnel.

10.3.7.2.1 Besides the relevant qualification, training, experience and satisfactory knowledge in respect of the analysis carried out, the personnel responsible for the contents of the protocols (reports, conclusions) on the analysis results shall have necessary knowledge as regards:

.1 possible consequences of the onboard use of fuel and oil of degraded quality (not complying with the relevant technical specifications, standards) and of the transport of oil product cargo with inappropriate characteristics;

.2 possible reasons for change of physical and chemical properties of the oil used in machinery and equipment in operation.

10.3.7.3 Technique.

10.3.7.3.1 The testing laboratory technique shall provide for laboratory testing and quick analysis to monitor quality characteristics of oil products within the area of recognition indicated in the request.

The testing laboratory shall be equipped with its own measuring and testing equipment providing for the required types of fuel, oil and oil product cargo analysis:

.1 bunker oil;

.2 new oil loaded onboard;

.3 oil used in machinery and equipment in operation, to evaluate their fitness for use against defect criteria and to assess technical condition of the ship items within survey systems on the basis of condition monitoring.

10.3.7.3.2 The testing laboratory technique shall provide for evaluation of at least the following quality characteristics of oil products.

10.3.7.3.2.1 For bunker oil:

.1 density;

.2 viscosity;

.3 sulphur fraction of total mass;

.4 water content;

.5 ash content;
.6 flashpoint;
.7 chilling point;
.8 coking ability;
.9 mechanical impurities content;
.10 vanadium, aluminium, silicon contents.

10.3.7.3.2.2 For new lubricating oil:
.1 flashpoint;
.2 viscosity;
.3 water content;
.4 alkali neutralization number;
.5 insoluble residue content.

10.3.7.3.2.3 For new hydraulic oil:
.1 viscosity;
.2 water content;
.3 acid number.

10.3.7.3.2.4 For lubricating and hydraulic oil used in machinery and equipment in operation:
.1 physical and chemical properties indicating change of the quality of analysed oils and technical condition of the ship technical means (usually measured by the monitoring system);
.2 wear debris.

10.3.7.3.2.5 For lubricating oil used in propeller and sterntube shafts in operation:
.1 water content;
.2 chlorides content;
.3 content of bearing metal particles;
.4 oil aging (resistance to oxidation).

10.3.7.3.3 Measuring and testing equipment belonging to other firms, organizations or individuals as well as being the property of the testing laboratory shall be identified and registered in the documents of the testing laboratory (passport, record sheet or card).

10.3.7.4 Files of the testing laboratory documents.

10.3.7.4.1 The testing laboratory shall have instructions on the procedure of sampling, testing, issue of testing results and normative documentation on fuel, oil and oil product cargo analysis.

10.3.7.5 Reporting.

10.3.7.5.1 The testing laboratory shall have and maintain the analysis results logs.

10.3.7.5.2 Records (conclusions, test protocols and results logs) on analysis of test samples of bunker oil and new oil loaded onboard shall contain values of the physical and chemical properties specified in passports (delivery notes) for ordered fuel and oil.

10.3.7.5.3 The testing laboratory shall immediately notify the customer of each case of the bunker oil properties non-compliance with the requirements of regulations 14 and 18 of Annex VI to MARPOL 73/78 identified within the scope of the analysis carried out.

10.3.8 Special requirements for testing laboratories carrying out sampling and check test (analysis) of ballast water in accordance with International Convention for the Control and Management of Ship's Ballast Water and Sediments, 2004 (BWM Convention) (code 21002900МК).

10.3.8.1 Technique.

10.3.8.1.1 The testing laboratories shall be consistent with methods for sampling and analysis of ballast water, as specified in IMO resolution MEPC.173(58) and MEPC.174(58).

10.3.8.1.2 The analysis results shall comply with the requirements of the BWM Convention.

10.3.8.1.3 The testing laboratories technique shall enable evaluation of the following quality characteristics of the ballast water at least.

10.3.8.1.3.1 Quantity of viable organisms:
.1 per cubic meter;
.2 per milliliter.
10.3.8.1.3.2 Indicator microbes content:
.1 toxicogenic Vibrio cholerae;
.2 escherichia coli;
.3 intestinal Enterococci.

10.3.9 Special requirements for testing laboratories carrying out testing of bulk cargoes to determine transport performance (code 21004000МК).

10.3.9.1 Sample preparation and testing procedures shall comply with the requirements of the IMSBC Code, IMO resolution MSC.354(92) and IMO circular MSC.1/Circ.1454, and shall be approved by the Register.

10.3.9.2 A testing laboratory shall keep and store for a period of 10 years and submit to the Register the following documents both in Russian and English:
.1 training record books for the personnel involved in sample preparation and testing;
.2 reports on internal review to ensure that the procedures for sample preparation and testing are applied correctly;
.3 record books of spot samples and forms where the traceability of the subsample and representative sample is ensured;
.4 test reports;
.5 record books for maintenance, calibration and testing of any testing equipment;;
.6 reports on deviations from the approved sample preparation and testing procedures and any modification to the procedures.

10.3.9.3 The testing laboratory shall provide identification and recording of representative samples; identification, recording and storage of test samples prepared from representative samples. Storage conditions shall ensure sample property maintenance so as to enable carrying out of check tests. The minimum sample storage period shall be as follows:
.1 for representative samples for flow moisture tests — at least 9 months;
.2 for representative samples for testing for moisture content — prior to ship discharge but not less than 3 months;
.3 for representative samples for other tests (for determination of the particle size distribution, stowage factor, etc.) — prior to ship discharge but not less than 1 month.

10.3.9.4 The testing laboratory and its personnel shall not be involved in any activities that may impair their independence and impartiality in respect of services rendered. The testing laboratory and its personnel shall not be under any commercial, financial or other pressure from the cargo manufacturer, purchaser, shipper, owner, user or accompanying person (forwarder/agent), shipowner or underwriter, or any representative thereof, that may impair their independence and impartiality in respect of services rendered.

10.3.10 Special requirements for testing laboratories carrying out full-scale tests during survey of onshore facilities: GMDSS sea areas A1 and A2; NAVTEX service; vessel traffic service (VTS) (code 21003100).

10.3.10.1 Testing procedure shall be submitted for the Register approval as part of the testing laboratory documentation.

10.3.10.2 Testing procedure shall include, at least, the following information:
.1 appropriate identification;
.2 scope of application;
.3 description of an item subject to testing or calibration;
.4 parameters and quantitative indices and ranges to be specified;
.5 facilities and equipment, including requirements to technical specifications;
.6 required environmental conditions and stabilization time;
.7 procedures, including:

checks prior to commencement of works;

checks of proper functioning and, where required, calibration and adjustment of the equipment prior to use; method of observations and results recording;

safety measures to be met;

.8 criteria and/or requirements for acceptance or rejection of results;

.9 data to be recorded, method of analysis and data reporting form.

10.3.10.3 Prior to test, the testing laboratory shall develop the program of onshore facility tests. The test program shall comply with the approved testing procedure and consider the technical specification requirements for full-scale tests and environmental conditions, in which the tests are carried out. The test program shall be approved by an authorized body and agreed with the customer.

10.3.10.4 The testing laboratory shall have the facilities necessary for testing in accordance with the approved testing procedure.

10.3.10.5 Measuring and testing equipment being the property of the testing laboratory as well as belonging to other firms, organizations or individuals, shall be calibrated in the established order, identified and registered in the testing laboratory passport.

10.3.10.6 In case the software is used to control measuring and testing equipment, to accumulate, process, recording and storage of the test data, it shall be detailed, identified and submitted for the Register approval as part of the testing laboratory documentation. The software for the data storage shall be backed up and protected against an unauthorized access.

10.3.10.7 Possible adjustment of the testing and calibration equipment, including the hardware and software, which may invalidate the test results, shall be eliminated.

10.3.10.8 The testing laboratory personnel shall consist of at least 3 specialists with higher professional education proved by a nationally recognized document, having at least 3 years of practical experience in testing specified by the applicant.

10.3.10.9 In case the testing laboratory subcontracts another laboratory, the latter shall have the Recognition Certificate issued by the Register. The area of recognition of the testing laboratory-subcontractor shall correspond to code 21003100. The contract with the laboratory-subcontractor shall be concluded on a long-term basis and included in the testing laboratory documentation.

10.3.10.10 The testing laboratory shall not belong to the firms-owners of onshore facilities as well as to the manufacturers, suppliers of the equipment used in construction of onshore facilities, and shall not be under their control. The testing laboratory being part of the organization carrying out, in addition, the activities other than testing, shall demonstrate that the duties of the organization top management, participating or influencing the testing laboratory activities, shall be clearly defined to eliminate the potential conflicts of interest. The testing laboratory shall be capable of demonstrating its impartiality and that neither the testing laboratory itself, nor its employees do not experience commercial or other pressures to compromise their technical solutions.

10.3.10.11 The Test Report shall comply with the approved testing program and contain the list of the measuring and testing equipment applied during the tests.

10.3.11 Special requirements for firms engaged in testing of coating systems in accordance with IMO resolution MSC.215(82), as amended, and IACS UI SC223 and/or IMO resolution MSC.288(87), as amended (code 21003000МК).

10.3.11.1 Extent of engagement — testing of coatings systems according to IMO resolution MSC.215(82), as corrected by IMO circular MSC.1/Circ.1381 and amended by IMO resolution MSC.341(91) and IACS UI SC223 and/or IMO resolution MSC.288(87), as corrected by IMO circular MSC.1/Circ.1381 and amended by IMO resolution MSC.341(91).

10.3.11.2 The testing laboratory shall provide to the Register the following information:

.1 a detailed list of the laboratory test equipment for the coating approval according to IMO resolution MSC.215(82) as amended and/or IMO resolution MSC.288(87) as amended;

.2 a detailed list of reference documents comprising a minimum those referred to in IMO resolution MSC.215(82) as amended and/or IMO resolution MSC.288(87) as amended for the coating approval;

.3 details of test panel preparation, procedure of test panel identification, coating application, test procedures and a sample test report;

.4 details of exposure method and site for weathering primed test panels;

.5 a sample daily or weekly log/form for recording test conditions and observations including unforeseen interruption of the exposure cycle with corrective actions;

.6 details of any sub-contracting agreements, if applicable;

.7 comparison test reports with an approved coating system or laboratory if available.

10.3.11.3 Reporting.

Reference shall be made to the following IACS recommendations:

Recommendation No. 101 "Model Report for IMO Resolution MSC.215(82) Annex 1 "Test Procedures for Coating Qualification"";

Recommendation No 102 "IACS Model Report for IMO Resolution MSC.215(82) Annex 1 "Test Procedures for Coating Qualification", Section 1.7 — Crossover Test".

10.3.11.4 Audit of the test laboratory shall be based on the requirements of this Section and the standards listed in IMO resolution MSC.215(82) as amended and/or IMO resolution MSC.288(87) as amended for the coating approval.

10.3.11.5 For the testing laboratories engaged in testing of coating systems in accordance with IMO resolution MSC.215(82), as amended, and IACS UI SC223 and/or IMO resolution MSC.288(87), as amended, the definitions given in 9.1.1.1 shall be used.

10.3.12 Special requirements for testing laboratories of the firms having the Recognition Certificate (СП) under code 22023000МК "Expertise of safe carriage of bulk cargoes by sea" and carrying out tests of bulk cargoes to determine transport performance (code 21004100МК).

10.3.12.1 Testing laboratory is a structural unit of the firm having the Recognition Certificate (СП) under code 22023000МК "Expertise of safe carriage of bulk cargoes by sea".

10.3.12.2 Sample preparation and testing procedures shall comply with the requirements of the IMSBC Code, IMO resolution MSC.354(92) and IMO circular MSC.1/Circ.1454, and shall be approved by the Register.

10.3.12.3 A testing laboratory shall keep and store for a period of 10 years and submit to the Register the following documents both in Russian and English:

.1 training record books for the personnel involved in sample preparation and testing;

.2 reports on internal review to ensure that the procedures for sample preparation and testing are applied correctly;

.3 record books of spot samples and forms where the traceability of the subsample and representative sample is ensured;

.4 test reports;

.5 record books for maintenance, calibration and testing of any testing equipment;

.6 reports on deviations from the approved sample preparation and testing procedures and any modification to the procedures.

10.3.12.4 The testing laboratory shall provide identification and recording of representative samples; identification, recording and storage of test samples prepared from representative samples. Storage conditions shall ensure sample property maintenance so as to enable carrying out of check tests. The minimum sample storage period shall be as follows:

.1 for representative samples for flow moisture tests — at least 9 months;

.2 for representative samples for testing for moisture content — prior to ship discharge but not less than 3 months;

.3 for representative samples for other tests (for determination of the particle size distribution, stowage factor, etc.) — prior to ship discharge but not less than 1 month.

10.3.12.5 The testing laboratory and its personnel shall not be involved in any activities that may impair their independence and impartiality in respect of services rendered. The testing laboratory and its personnel shall not be under any commercial, financial or other pressure from the cargo manufacturer, purchaser, shipper, owner, user or accompanying person (forwarder/agent), shipowner or underwriter, or any representative thereof, that may impair their independence and impartiality in respect of services rendered.

11 RECOGNITION OF MANUFACTURERS

11.1 GENERAL

11.1.1 The requirements of this Section apply to the manufacturers of materials and products listed in the RS Nomenclature.

11.1.2 The firms (manufacturers) manufacturing materials and products in compliance with the requirements of 2.4.1.1, Part III "Technical Supervision during Manufacture of Materials" and 3.5.1, Part IV "Technical Supervision during Manufacture of Products" shall be recognized by the Register. In other cases, manufacturers may be recognized on the voluntary basis.

11.1.3 The manufacturer shall meet general requirements listed in Section 8, requirements of 11.2 and requirements of the Administrations (if any).

11.1.4 Recognition of the manufacturer by the Register is confirmed by the Recognition Certificate for Manufacturer (СПИ), which is issued in compliance with 3.4 — 3.7.

11.2 REQUIREMENTS

11.2.1 Personnel.

11.2.1.1 The manufacturer shall have documents on the personnel containing the following information:

.1 functional duties;

.2 re-training and its terms of validity;

.3 certification and terms of its performance.

11.2.1.2 The manufacturer shall have the regular staff of specialists.

11.2.1.3 The manufacturer shall have and adhere to the plans (schedules) of the following:

.1 training and re-training of the personnel;

.2 refresher training of the personnel;

.3 certification of the personnel with respect to performance of certain activities.

11.2.2 Technique.

11.2.2.1 The manufacturer shall have the lists of equipment, premises and facilities necessary for performance of activity in the area indicated in the request.

11.2.2.2 The manufacturer shall have and adhere to the schedules of maintenance of equipment and instrumentation.

11.2.3 Measurement assurance.

11.2.3.1 When tests of materials and products shall be conducted in a testing laboratory, this laboratory shall meet the requirements of Section 10.

11.2.4 Files of the manufacturer's documents.

11.2.4.1 The manufacturer shall have the valid normative and technical documents necessary for performance of activities in the area indicated in the request, including:

.1 list of activities performed (area of activity);

.2 operating and maintenance documentation on equipment;

.3 operating and maintenance documentation on measuring and testing equipment;

.4 duty regulations;

.5 documents on records keeping and archives maintenance.

11.2.5 Quality management system.

11.2.5.1 The firm shall have the documented quality management system covering at least the following:

.1 the Code of Ethics to conduct the relevant activity;

.2 maintenance of equipment;

.3 measurement assurance, checking (calibration) of measuring equipment;

.4 training programmes for operators/technicians/inspectors;

.5 supervision and verification to ensure compliance with operational procedures;

.6 recording and reporting of information;

.7 quality management of subsidiaries, agents and subcontractors;

.8 job preparation;

.9 corrective and preventive actions related to complaints;

.10 periodic review of work process procedures, complaints, corrective actions, and issuance, maintenance and control of documents.

12 AUDITS OF FIRMS

12.1 GENERAL

12.1.1 The requirements of this Section apply to the firms performing the activity in connection with items of the RS technical supervision, the kinds of which are specified in Table 12.1.1.

Table 12.1.1

Code	Kinds of activity
22009000	Diagnostics of devices, installations, machinery, equipment, hull structures and other items of technical supervision
22013000	Shore-based centre for damage stability and residual structural strength calculation
22014000	Conversion, modernization and repair of items of technical supervision (ships, hull structures, ship equipment, products, etc.)
22014001	Installation and commissioning of electrical and automation equipment
22014002	Maintenance and repair of electrical and automation equipment
22014004	Constructions of ships, including mobile offshore drilling units (MODU) and fixed offshore platforms (FOP)
22014005	Repair of items of technical supervision using composite and polymer materials
22017000	Theoretical training and welders' practical qualification tests (at certification centers)
22017010	Training and certification of personnel for thickness measurement on ships (ultrasonic examination) in shipbuilding and shiprepair sector
22017020	Training and examination of coating inspectors
22020000	Inclining test and light-weight check of ships
22024000	Manufacture of nuclear steam supply systems (NSSS) equipment of safety classes 1, 2 and 3

12.1.2 Where technical supervision is conducted in the firms engaged in the activity with codes 22009000, 22013000, 22014000, 22014001, 22014002, 22014004, 22014005, 22017000, 22017010, 22017020, 22020000, 22024000, these firms shall be audited by RS for compliance with the requirements in Section 8, relevant special requirements in 12.3, and requirements of the Administration (if any). In future, the Register reserves the right to audit the firm for compliance with the requirements in Section 8, relevant special requirements in 12.3, where necessary.

In addition to requirements in Section 8, the firm may be audited on a voluntary basis against the requirements in 12.2.

12.1.3 Compliance of the firm with the requirements of Section 8, requirements of 12.2, relevant special requirements and Administrations' requirements (if any) is confirmed by the Certificate of Firm Conformity (ССП), which is issued in accordance with 3.4 — 3.7. In case the Certificate of Firm Conformity (ССП) is available, the audits are conducted in accordance with the conditions for its issue.

12.1.4 The firm shall demonstrate that its activity is performed in the area indicated in the request.

12.2 REQUIREMENTS

12.2.1 Personnel.

12.2.1.1 The firm shall have documents on the personnel containing the following information:

.1 functional duties;

.2 professional and special training and its terms of validity;

.3 certification and terms of its performance (if necessary).

12.2.1.2 The firm shall have the regular staff of specialists.

12.2.1.3 The firm shall have and adhere to the plans (schedules) of the following:

.1 training and re-training of the personnel;

.2 refresher training of the personnel;

.3 certification of the personnel with respect to certain activities.

12.2.2 Technique.

12.2.2.1 The firm shall have the lists of equipment, premises and facilities necessary for performance of activity in the area indicated in the request.

12.2.2.2 The firm shall have and adhere to the schedules of maintenance of equipment and facilities.

12.2.3 Measurement assurance.

12.2.3.1 The firm shall have the lists of the following:

.1 measuring equipment, including those for certification of testing equipment;

.2 testing and ancillary equipment;

.3 references and standard specimens.

12.2.3.2 The firm shall have and adhere to the schedules of the following:

.1 maintenance of measuring and testing equipment;

.2 testing (calibration) of measuring equipment;

.3 certification of testing equipment.

12.2.4 Files of the firm documents.

12.2.4.1 The firm shall have the valid normative and technical documents necessary for performance of activity in the area indicated in the request, including:

.1 list of activities performed (area of activity);

.2 operating and maintenance documentation on equipment;

.3 operating and maintenance documentation on measuring and testing equipment;

.4 duty regulations;

.5 documents on records keeping and archives maintenance.

12.3 SPECIAL REQUIREMENTS

12.3.1 Special requirements for the firms that perform activity "Training and examination of coating inspectors" (code 22017020) are specified in 3.2.9.3.1.1 — 3.2.9.3.1.3 and 3.5.11.2, 3.5.11.3, Part III "Technical Supervision during Manufacture of Materials".

12.3.2 Special requirements for the firms that perform activity "Training and certification of personnel for thickness measurement on ships (ultrasonic examination) in shipbuilding and shiprepair sector" (code 22017010).

12.3.2.1 Legal status.

12.3.2.1.1 The firm shall have documents confirming its competence in the kind of activity indicated in the request, issued by an organization authorized in accordance with the current legislation.

12.3.2.1.2 The firm shall be guided in its activity by the requirements of ISO/IEC 17024 "Conformity assessment — General requirements for bodies operating certification of persons".

12.3.2.2 Personnel.

12.3.2.2.1 The firm shall have documents on the personnel containing the following information:

.1 full name;

.2 education;

.3 qualification level according to EN 473 or ISO 9712 or a corresponding level in the national system;

.4 number and date of issue of a certificate according to EN 473 or ISO 9712 or to a corresponding document in the national system;

.5 non-destructive examination sector(s);

.6 functional duties;

.7 working experience in methods and sectors of non-destructive examination.

12.3.2.2.2 The members of the examination board shall have qualification Level III according to EN 473 or ISO 9712 or, a corresponding level in the national system.

12.3.2.2.3 Place of work of members of the examination board shall be specified in addition to information given in 12.3.3.2.1.

12.3.2.2.4 The firm shall have and adhere to the personnel training, re-training and certification programmes.

12.3.2.2.5 The firm shall have and adhere to plans (schedules) of:

.1 training and re-training of the personnel;

.2 refresher training of the personnel;

.3 certification of the personnel with respect to performance of certain activities.

12.3.2.3 Technique.

12.3.2.3.1 The firm shall have examination samples as regards non-destructive examination, in accordance with items of the firm area of activity.

12.3.2.4 Measurement assurance.

12.3.2.4.1 Measurements shall be performed in the testing laboratory complying with the requirements of Section 10.

12.3.2.4.2 The testing laboratory shall be authorized to perform measurements in accordance with the current legislation.

12.3.2.5 Files of the firm documents.

12.3.2.5.1 The firm shall have programs for training and certification of personnel for thickness measurement on ships (ultrasonic examination) in shipbuilding and shiprepair sector and sets of examination questions by the following topics:

.1 main information on the items of examination, their production technology, repair, operating conditions (cargo handling gear, MODU, FOP, sea-going ships, ships of river-sea

navigation, river ships, pipelines, heat exchangers, welded joint connections of structural elements, welding materials);

.2 materials applied in items, non-destructive examination methods;

.3 requirements of the RS rules for the hull structure of ships, MODU, FOP etc. (ship types and their structural particulars, name and designation of ship's hull members etc.);

.4 RS requirements for use and interpretation of results of thickness measurement on ships (ultrasonic examination) (normative base, types of wear and methods of their identification, norms of wear, preparation of reports on thickness measurement, preparation of items for the examination, safety precautions during works).

12.3.2.5.2 The firm shall have examination samples list as regards thickness measurement on ships (ultrasonic examination) with passports issued for every examination sample in accordance with EN 473 or a corresponding document in the national system.

12.3.2.5.3 The firm shall have the valid normative and technical documents necessary for performance of activity in the area indicated in the request, including:

.1 list of activities performed (area of activity);

.2 the Quality Manual or a similar document;

.3 description of process for the training and certification of personnel for non-destructive examination;

.4 operating and maintenance documentation on technical equipment;

.5 operating and maintenance documentation on measuring and testing equipment;

.6 duty regulations;

.7 documents on records keeping and archives maintenance.

12.3.2.6 Reporting.

12.3.2.6.1 In addition to the information specified in 8.2.6.1, reports on the results of activity performed, shall contain:

.1 information on trainers;

.2 information on members of the examination board;

.3 the programs for training of personnel for thickness measurement on ships (ultrasonic examination) in shipbuilding and shiprepair sector;

.4 list of sets of examination questions including shipbuilding and shiprepair sector;

.5 the examination samples list for shipbuilding and shiprepair sector;

.6 information on trainees.

12.3.2.7 Checking and control.

12.3.2.7.1 Personnel of the firm responsible for the checking (control) shall have qualification Level II or III according to EN 473 or ISO 9712 or a corresponding level in the national system.

12.3.2.7.2 The firm shall conduct control checks in the area indicated in the request witnessed by the RS representative.

12.3.3 Special requirements for the firms that perform activity "Manufacture of NSSS equipment of 1, 2 and 3 safety classes" (code 22024000).

12.3.3.1 Legal status.

12.3.3.1.1 The firm shall have a license of the state safety regulatory body in the field of nuclear energy use to perform the activity "Design and manufacture of nuclear plant equipment" as provided by applicable law.

12.3.3.2 File of the firm documents.

12.3.3.2.1 The firm shall have and maintain the procedures for development and agreement of the quality plans. The recommended content of the quality plan is given in Appendix 1 to federal codes and rules NP-071-06 "Regulations for Assessment of Conformity of Equipment, Materials and Semi-Finished Products to be Delivered to Nuclear Facilities".

12.3.4 Special requirements for the firms that perform activity "Repair of items of technical supervision using composite and polymer materials" (code 22014005).

12.3.4.1 Personnel.

12.3.4.1.1 Personnel of the firm involved in repair works using composite and polymer materials shall have sufficient documented experience to perform repair works using such materials, as well as qualification documents confirming possible repair of the items of technical supervision (hull structures, shipboard equipment, products, etc.) using composite and polymer materials.

12.3.4.2 Technique.

12.3.4.2.1 The firm shall have the technique necessary for performance of the activity related to repair of the items of technical supervision using composite and polymer materials, including equipment and instruments to perform the following production operations:

.1 chipping and grinding of the surfaces under repair;

.2 preparation of polymer and concrete compositions;

.3 application of detergent and oxidizing compounds, paint and polymer materials.

12.3.4.3 Measurement assurance.

12.3.4.3.1 The firm shall have and apply the necessary measurement assurance, including:

.1 ambient temperature and humidity, dew point meters;

.2 scales for weighing components of polymer components;

.3 viscosity gauges of liquid polymer components;

.4 wet film coating thickness gauges;

.5 dry film coating thickness gauges.

12.3.4.4 Files of the firm documents.

12.3.4.4.1 The firm shall have the valid normative and technical documents necessary for performance of the activity related to repair using composite and polymer materials, agreed with RS, including type production processes and specifications for polymer materials used.

12.3.4.5 Checking and control.

12.3.4.5.1 The firm shall exercise incoming check and operational control, fulfil work acceptance conditions according to the requirements of the type production processes approved by RS and confirmed by the following documents:

.1 brief process instructions for specific repair items agreed upon by RS;

.2 quality certificates (passports) for the batches of polymer materials used from the firms (manufacturers) having the Register/ACS Type Approval Certificate (CTO) or certificate of another competent organization;

.3 inspection report on compliance of the repair performed with the process instruction for repair of hull structures or machinery components;

.4 tightness test results of the repaired hull structures (if required).

13 TECHNICAL SUPERVISION AT THE SHIPYARD DURING CONSTRUCTION OF SHIPS

13.1 Technical supervision during construction of ships is performed on the basis of the contract signed between the Register and the shipyard (refer to Section 4).

For the purpose of technical supervision the shipyard is audited for conformity with the requirements of Section 12. Based on the audit results, the Certificate of Firm Conformity (ССП) (refer to Section 12) may be issued to the shipyard. In case the Certificate of Firm Conformity (ССП) is available, the audits are conducted in accordance with the conditions of its issuance.

Construction facilities of the shipyard and the shipyard subcontractor companies performing manufacture of hull structures and coating application at their own facilities or at other remote locations and where the technical supervision will be carried out during construction of ships/series of ships, shall be reviewed in accordance with the provisions of 2.6 (considering 2.3) of the Guidelines on Technical Supervision of Ships under Construction (hereinafter referred to as "the Guidelines").

13.2 Scope and procedure of the technical supervision, types of checks, tests and control are determined according to the Guidelines and indicated in the Inspection and Test Plan (the List of Items of Technical Supervision (hereinafter referred to as "the List")).

Along with surveys performed under the List, additional patrols (periodical inspections) shall be conducted (refer to 13.4 and 13.5).

The List is the basic working document used in the course of technical supervision at the shipyard.

13.3 The List shall be developed by the shipyard and agreed upon with the RS Branch Office. The List is compiled in accordance with the provisions of the appropriate sections of the Guidelines for each prototype (single) ship, as well as ships of a series.

13.3.1 The List shall specify hull structure items of technical supervision and hull construction processes, machinery, equipment and outfit, electrical and radio equipment.

The items of technical supervision are also production processes and particular works subject to the RS technical supervision.

The shipyard and the RS Branch Office shall take measures to minimize the number of inspections.

13.3.2 On agreement with the RS Branch Office, use may be made as the List of one or several documents elaborated by the shipyard in accordance with its existing practice, such as the shipyard's standard on submission to RS of hull structures or a list of sections, the NDT Plan, Tank Tightness Test Plan, etc. Shipyard's documents shall contain the data indicated in the List.

The RS Branch Office reserves the right, in justified cases, to demand the agreed List to be updated.

13.3.3 Surveys under the List are performed by the RS surveyor upon submission by the technical control body of the item of technical supervision or completed works together with the documents issued, finally verified by the shipyard and prepared for survey.

The main target of surveys under the List is verifying the compliance of item of technical supervision with the RS requirements. If defects or deficiencies to be eliminated are found, the RS surveyor shall require the item of technical supervision to be submitted repeatedly for survey.

13.3.3.1 The shipyard's documents on the readiness of the item of supervision for survey by the Register according to the List (application form, Inspection report, record book, etc.) shall contain:

hull number;

the item of supervision submitted for survey or the scope of the work according to the List; numbers of drawings and other technical documentation related to the item of supervision;

conclusion of the shipyard technical control body on the item quality and its readiness for survey by the Register;

date and place of the survey.

The above documents shall be signed by a representative of the shipyard technical control body and submitted to the RS surveyor for each survey in accordance with the List. Upon results of survey:

the remarks, if any, shall be recorded by the RS surveyor in the Inspection report;

the Inspection report shall be signed by the RS surveyor.

13.3.4 The RS surveyor shall keep records of surveys carried out under the List. The records shall be kept in such a way as to provide traceability of works accepted by the Register.

13.4 In addition to the surveys performed according to the List, the RS surveyor carries out the following patrols (periodical inspections) not associated with the official inspections by the shipyard technical control body: quality of control operations conducted by the shipyard and manufacture of separate parts (components) and structural elements (members), being parts of the items of technical supervision, which are submitted under the List.

In so doing, special attention shall be given to identification of deficiencies and defects, which cannot be revealed in the course of surveys under the List upon completion of the appropriate works.

Patrols may relate to the certain items of technical supervision indicated in the List, to the ship as well as to the production workshop, laboratory, production process, etc. The RS surveyor shall determine periodicity of such patrols depending on the nature of the item of technical supervision, quality of works performed by the shipyard and its subcontractors as well as production conditions.

13.4.1 The results of patrols and the shipyard's notifications of their results are drawn up according to the procedure established by the Register or, on agreement with the RS Branch Office, by the shipyard.

13.5 The RS surveyor may perform surveys not associated with the technical supervision during construction of particular ships, but arising from the RS functions on technical supervision at the manufacturer or prescribed by the RS rules, guidelines and other normative documents, as well as stipulated by the Agreement on Classification of Ship under Construction (form 430.1.6).

13.6 The shipyard shall immediately notify the RS surveyor of all cases where the situations resulting in damage to hull structures, machinery, equipment, floodings and other cases (including emergency) occur during construction of a ship, which can cause diminution of quality or danger of such diminution, replacement of machinery, equipment and outfit.

The RS surveyor performs the survey, places requirements on the shipyard to provide elimination of the defects (or their causes) and agrees the scope and methods for elimination thereof.

13.7 During inspection of machinery, arrangements, equipment and outfit installation, the RS surveyor shall check that all items of technical supervision are provided with the documents confirming their production under the RS technical supervision.

13.8 The documents on all amendments allowed by the Register to the RS previously approved (agreed) technical documentation as well as on fulfilment of remarks of the RS surveyor made at the previous stages of the technical supervision shall be submitted to the RS surveyor.

13.9 The RS technical supervision during mooring and sea trials of equipment and the ship aims at checking their conformity with the approved (agreed) technical documentation, the RS rules and standards as well as with the provisions of international conventions applicable to the ship under construction.

13.9.1 The scope of surveys at trials of ships and testing of ship equipment is specified in the appropriate sections of the Guidelines.

13.9.2 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.

13.9.3 The shipyard building the ship provides all necessary conditions for technical supervision by the RS surveyor in the course of mooring and sea trials of the ship in compliance with the requirements of the applicable RS rules and the Guidelines.

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).

13.9.4 During the testing of the equipment, any works that interfere with the normal conduct of tests or endanger the personnel involved in the tests, shall be stopped. The equipment subjected to the tests and the surrounding area shall be clean, readily accessible; provision shall be made for adequate lighting and ventilation of the spaces.

13.9.5 Mooring and sea trials are conducted according to the approved programme.

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

13.9.7 Elimination of defects and repeated trials shall be agreed upon with the RS surveyor. Repeated trials shall not affect further trials or interfere with their safety.

13.9.8 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 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.

13.9.9 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.

13.9.10 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.

13.9.11 The items of technical supervision may be installed on board the ship, which have not been totally tested, provided the tests have been carried out under a special programme agreed upon with the Register with subsequent tests according to the programme of mooring and sea trials.

13.9.12 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.

13.9.13 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.

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

13.9.15 Fulfilment of the requirements for certain items of technical supervision, on agreement with the RS Branch Office, may be transferred 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.

13.9.16 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.

13.9.17 In case the RS 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 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.

13.9.18 Upon completion of the sea trials or tests under operating modes without ship movement, using simulation methods, the RS surveyor informs the shipyard of his/her remarks, which shall be eliminated before the Register issues the ship's documents.

13.10 Satisfactory results of surveys performed under the List, no violation of the RS requirements upon results of the patrols (periodical inspections), 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.

13.11 In technical supervision of the prototype ship trials account shall be taken of the following;

.1 the prototype ship trials are carried out under an enhanced programme, including checking of the ship characteristics and determination of the parameters, which can be used for series ships without this checking;

.2 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;

.3 where deemed necessary, having regard to the purpose of the ship and in case of using prototypes of materials, products, machinery and equipment, the Register may demand operational tests to be carried out according to the programme approved by the Register.

14 TECHNICAL SUPERVISION ON BEHALF OF THE REGISTER

14.1 The Register can authorize ACS to carry out technical supervision on its behalf.

14.2 Technical supervision on behalf of the Register is performed by ACS on the basis of the agreement on mutual substitution and under a particular authorization of the Register or an agreement made between the Register and ACS.

14.3 Where an authorization is given by the Register: items and scope of technical supervision, procedure of the technical documentation approval, documents to be issued shall be specified. Besides, the procedure of payment for technical supervision services can also be indicated.

14.4 Unless provided otherwise, certificates and other documents issued by ACS in charge of technical supervision on behalf of the Register shall have the following notice: "Under authorization of the Register, No._____ of_____20___".

14.5 Unless expressly provided otherwise, technical supervision is performed according to the procedures used by ACS.

14.6 The authorizations for technical supervision are issued by RHO.

14.7 The Register reserves the right to cancel the authorization for technical supervision issued.

15 TECHNICAL SUPERVISION ON BEHALF OF ANOTHER CLASSIFICATION SOCIETY

15.1 Technical supervision on behalf of another classification society is performed by the Register on the basis of the agreement on mutual substitution and under a particular authorization of another classification society or an agreement made between the Register and another classification society.

15.2 When the Register is authorized by another classification society, items and scope of technical supervision, procedure of the technical documentation approval, documents to be issued shall be specified. Besides, the procedure of payment for supervision services can also be indicated.

15.3 Unless expressly provided otherwise, certificates or other documents issued by the Register on behalf of another classification society shall have the following notice: "Under authorization of (name of another classification society)".

15.4 Unless expressly provided otherwise, technical supervision is performed according to the Register practice.

15.5 Authorization for technical supervision from ACS shall be forwarded to RHO. The RS Branch Offices may render services on behalf of another classification society only upon written confirmation by RHO.

15.6 ACS has the right to cancel authorization for technical supervision issued.

16 TECHNICAL SUPERVISION DURING DESIGN AND CONSTRUCTION IN A DOUBLE OR DUAL CLASS ARRANGEMENT

16.1 In case of technical supervision during design and construction in a double class arrangement each classification society acts independently of the other classification society.

16.2 Technical supervision during design and construction of the ship in a dual class arrangement is governed by the Dual Classification Agreement with due regard for the following:

.1 in case of technical supervision during design:

each classification society acts on behalf of the other classification society in accordance with the trilateral agreement adopted by the two societies and the designer. The agreement shall clearly define at least the following modalities:

split of responsibilities between two societies regarding review of drawings;

inventory of rules and other normative documents to be applied;

procedure for agreement/approval as well as resolution of comments raised during documentation review;

each society shall carry out review and approval of the plan approval documentation in compliance with the signed trilateral agreement;

.2 in case of technical supervision during construction:

each classification society acts on behalf of the other classification society in accordance with the trilateral agreement adopted by the two societies and the shipyard;

each society shall perform the survey during fabrication, construction and testing of the ship in accordance with the trilateral agreement, and/or the bilateral agreement adopted by the two societies, if any;

each classification society shall share information and records related to new construction such as plan approval including following up and closing of comments imposed, surveys, inspections, witnesses and tests etc., to perform the surveys and verify compliance with the relevant requirements;

each society shall draw up and issue a Classification Certificate for the ship upon satisfactory completion of new construction survey process in a dual class arrangement.

APPENDIX 1

NOMENCLATURE OF ITEMS OF THE REGISTER TECHNICAL SUPERVISION

1. Nomenclature of Items of the Register Technical Supervision is a list of materials, products, production processes, and software regulated by the RS rules.

2. Definitions and abbreviations given in Section 1 of Part I "General Regulations for Technical Supervision" of these Rules are used in the RS Nomenclature, as well as:

К — branding of items of technical supervision;

МК — item subject to technical supervision in compliance with the requirements of international conventions.

3. The RS Nomenclature is presented in the form of the table comprising 6 columns.

Column 1: "Code of item of technical supervision" — identification code of the material, product, production process or software is indicated, which consists of eight characters grouped in the following groups, each group consisting of two characters:

1st group — part of the RS rules, serial number;

2nd group — groups of machinery, systems, constructions, materials, production processes, software;

3rd group — types of machinery, systems, constructions, materials;

4th group — parts, assemblies;

5th group ("letter group") — items of technical supervision covered by the international conventions.

Column 2 "Item of technical supervision" — name of the material, product, production process or software according to the RS rules is indicated.

Column 3 "Group of item of technical supervision" — number of group of item of technical supervision is indicated according to which the technical supervision type is assigned. Forms of technical supervision for the groups are given in Tables 5.2-1 and 5.2-2.

Column 4 "Other documents issued by RS" — the RS documents issued in addition to (Certificate of Type Approval (СОТО), Certificate of Type Test (СОТИ), EIAPP Certificate) or instead of (Type Approval Certificate for Fire-Proof Division (СТПК), Recognition Certificate for Manufacturer (СПИ), Certificate of Approval for Welding Consumables (СОСМ)) the ones specified in Tables 5.2-1 and 5.2-2 or issued on voluntary basis according to other standards (The EU RO MR Procedure) are indicated.

Column 5 "Branding" — obligation of branding of items of technical supervision in compliance with the Instructions on Branding of Items of the Register Technical Supervision (refer to Appendix 2) is indicated.

Column 6 "Remarks" — additional information (requirements) is indicated.

4. RS Nomenclature contains the following sections:

01000000 Hull
02000000МК Life-saving appliances
03000000 Arrangements, equipment, outfit
03000000МК Signal means
04000000МК Radio equipment
05000000МК Navigational equipment
06000000 Fire protection
07000000 Machinery installations
08000000 Systems and piping

09000000 Machinery
10000000 Boilers, heat exchangers and pressure vessels
11000000 Electrical equipment
12000000 Refrigerating plants
13000000 Materials
14000000 Welding consumables
14000000MK Cargo handling gear
15000000 Automation
16000000 Fiber-reinforced plastic ships
17000000 Ships carrying liquefied gases in bulk (LG carriers)
18000000 Nuclear ships and nuclear support vessels
19000000MK Equipment and appliances for prevention of pollution from ships
20000000 Software

NOMENCLATURE OF ITEMS OF THE REGISTER TECHNICAL SUPERVISION

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
01000000	**HULL**				
01010000	Hull structures	5			Group 5 — only if sections are constructed out of the shipyard
01020000	Structures of superstructures and deckhouses	5			Group 5 — only if sections are constructed out of the shipyard
01030000	Seatings of machinery and arrangements	5			Group 5 — only if sections are constructed out of the shipyard
02000000MK	**LIFE-SAVING APPLIANCES**				
02010000MK	**Lifeboats and launching appliances:**				
02010002MK	release mechanisms and lifeboat release and retrieval system	3			
02010100MK	**Launching appliances for lifeboats, rescue boats, fast rescue boats and liferafts:**				
02010101MK	launching appliances using falls and winches for lifeboats	3			
02010102MK	launching appliances for free-fall lifeboats	3			
02010103MK	launching appliances for rescue boats	3			
02010104MK	launching appliances for fast rescue boats	3			
02010105MK	launching appliances for liferafts	3			
02010200MK	**Lifeboats:**				
02010201MK	partially enclosed lifeboats	3			
02010202MK	totally enclosed lifeboats	3			
02010203MK	totally enclosed lifeboats with a self-contained air support system	3			
02010204MK	fire-protected totally enclosed lifeboats	3			
02010305MK	free-fall lifeboats	3			
02010306MK	free-fall lifeboats with a self-contained air support system	3			
02010307MK	fire-protected free-fall lifeboats	3			
02020000MK	**Liferafts, rescue boat, fast rescue boats:**				
02020200MK	Arrangements for launching and raising for liferafts, lifeboats and rescue/fast rescue boats (strops, falls and their parts, release mechanisms (hooks) of launching appliances of liferafts and rescue boats)	3			
02020300MK	Hydrostatic release units	3			
02020600MK	**Liferafts:**				
02020601MK	inflatable liferafts	3			
02020602MK	rigid liferafts	3			
02020603MK	self-righting liferafts	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
02020604MK	canopied reversible liferafts (with two canopy canopies)	3			
02020700MK	**Rescue boats:**				
02020701MK	rigid rescue boats	3			
02020702MK	inflated rescue boats	3			
02020703MK	combined rescue boats	3			
02020800MK	**Fast rescue boats:**				
02020801MK	rigid fast rescue boats	3			
02020802MK	inflated fast rescue boats	3			
02020803MK	combined fast rescue boats	3			
02030000MK	Means for bringing lifeboats and liferafts against ship's side and holding them alongside, skates	1			
02040000MK	Embarkation ladders, lifelines	3			
02050000MK	Lifebuoys	3			
02050100MK	Self-igniting lights	3			
02050200MK	Self-activating smoke signals	3			
02050300MK	Buoyant lifelines	3			
02060000MK	**Lifejackets, immersion suits, anti-exposure suits and thermal protective aids**				
02060100MK	**Lifejackets:**				
02060101MK	non-inflatable lifejackets	3			
02060102MK	inflatable lifejackets	3			
02060200MK	**Immersion suits:**				
02060201MK	immersion suits with thermal insulation	3			
02060202MK	immersion suits without thermal insulation	3			
02060300MK	Anti-exposure suits	3			
02060400MK	Thermal protective aids	3			
02070000MK	Lifejacket lights	3			
02080000MK	Line-throwing appliances	3			
02090000MK	**Equipment of survival craft, rescue boats/fast rescue boats:**				
02090001MK	lifeboat steering gears	1			
02090002MK	masts with sails and stays	1			
02090003MK	oars, thole pins or crutches, buoyant oars	1			
02090004MK	cap or plag of drain valves of lifeboats	1			
02090005MK	lifelines, handrails	1			
02090006MK	boarding ladder of lifeboat and boarding ramp of liferaft	1			
02090007MK	buoyant rescue quoit of liferafts with buoyant line	1			
02090008MK	lifeboat manual draining pumps	1			
02090009MK	protective covers	1			
02090010MK	searchlights of lifeboats and rescue boats	2			
02090011MK	life-saving signals table	1			
02090012MK	signal whistles	1			
02090013MK	boat compasses	3			
02090014MK	internal and external lights of liferafts and lifeboats, lights of rescue/fast rescue boats	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
02090015MK	repair outfit (with instructions) for inflatable liferafts	1			
02090016MK	waterproof electric torch	3			
02090017MK	food ration	1			
02090018MK	fresh water	1			
02090019MK	valves for inflatable liferafts and inflated rescue/fast rescue boats	1			
02090020MK	first-aid outfit	1			
02110000MK	Sea activated power sources for lifejacket and liferaft lights and lifebuoy self-igniting lights	2			
02120000MK	Marine evacuation systems	3			
02130000MK	Symbols for use in accordance with SOLAS-74 as amended	1			
02140000MK	Means of rescue	3			
03000000	**ARRANGEMENTS, EQUIPMENT, OUTFIT**				
03010000	**Rudder and steering gear:**				
03010100	rudder stocks including their flanges	5			
03010101	rudder stock bearings	1			
03010102	parts of roller laying of steering gears	1			
03010103	chains of steering ropes	1			
03010200	rudder axles including their flanges	1			
03010201	parts of connections of rudder axles with sternframe	1			
03010300	**Nozzle rudder in assembly:**	5			
03010301	pintles	1			
03010302	pintle bushes	1			
03010303	parts for coupling rudder stock with nozzle rudder	1			
03010304	limiters of putting nozzle rudder over either side	1			
03010400	rudder blade	5			
03010401	pintles	1			
03010402	pintle bushes	1			
03010403	couplings	1			
03010404	limiters of putting rudder blade over either side	1			
03010500	tillers	1			
03010501	parts of coupling tiller with rudder stock	1			
03010600	rudder quadrants	1			
03010601	parts for coupling quadrant with rudder stock	1			
03010700	**Hull and foundation of main steerable podded electrical propulsion units:**				
03010701	parts of hull and propulsion block hull	5			
03010702	parts of mounting block	5			
03020000	**Anchor arrangement:**				
03020005	anchor hawses	1			
03020100	anchors	4M		K	
03020300	anchor stoppers	2			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
03020400	device for securing and releasing the inboard end of the chain cable or rope	2			
03030000	**Mooring arrangement:**				
03030001	bollards, belaying cleats, fairleaders, chocks and rollers	2			
03040000	**Towing arrangements:**				
03040001	bitts, bollards, fairleaders, rollers and stoppers	2			
03040002	tow hooks and tow line releasing device	3			
03040003	snatch-blocks	2			
03040004	towing rails	1			
03040100MK	**Emergency towing arrangement:**				
03040101	chain devices	2			
03040102	tow lines	2			
03040103	tow securing arrangements	2			
03050000	**Signal masts:**				
03050001	metal, wooden and glass-reinforced plastic rigging fixed gear of masts and their standing rigging	1			
03050002	loose gear of standing rigging	1			
03060000	**Openings in hull, 1st and 2nd tiers of superstructures and deckhouses and their closing appliances:**				
03060100	side and flush deck scuttles, round and square, wheelhouse windows (refer also to code 06010006MK)	3			
03060101	glasses for side and flush deck scuttles, round and square, wheelhouse windows	1			
03060200	in bottom side shell plating doors	3			
03060300	outside doors in superstructures and deckhouses	3			
03060400	covers of companion hatches, skylights and ventilation trunks	3			
03060500	ventilation pipes	1			
03060700	doors in watertight bulkheads	3			
03060800	hatch covers of dry cargo holds, holds fitted for alternate carriage of bulk liquid and dry cargoes, 'tween decks, cargo tanks	5			
03060801	tank manhole covers	1			
03070000	**Equipment of spaces:**				
03070001	plating, hold battens, linings in cargo holds	1			
03070005	cellular guide members in holds of container carriers	1			
03070200	doors in ship's spaces on escape routes	1			
03070300	stairways and vertical ladders	1			
03070400	guard rails, bulwark and catwalk bridges	1			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
03070600	devices for securing movable decks, platforms, ramps and similar structures	1			
03070700	low-location lighting systems (photoluminiscent, electrically powered)	2			
03070800	seats for HSC passengers and crew	3			
03080000	**Grain fittings:**				
03080001	removable metal bulkheads	1			
03080003	shroud wire ropes	1			
03080004	gears of shrouds	1			
03090000	Arrangement for attachment of timber deck cargo	1			
03100000	**Items made of ropes for all applications**	1			
03110000	**Emergency outfit:**				
03110001	thrummed mats, armoured mats with outfit	1			
03120000	**MODU jacking frame of self-elevating system:**				
03120001	sliders and their guides	5			
03120002	catches and their bearers	5			
03120003	yokes and their latches	5			
03120004	securing plates of hydraulic cylinders	5			
03120005	support screws with nuts	5			
03120006	jack frames	5			
03120007	rack-and-pinion shafts	5			
03120008	pinions and wheels	5			
03120009	shafts	5			
03120010	fastenings	2			
03130000	**MODU arrangements for lifting and lowering columns of submersible sea water pumps:**				
03130001	columns and guides	2			
03130002	column support	2			
03130003	stoppers	2			
03140000	**MODU fixing arrangements:**				
03140001	plates	2			
03140002	sliders	2			
03140003	screws and nuts	2			
03150000	Parts of lifting appliances for shipborne barges (lugs, eye plates, eyes, shackles, grips)	1			
03160000	**Securing devices of general cargo on board the ships:**				
03160100	lashings (rope, chain, bar, strip, wire)	3			
03160200	tightening devices (turnbuckles, bridge fittings)	3			
03160300	buttresses and shores	3			
03160400	locks (automatic and semi-automatic stoppers, stacking cones with locking pin)	3			
03160500	stacking cones (single, double etc.)	3			
03160600	penguin hooks	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
03160700	joint rings, lashing plates	3			
03160800	pedestal and flush sockets, dove-tail type sockets	3			
03170000MK	**Pilot transfer arrangements**				
03170001MK	pilot ladder	3			
03170002MK	mechanical pilot hoists	3			
03180000MK	**Means of embarkation and disembarkation:**				
03180001MK	accommodation ladders and gangways	3			
03000000MK	**SIGNAL MEANS**				
03010000MK	Navigation lights	3			
03020000MK	Flashing lights	3			
03030000MK	Sound signal means	3			
03040000MK	Pyrotechnic signal means	3			
03050000MK	Signal shapes	1			
04000000MK	**RADIO EQUIPMENT**				
04020000	**Radiotelephone communication facilities:**				
04020900	VHF radiotelephone station	2			
04021100	UHF radiotelephone station	1			
04021200MK	two-way VHF radiotelephone apparatus for communications with aircraft	3			
04030500	Portable two-way radiotelephone station	1			For radiotelephone stations intended for emergency fire brigades, a document confirming explosion-proof or intrinsically safe type of radiotelephone stations shall be submitted
04040000MK	Command broadcast facilities (command broadcast apparatus, public address system, microphone posts)	3			
04070000	Aerial	1			
04090000	Satellite radio communication equipment	2			
04110000MK	**GMDSS radio equipment:**				
04110100MK	digital selective calling (DSC) encoder	3			
04110200	facsimile device	1			
04110300MK	terminal printing device	3			
04110400MK	telephony and NBDP receiver	3			
04110500MK	telephony, DSC and NBDP transmitter	3			
04110600MK	VHF radiotelephone station	3			
04110700MK	MF radiotelephone station	3			
04110800MK	MF/HF radiotelephone station	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
04110900MK	direct-printing apparatus of improved fidelity	3			
04111100MK	radio equipment power supply device, automatic battery charger	3			
04120000MK	VHF radio installation (set)	3			
04130000MK	MF radio installation (set)	3			
04140000MK	MF/HF radio installation (set)	3			
04150000MK	ship earth station of the INMARSAT service	3			
04150100MK	EGC receiver	3			
04150200MK	ship security alert system (SSAS)	3			
04150300MK	ship earth station of the IRIDIUM service	3			
04160000MK	COSPAS-SARSAT satellite EPIRB	3			
04180000MK	NAVTEX service receiver	3			
04190000MK	enhanced group calling (EGC) receiver	3			
04200000MK	DSC watch receiver	3			
04210000MK	HF direct-printing radiotelegraph receiver	3			
04220000MK	radar transponder	3			
04220100MK	ship's and survival craft AIS search and rescue transmitter (AIS-SART)	3			
04230000MK	two-way VHF radiotelephone apparatus	3			
04400000	radio equipment not mentioned above	1			
04410000	Ship security surveillance TV system (video surveillance system)	2			
05000000MK	**NAVIGATIONAL EQUIPMENT**				
05010000MK	Magnetic compasses (standard, spare, lifeboat)	3			
05010100MK	Transmitting heading devices (THD)	3			
05020000MK	Gyrocompasses	3			
05030000MK	Logs (speed and distance measuring devices)	3			
05040000MK	Deck logs	2			
05050000MK	Echo sounders	3			
05060000MK	Heading control systems/track control systems	3			
05070000MK	Integrated navigation systems	3			
05080000	Combined ship's workstations	1			
05100000MK	Gyro-magnetic compasses and gyro-azimuths	3			
05110000	Unified timing systems	1			
05120000MK	Rate-of-turn indicators	3			
05130000MK	Electronic chart display and information system (ECDIS)	3			
05140000MK	**Radio navigation equipment:**				
05140210MK	radar equipment intended for ships below 500 gross tonnage	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
05140220MK	radar equipment intended for ships below 10000 gross tonnage	3			
05140230MK	radar equipment intended for ships of 10000 gross tonnage and upwards	3			
05140240MK	radar ice display	3			
05140250	radar equipment intended for the ships below 300 gross tonnage	2			
05140300MK	radio navigation system receivers	3			
05140400MK	Ship's radar reflectors (shipborne and for life-saving appliances)	2			
05150000MK	Equipment of the universal automatic identification system (UAIS), class "A"	3			
05150000	Equipment of the automatic identification system (AIS), class "B"	2			
05160100MK	Voyage Data Recorders (VDR)	3			
05160200MK	Simplified voyage data recorders (S-VDR)	3			
05170000MK	Sound reception systems	3			
05180000	Alarm and communication systems (for OMBO ships)	1			
05180100MK	Bridge alert management (BAM) system	3			
05190000MK	Bridge navigational watch alarm system (BNWAS)	3			
05200000MK	Equipment for long-range identification and tracking of ships (LRIT)	3			
05210000	Remote camera systems	1			
05220000	Hydrometeorological complexes	2			Intended for use on the FOP and the ship with distinguishing mark **OMBO** in the class notation
05220100MK	Night vision equipment HSC	3			
05220100	Night vision equipment	2			
05300000	Navigational equipment which is not mentioned above	1			
06000000	**FIRE PROTECTION**				
06010000MK	**Structural fire protection:**				
06010100MK	fire-proof bulkheads, decks and ceilings:				
06010101MK	A-60 class	2			
06010102MK	A-30 class	2			
06010103MK	A-15 class	2			
06010104MK	B-30	2			
06010105MK	B-15 class	2			
06010106MK	B-0 class	2			
	decks:				
06010107MK	A-60 class	2			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
06010108MK	A-30 class	2			
06010109MK	A-15 class	2			
	ceilings:				
06010111MK	B-15 class	2			
06010112MK	B-0 class	2			
06010200MK	fire-proof doors:				
06010201MK	A-60 class	2			
06010202MK	A-30 class	2			
06010203MK	A-15 class	2			
06010204MK	A-0 class	2			
06010205MK	B-15 class	2			
06010206MK	B-0 class	2			
06010300MK	C class bulkheads, doors	1			
06010400	H class structures:				
06010401	H-120	2			
06010402	H-60	2			
06010403	H-0	2			
06010500MK	fire hatchways:				
06010501MK	A-60 class	2			
06010502MK	A-30 class	2			
06010503MK	A-15 class	2			
06010504MK	A-0 class	2			
06010005MK	Cable transit, pipe and duct penetrations	2			
06010006MK	Windows and sidescuttles (refer to regulations II-2/4.5.2.3 and II-2/9.4.1.3 of SOLAS 74)	2			
06010207MK	Arrangements for automatic closing of fire doors	3			
06020000MK	**Materials, deck coverings, paints, varnishes**				
06020100MK	**Materials:**				
06020101MK	insulating materials (plates, panels, mats, braided cords, etc.)	2			
06020102MK	facings	2			
06020103MK	covering fabrics, curtains, draperies, etc.	2			
06020104MK	bedding components	2			
06020105MK	glues and sealants used in the "A", "B" and "C" class divisions	2			
06020200MK	Deck coverings (linoleums, carpets, mastics)	2			
06020300MK	Paints, varnishes for exposed interior surfaces	2			
06020400MK	Primary deck coatings	2			
06030000MK	**Fire extinguishing systems:**				
06030200MK	sprinkler system	3			
06030500MK	pressure water-spraying and water-mist fire extinguishing systems	3			
06030600MK	foam fire extinguishing system	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
06030700MK	fixed local application fire extinguishing system for use in machinery spaces	3			
06030800MK	carbon dioxide system as well as systems containing fire extinguishing gas in cylinders	3			
06031100MK	powder system	3			
06031200MK	aerosol system	3			
06050000MK	**Fire extinguishing systems components:**				
06050200MK	sprinkler heads and control detection devices	3			
06050300MK	spray nozzles, monitors	3			
06050400MK	deck integrated foam nozzles	3			
06050600MK	high-expansion foam generators	3			
06050800	mixers of foam systems	3			
06060000	**Fire-fighting outfit:**				
06060100MK	fire hoses complete with couplings	1			
06060101MK	fire hoses without connection fittings	1			
06060200MK	fire hoses nozzles	3			
06060300MK	air-foam nozzles	3			
06060400MK	portable foam generators	3			
06060500MK	portable foam sets	3			
06060800MK	water fog applicators	3			
06060900MK	portable fire extinguishers	3			
06061000	foam fire extinguishers of at least 45 l capacity and foam fire extinguishers of at least 135 l capacity	3			
06061100	carbon dioxide of dry powder fire extinguishers of at least 16 kg, carbon dioxide or dry powder fire extinguishers of at least 45 kg	3			
06061300	blankets	1			
06061400MK	fireman's outfit (clothing, boats, gloves, helmet)	2			
06061500MK	portable safe lantern	2			
06061600MK	self-contained breathing apparatus	3			
06061601MK	emergency escape breathing devices (EEBD)	3			
06061700MK	flexible fireproof lifeline	2			
06061800MK	protective clothing for work with dangerous goods	2			
06061900	portable fire motor pumps	3			
06062000MK	international shore connection	1			
06062100MK	foam concentrate, powder, special gas and other fire-extinguishing substances	3			
06062300MK	gas analyser for vapours of flammable liquids, gases and oxygen content	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
06080000	MODU gas detection and alarm system	3			
06090000MK	Smoke detection system operating on the principle of air sampling from spaces	3			
07000000	**MACHINERY INSTALLATIONS**				
07010000	**Shafting:**				
07010007	shafting connecting bolts	2			
07010008	propeller shaft cone sealings	1			
07010009	CPP-shaft flange connection sealings	1			
07010100	thrust shafts	5			
07010200	intermediate shafts	5			
07010300	propeller and stern shafts	5			
07010301	propeller shaft liners	5			
07010400	thrust bearings	1			
07010500	journal bearings	1			
07010600	shaft couplings	2			
07020000	**Stern tubes:**				
07020100	tubes	1			
07020200	stern bearings, including strut bearings	2			
07020300	seals	2			
07020301	sealing components (collars, rings)	1			
07020302	packing gland	1			
07020303	pneumatic stop	1			
07030000	**Propellers:**				
07030100	fixed-pitch propellers:	5			
07030101	bosses	4			
07030102	blades	4			
07030103	blade securing items	2			
07030200	controllable pitch propellers:	5			
07030201	boss	2			
07030202	blades	4			
07030203	blade securing items	2			
07030204	crankpin rings	1			
07030205	crosshead	1			
07030206	slide block	1			
07030207	hydraulic cylinder	3			
07030208	CPP blade sealing	1			
07030210	power hydraulic system	4			
07030212	CPP control system	4			
07030220	pitch changing mechanism:	4			
07030221	pitch changing mechanism shaft, oil transfer block shaft	1			
07030222	hydraulic cylinder	3			
07030223	piston and securing items	1			
07030224	push-pull rods	1			
07030225	pitch changing mechanism control equipment (actuating)	3			
07030300	voith-schneider propellers:	4			
07030301	propeller housing	2			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
07030302	rotor housing	1			
07030303	rotor shaft	2			
07030304	blade	2			
07030305	central support	1			
07030306	control lever	1			
07030307	gears and pinions	2			
07030308	driving shaft	2			
07030400	**Steerable propellers:**	4/5			Group 4 — for typical structures
07030401	propeller	4/5			Group 4 — for typical structures
07030402	shafts	4/5			Group 4 — for typical structures
07030403	pinions	3			
07030404	housings	3			
07030407	propeller shaft seals	2			
07030408	steering tube sealing	2			
07030409	thrust bearings	2			
07030410	steady bearings	2			
07030412	steering gear wheel and pinion	3			
07030413	steering gear bearing	3			
07030414	machineries of hydraulic steering system	2			
07030415	flexible hoses of hydraulic and lubrication system	2			
07030416	connecting bolts of hull, shafts and steering gear rings	2			
07030500	Thrusters	3			
07030600	**Main steerable podded electrical propulsion units:**	4/5			Group 4 — for typical structures
07030602	propeller	4/5			Group 4 — for typical structures
07030603	shafts	4/5			Group 4 — for typical structures
07030604	thrust bearings	2			
07030605	journal bearings	2			
07030606	propeller shaft seals	2			
07030607	steering tube sealing	2			
07030609	machineries of hydraulic steering system	2			
07030611	machineries of hydraulic systems of steering brake gear	2			
07030613	machineries of hydraulic systems of shaft brake gear	2			
07030614	cooling air unit	1			
07030616	lubrication oil treatment (cleaning and control) unit	1			
07030618	steering gear wheel and pinion	3			
07030619	steering gear bearing	3			
07030620	swivel of lubrication and drainage systems	1			
07030621	flexible hoses of hydraulic and lubrication system	2			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
07030622	connecting bolts of hull, shafts and steering gear rings	2			
07030625	housings	3			
07030700	Water jets	4			
07040000	Shock absorbers	1	CTO MR		
07050000	Bulkhead seals and glands	2			
08000000	**SYSTEMS AND PIPING**				
08010000	**Ship's systems:**				
08011400MK	inert gas system:				
08011410MK	inert gas generator	4			
08011420MK	water seal of the inert gas system	2			
08011430MK	scrubber of the inert gas system	4			
08011440MK	instruments and alarm of the inert gas system	4			
08011450MK	nitrogen generator of the inert gas system	4			
08011460MK	air compressor for the nitrogen generator	3			
08011470MK	nitrogen receiver	3			
08030000	**Valves:**				
08030100	valves intended for Class I and II pipelines	3	CTO MR		
08030101	billets of valves bodies intended for Class I and II pipelines	1			
08030200	valves intended for Class III pipelines	1			
08030230	bottom and side valves	2	CTO MR		
08030240	remote-controlled valves	2			For products approved within the EU RO MR Procedure, limitations stated in the EU RO MR Technical Requirements shall be taken into account
08030300	fittings pipes and pipelines	1			
08030400	ventilation fittings:				
08030400MK	type A ventilation fire dampers	2			
08030410	steel fire dampers	1			
08030420	type H ventilation fire dampers	2			
08030430	closing ventilation heads and shutters	1			
08030500MK	tank venting and cargo vapour emission systems	3			
08030510MK	automatic closing devices for air pipes	2	CTO MR		
08030600	Flexible joints	2			
08030700	Expansions joints and mechanical connections of pipes:				
08030710	mechanical connections of pipes	2	CTO MR		

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
08030720	expansion joints	2	CTO MR		
08030800	Hoses:				
08030800MK	Cargo hoses of chemical and gas carriers	3			
08030900	Cargo hoses of oil tankers	3			
08031000	Oil fuel and lubricating oil receiving/transfer hoses	3			
08031100	Appliances and systems for oil product transfer afloat and from *A* point berth	3			
08031110	Cargo vapour transfer hoses	2			
08031200	Gauges:				
08031240	thermometers	1	CTO MR		
08031250	manometers	1	CTO MR		
08031260	level gauges	1	CTO MR		
08031270	discharge gages and flowmeters	1	CTO MR		
08031300	Sleeves for hoses according to codes 08030800, 08030900, 08031000 and 08031100	2			
08040000	Spark arresters (spark extinguishers), dampers of exhaust gas systems, boiler and incinerator uptakes	1	CTO MR		
09000000	**MACHINERY**				
09010000	**Internal combustion engines of power output 55 kW and over (main, auxiliary and emergency):**	4/5	EIAPP Certificate		1) Group 4 — for engines with $D_{cyl} \leq 30$ mm; Group 5 — for engines with $D_{cyl} > 300$ mm 2) The list of the certificates and documents that shall be issued for the internal combustion engines components is listed in Appendix 8 to Section 5, Part IV of these Rules 3) EIAPP Certificate for non-emergency engines with power output 130 kW and over
09010001	welded bedplates (part of internal combustion engine frame)	4			Refer to remark 2 for code 09010000
09010002	welded frame boxes	4			Refer to remark 2 for code 09010000
09010003	cylinder blocks (gray cast iron (GJL)/spheroidal graphite cast iron (GJS)) for engines with power > 400 kW/cyl	1			Refer to remark 2 for code 09010000

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
09010004	welded cylinder frames of crosshead engines	4			
09010005	cylinder liners (jackets), D_{cyl} > 300 mm	1			Refer to remark 2 for code 09010000
09010006	cylinder heads (GJL/GJS), D_{cyl} > 300 mm	1			
09010007	cylinder heads (forged/cast steel), D_{cyl} > 300 mm	4			Refer to remark 2 for code 09010000
09010008	tie rods of cross head engines	4			Refer to remark 2 for code 09010000
09010009	piston crown (cast steel, forged steel), D_{cyl} > 400 mm	4			Refer to remark 2 for code 09010000
09010011	piston rod of cross head engines, D_{cyl} > 400 mm	4			Refer to remark 2 for code 09010000
09010012	connecting rod with caps	4			Refer to remark 2 for code 09010000
09010013	crosshead	4			Refer to remark 2 for code 09010000
09010014	crankshaft: made in one piece, semi-built	4			Refer to remark 2 for code 09010000
09010015	crankcase (GJL/GJS), power > 400 kW/cyl	1			Refer to remark 2 for code 09010000
09010016	crankcase safety valve	4			Refer to remark 2 for code 09010000
09010021	Hydraulic power drive for valves and its components (drive, pipes, valves), power > 800 kW/cyl	1			Refer to remark 2 for code 09010000
09010022	Hydraulic accumulators with a capacity of > 0,5 l	1			Refer to remark 2 for code 09010000
09010023	High pressure common servo oil system	1			Refer to remark 2 for code 09010000
09010024	Engine-driven hydraulic pumps, power > 800 kW/cyl	1			Refer to remark 2 for code 09010000
09010032	Air coolers (D_{cyl} > 300 mm)	1			Refer to remark 2 for code 09010000
09010033	Exhaust gas valve cage	1			Refer to remark 2 for code 09010000
09011600	Bearings:				Refer to remark 2 for code 09010000
09011601	main bearings (power > 800 kW/cyl)	1			Refer to remark 2 for code 09010000
09011602	crankpin bearings (power > 800 kW/cyl)	1			Refer to remark 2 for code 09010000
09011604	crosshead bearings (power > 800 kW/cyl)	1			Refer to remark 2 for code 09010000
09011606	Bearing transverse girders (cast steel)	4			Refer to remark 2 for code 09010000
09011700	Securing items:				Refer to remark 2 for code 09010000
09011701	bolts and studs of main bearings (D_{cyl} > 300 mm)	1			Refer to remark 2 for code 09010000
09011702	bolts and studs of connecting rods (D_{cyl} > 300 mm)	1			Refer to remark 2 for code 09010000

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
09011703	bolts and studs of cylinder heads (D_{cyl} > 300 mm)	1			Refer to remark 2 for code 09010000
09011704	Coupling bolts for crankshaft	4			Refer to remark 2 for code 09010000
09011900	Oil fuel equipment:				Refer to remark 2 for code 09010000
09011901	high pressure fuel injection pump body	1			Refer to remark 2 for code 09010000
09011902	high pressure fuel injection valves (only for those not autofretted)	1			Refer to remark 2 for code 09010000
09011903MK	high pressure fuel injection pipes including common fuel rail	1			Refer to remark 2 for code 09010000
09013000MK	Rescue boat engines	3			
09014000MK	Lifeboat engines	3			
09015000	Diesel generators	4			
09016000	Diesel engine geared sets	4			
09017001MK	Exhaust gas cleaning system to reduce NO_x emission recognized as a component of marine diesel engine	1			
09017002MK	NO_x exhaust gas monitoring system (NO_x Technical Code)	4			
09020000	**Internal combustion engines of power output 55 kW and less (drives of generators, fire pumps, compressors, engines of lifeboats and rescue boats):**				
09020100	auxiliary engines	3			
09020200MK	lifeboat engines	3			
09023000MK	rescue boat engines	3			
09024000	diesel generators	3			
09025000	diesel engine geared sets	4			
09030000	**Main steam turbines and electric generator turbines:**	4			
09030001	turbine casings	3			
09030002	nozzle boxes	3			
09030003	manoeuvring gear casings	3			
09030004	nozzles	2			
09030005	diaphragms	3			
09030006	discs	3			
09030007	blades	3			
09030008	gland seals	3			
09030009	rotors and shafts	3			
09030010	bearings	3			
09030011	couplings	3			
09030012	shrouds and lashing wire	2			
09030013	bolts for split casing joints	3			
09040000	**Auxiliary steam turbines:**	4			
09040001	turbine casings	3			
09040002	nozzle boxes	3			
09040003	nozzles	3			
09040004	discs	3			
09040005	blades	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
09040006	rotors and shafts	3			
09040007	bearings	3			
09050000	**Main gas turbines and electric generator gas turbines:**	4			
09050001	turbine casings	3			
09050002	compressor housings	3			
09050003	combustion chamber casings	3			
09050004	diaphragms	3			
09050005	turbine rotors	3			
09050006	turbine discs	3			
09050007	compressor rotors	3			
09050008	compressor discs	3			
09050009	turbine blades	3			
09050010	compressor blades	3			
09050011	shrouds, lashing wire	2			
09050012	flame tube of combustion chambers	3			
09050013	regenerators	3			
09050014	gland seals	3			
09050015	bearings	1			
09050016	couplings	3			
09050017	bolts for turbine split casing joints	3			
09050018	bolts for compressors split casing joints	3			
09060000	**Main machinery reduction gear:**	4			
09060001	reduction gear casing	1			
09060002	wheels and pinions	3			
09060003	reduction gear shafts	3			
09060004	detachable half-couplings of shafts	3			
09060005	bolts	1			
09060006	sliding bearings	1			
09060100	**Disengaging, flexible couplings of main machinery:**	4			
09060101	coupling casing	1			
09060102	coupling shafts	1			
09060103	driving parts of couplings	1			
09060104	driven parts of couplings	1			
09060105	components of flexible couplings	1			
09060106	sliding bearings	1			
09070000	**Auxiliary machinery reduction gear:**	3			
09070001	casings of reduction gear and couplings	1			
09070002	wheels and pinions	1			
09070003	shafts of reduction gears and couplings	3			
09080000	**Auxiliary machinery:**				
09080101	starting air compressors, power output of the drives < 100 kW	3			
09080102	starting air compressors, power output of the drives ≥ 100 kW	4			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
09080103	compressors intended for general purpose use	1	CTO MR		For products approved within the EU RO MR Procedure, limitations stated in the EU RO MR Technical Requirements shall be considered
09080200	turbochargers	1/3			Group 1 — for turbochargers of category A; Group 3 — for turbochargers of categories B and C
09080300	main and auxiliary boiler blowers	4			
09080401	Pumps, power capacity of drives < 100 kW	3			Pumps intended for the systems covered by Parts VI, VIII, XII of the Rules for the Classification and Construction of Sea-Going Ships
09080402	Pumps, power capacity of drives ≥ 100 kW	4			Pumps intended for the systems covered by Parts VI, VIII, XII of the Rules for the Classification and Construction of Sea-Going Ships
09081600	steam-jet ejectors of condensers	3			
09081800	oil fuel and lubricating oil separators	3			
09081900	bilge ejectors	3			
09090000	**Parts of machinery listed under code 09080000:**				
09090100	piston pumps and compressors:				
09090101	cylinder blocks	1			
09090102	cylinder liners	1			
09090103	pistons	1			
09090104	piston rods	1			
09090105	connecting rods	1			
09090106	crankshafts	2			
09090200	centrifugal and rotary pumps and compressors:				
09090201	shafts	1			
09090202	impellers, rotors	1			
09090203	casings	1			
09090300	screw and gear pumps and compressors:				
09090301	shafts, screws	1			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
09090302	casings	1			
09090303	screw pump housing	1			
09090304	pinions	1			
09090400	oil fuel and lubricating oil separators:				
09090401	bowl bodies, shafts	1			
09090402	bowl discs	1			
09090403	pinions	1			
09090500	blowers:				
09090501	shafts and rotors	1			
09090502	gland seals	1			
09090503	casings	1			
09090504	bearings	1			
09100000	**Deck machinery:**				
09100100MK	steering gear (engines):	4			
09100101	rudder stock yoke	1			
09100102	cylinders	2			Additionally, hydraulic test reports shall be submitted
09100103	driven shafts	1			
09100104	pinions, wheels, tooth rims	1			NDT reports shall be submitted
09100105	pistons with rods	1			
09100106	safety valves	1			
09100200	windlass and anchor capstans:	4			
09100201	intermediate and output shafts and spindles	2			
09100202	chain sprockets	2			
09100203	pinions, gears of power drives	2			NDT reports shall be submitted
09100204	disengaging and safety clutches	1			
09100205	band and automatic brakes	1			
09100300	mooring capstans and winches:	2			
09100301	spindles, output shafts	2			
09100302	pinions, gears of power drives	2			NDT reports shall be submitted
09100303	safety clutches	2			
09100304	automatic brakes	1			
09100400	towing winches:	3			
09100401	output and intermediate shafts	2			
09100402	pinions, gears of power drives	2			NDT reports shall be submitted
09100403	rope tightening control devices, rope layers	1			
09100404	brakes	1			
09100500MK	boat winches:	3			
09100501	output and intermediate shafts	2			
09100502	pinions, gears of power drives	2			NDT reports shall be submitted
09100503	automatic and hand brakes	2			
09100504	stoppers	2			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
09120000	**Fans:**				
09120010	machinery spaces, foam and smothering fire extinction stations, refrigerated spaces	1/2/3			Group 1 — for fans with power output of 2 kW inclusive; Group 2 — for fans with power output from 2 kW to 100 kW inclusive; Group 3 — for fans with power output of 10 kW and over
09120020	machinery of cargo pump rooms, holds for carriage of dangerous goods and motor vehicles, helicopters sheds	3			
09120030	machinery portable for gas freeing fans for enclosed spaces on oil and chemical tankers	1			Document confirming explosion-proof or intrinsically safe type of fans shall be submitted
09120040	machinery of dangerous spaces and spaces with overpressure of MODU, oil and chemical tankers	3			
09130000	**Motors and pumps of hydraulic systems:**	3			
09130001	shafts, rotors, pinions	1			
09130002	rods	1			
09130003	pistons plungers	1			
09130004	casings	1			
09130005	hydraulic cylinders	1			
09160000	**Drives of MODU jacking arrangements:**	3			
09160100	hydraulic cylinders in assembly	3			
09160101	cylinders and covers	3			
09160102	pistons with rods	3			
09160103	yokes for securing hydraulic cylinders	2			
09160104	securing items	2			
09170000	**Winches of MODU lifting and lowering columns of submersible sea water pumps:**	3			
09170001	output and intermediate shafts	3			
09170002	wheels and pinions	3			
09170003	brakes	2			
10000000	**BOILERS, HEAT EXCHANGERS AND PRESSURE VESSELS**				
10000100	Steam generating units	3/4			Group 3 — for boilers of Class II; Group 4 — for boilers of Class I

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
10010000	**Boilers, including waste-heat and water heating boilers:**	3/4			Group 3 — for boilers of Class II; Group 4 — for boilers of Class I
10010002	billets of boiler components according to codes 10010003 — 10010500	1			
10010003	shells	1			
10010004	end plates	1			
10010006	water chambers	1			
10010007	combustion chambers	1			
10010008	furnaces	1			
10010009	boiler stays	1			
10010011	economizers	1			
10010012	steam accumulators (steam separators)	1			
10010100	shells	1			
10010200	drums	1			
10010500	headers	1			
10011000	boiler oil burning installations	2			
10011300	steam superheaters	1			
10011400	air heaters	1			
10020000	**Heat exchangers and pressure vessels:**				
10020001	billets for product according to codes 12020100 — 12020800	1			
10020100	boiler feed water heaters	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020101	deaerators	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020200	condensers of main turbines	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020201	condensers of electric generator turbines	3/4			Group 3 — for Class II, III; Group 4 — for Class I I
10020300	condensers of auxiliary steam turbines	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020400	distillers	3/4			Group 3 — for Class II, III; Group 4 — for Class I

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
10020500	heaters:				
10020501	oil fuel	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020502	lubricating oil	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020503	water	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020600	coolers:				
10020601	lubricating oil of main machinery	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020602	water of main machinery	3/4			Group 3 — for Class II, III Group 4 — for Class I
10020603	lubricating oil of auxiliary machinery	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020604	water of auxiliary machinery	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020700	filters:				
10020701	oil fuel	1			
10020702	lubricating oil	1			
10020703	water	1			
10020711	fuel oil and lubricating oil self-cleaning filters	3			
10020800	air bottles	3/4			Group 3 — for Class II, III; Group 4 — for Class I
10020900	hydraulic accumulators	2			
10021000	hydrophores	1			
10021100	pressure vessels and apparatus of fire extinguishing systems	2			
10021200	pressure vessels and apparatus of domestic, production, research and other applications	2			
10030000	**Valves:**				
10030100	boiler mountings and valves for pressures equal to or over 0,07 MPa	3			
10030200	boiler mountings and valves for pressures equal to or over 0,07 MPa and *DN* ≥ 50 mm	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
10030201	boiler mountings and valves for pressures equal to or over 0,07 MPa and *DN* < 50 mm	1			
10030300	safety valves	3			
10030400	pressure gauges	1	CTO MR		
10040000	**Pressure vessels for MODU marine riser tightening and rolling compensation system**	5			
10050000	**Gas fuel tanks:**	5			
10050100	liquefied gas fuel tanks	5			
10050200	compressed gas fuel tanks	5			
10050300	gas fuel treatment installation	5			
10050400	LNG fuel forcing vaporizer	5			
11000000	**ELECTRICAL EQUIPMENT**				
11010000	**Electrical propulsion plant:**				
11010100	generators and generators of unified electric power plant	4			
11010200	electric propulsion motors (EPM)	5			
11010300	podded azimuth drive's propulsion electrical motors	5			
11010400	distribution switchboards	5			
11010410	type section/box of distribution switchboard	3			
11010500	power transformers, reactors	4			
11010600	power semiconductor converters	4			
11010700	electrical machine converters	4			
11010800	control systems, monitoring and protection systems	4			
11010900	slip rings devices for podded azimuth propulsion	4			
11011000	electric drives for Azimuth drives	4			
11020000	**Main and emergency sources of electrical power:**				
11020100	**Generators:**				
11020101	power of 100 kW and over	4			
11020102	power less than 100 kW	3			
11020200	**Accumulators and batteries**	2	CTO MR		
11020300	**Uninterruptible power supply units (UPS):**				
11020301	power of 63 kVA and over	4			
11020302	power less than 63 kVA	3			
11030000	**Transformers and convertors:**				
11030100	power transformers	3			
11030200	lighting, measuring and other transformers	1	CTO MR		
11030300	**Rotary converters:**				
11030301	power of 100 kW and over	4			
11030302	power less than 100 kW	3			
11030400	**Rotary amplifiers:**				
11030401	power of 100 kW and over	4			
11030402	power less than 100 kW	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
11030500	**Static and semi-conductor converters (rectifiers, inverters, frequency converters) with rated current:**				
11030501	power of 100 kW and over	4			
11030502	power up to 100 kW	3	CTO MR		
11040000	**Switchboards and control and monitoring desks:**				
11040100	main switchboards	5			
11040101	emergency switchboards	5			
11040110	type section/box of distribution switchboards	3			
11040200	distribution and other switchboards	3			
11040300	navigation light switchboards	3			
11040400	control, monitoring and alarm panels and switchboards for essential services	3			
11040500	switchgear and control gear, alarm and indicating devices:				
11040502	switches	2	CTO MR		
11040503	contactors, relays	2	CTO MR		
11040504	tripping devices	2			
11040505	switches, limit switches	1			
11040507	semiconductor switching devices for non-motor loads	1	CTO MR		
11040509	pilot devices (push buttons, switchers, joysticks, etc.)	1	CTO MR		
11040600	protective devices:				
11040601	relays $I > 63$ A	4			
11040602	relays $I \leq 63$ A	3	CTO MR		
11040603	fuses	1	CTO MR		
11040605	complex protective devices	4			
11040606	zenner-barriers for intrinsically-safe circuits of *Exi* type	1			
11040607	circuit breakers $I > 63$ A	3			
11040608	circuit breakers $I \leq 63$ A	2	CTO MR		
11040700	controllers:				
11040701	voltage controller	4			
11040800	stationary electrical measuring instruments	2	CTO MR		
11050000	**Electric drives for machinery referred to in codes 07000000, 09000000, 12000000, 14000000MK, 18050000 19000000MK:**				
11050100	electric motors:				
11050101	electric motors with power of 100 kW and over	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
11050102	electric motors with power from 2 kW to 100 kW	2	CTO MR		For products approved within the EU RO MR Procedure, limitations stated in the EU RO MR Technical Requirements shall be taken into account
11050103	electric motors with power up to 2 kW	1			
11050200	starting devices:				
11050201	starters	2			
11050204	controllers	3			
11050205	soft starters with power of 100 kW and over	3			
11050206	control systems of electric drives	4			
11050207	soft starters with power up to 100 kW	2	CTO MR		
11050208	electronic drives of valves for I and II class of responsible devices	2			
11050209	electronic drives of valves for others systems and devices	1	CTO MR		
11050300	electromagnetic brakes	1			
11050400	electromagnetic clutches	2			
11060000	**Main and emergency lighting:**				
11060001	stationary lighting fixtures, projectors	2	CTO MR		
11060002	lighting and setting fittings	1	CTO MR		
11070000	**Control and monitoring devices:**				
11070100	engine room telegraphs	3			
11070200	rudder angle indicators	2			
11070300	CPP position indicator	2			
11070400	tachometers	1	CTO MR		
11080000	**Internal service communication**				
11080100	Sound-powered telephones	2			
11090000	General alarm system	3			
11100000	**Fire detection and fire alarm system and release indication on fire smothering system:**	3			
11100102	manually operated detectors and detectors of fire detection and fire alarm system	3			
11100200	Release indication of fixed local application fire extinguishing system	3			
11100300	Sewage holding tanks level alarm	3			
11100400	Sound signals engineers accommodation spaces	3			
11100500	Alarm system about presence people in cooled holds	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
11100600	Indication of door position in ro-ro passengers ships and ro-ro cargo ships	3			
11100700	Television surveillance and indication system	3			
11100800	Alarm of ultimate concentration of dangerously explosive and noxious gases	3			
11100900	Cargo hold water level alarm system on bulk carriers, passengers ships carrying 36 persons and more, and single-hold cargo ships other than bulk carriers	3			
11110000	Indication of closing watertight and fire doors	3			
11110100	Warning alarm system for automatic sprinkler fire extinguishing system	3			
11120000	Engine room personnel alarm system	3			
11130000	**Cabling:**				
11130100	cables and hookup wires:				
11130101	cable of supply circuits for voltage above 1000 V	3			
11130102	cable of supply circuits for voltage of 1000 V and less	3			
11130103	cable of control circuit and information transfer circuit	3			
11130104	coaxial cables	1			Documents confirming flame retardance or flame resistance characteristics
11130105	optical-fiber cables	3			
11130106	hookup wires	1			
11130107	Current leads and busbars uninsulated for voltage of 1000 V and less	3			
11130108	Current leads and busbars insulated for voltage of 1000 V and less	3			
11130109	Current leads and busbars uninsulated for voltage above 1000 V	3			
11130110	MODU/FOP power and/or control and instrumentation, and/or telecommunication and data cables for submarine use	3			
11130111	Current leads and busbars insulated for voltage above 1000 V	3			
11130200	Items and devices for installation, splicing and connection of cables	2	CTO MR		
11140000	Impressed current protection	2			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
11150000	**Heating and cooking appliances, stationary appliances:**				
11150001	oil fuel, lubricating oil and water heating appliances with pressure equal to or more than 0,07 MPa	3			
11150005	heating cables	2	CTO MR		
11150006	cooking stationary heating equipment	1			
11170100	Cargo and ballast pump bearing temperature alarm system	3			
11170200	High and limit-level alarms in cargo tanks	3			
11180000	Alarm about failures in MODU jacking system	3			
11190000	Housings for electrical items	1	CTO MR		
12000000	**REFRIGERATING PLANTS**				
12010000	**Refrigerating units and machinery:**				
12010005	Parts and billets of products specified in code 12010000				
12010100	Compressors:				
12010110	screw type	3			
12010120	piston type	3			
12010130	centrifugal and axial-flow type	3			
12010200	Refrigerant pumps	3			
12010300	Secondary refrigerant pumps	2			
12010400	Compressing and condensing units	3			
12010500	Ice generator	3			
12010600	Freezing units	3			
12020000	**Refrigerant pressure vessels:**				
12020100	billets for product according to codes 12020100 — 12020800	1			
12020001	Refrigerant condensers	3			
12020200	Direct evaporation air cooler	2			
12020300	Brine air cooler	2			
12020400	Refrigerant evaporator	2			
12020500	Refrigerant filters	2			
12020600	Oil separator	2			
12020700	Refrigerant receiver	2			
12020800	Refrigerant separator	2			
12050000	**Piping and valves:**				
12050004	Valve designed for pressure of 1,0 MPa and more	2			
12050100	Pipes of refrigerant, liquid secondary refrigerant and cooling water	1			
12050200	Air pipes of cooling system	1			
12050300	Relief devices and valves	2			
12050400	Solenoid valves	2			
12050500	Manually operated valves	2			
12060000	Safety devices	2			
12070000	Automatic control devices	2			
12070100	Thermostatic expansion valves	1			
12070200	Thermostat	1			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
12070300	Bellow-actuated pressure switch	1			
12080000	Atmosphere control devices	2			
12090000	Insulation of refrigerated spaces and piping	2	CTO MR		
12100000	Refrigerant	1			
12110000	Refrigerant leak detectors	1			
13000000	**MATERIALS**				
13100000	**Steel and iron:**				
13110000	**Rolled products:**				
13111000	**Rolled products for ship and MODU structures:**				
13111100	**strength class:**				
13111110	normal strength	4M			
13111120	higher strength	4M			
13111130	high-strength steel	4M			
13111200	**grade:**				
13111210	A	4M			
13111220	B	4M			
13111230	D	4M			
13111240	E	4M			
13111250	F	4M			
13111300	**type:**				
13111310	plates and sheets	4M		К	
13111320	strips	4M		К	
13111330	welded and rolled sections	4M			
13111340	bars	4M			
13111400	**with additional properties:**				
13111410	"Z" — properties	4M			
13111420	improved weldability "W"	4M			
13111430	ductility and cold resistance "Arc"	4M			
13111440	clad steel	4M			
13111500	Thick crack resistant steel for elements of hull structures of container carriers	4M			
13112000	Rolled steel for boilers, heat exchangers and pressure vessels	4M		К	Single approval in accordance with 2.4.1.2, Part III of these Rules is allowed
13113000	**steel for cargo tanks, cargo technological vessels under pressure, cargo and technological pipelines, secondary barriers of gas carriers:**				
13113010	plates and sheets	4M		К	
13113020	strips	4M		К	
13113030	welded and rolled sections	4M			
13113040	bars	4M			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
13114000	Rolled steel for general purpose	5M			Rolled steel used in ship hull structures, arrangements and machinery, etc. supplied according to the approved technical documentation on the item of application in accordance with 2.4.1.3, Part III of these Rules
13120000	**Tubes and pipes:**				
13121000	**Type:**				
13121100	**ship construction tubes for hulls and MODU:**				
13121110	normal strength	4M		K	
13121120	higher strength	4M		K	
13121130	high-strength steel	4M		K	
13121200	Ship construction tubes for shipborne and MODU/FOP machinery	5M		K	Tubes used in ship arrangements and machinery, etc. supplied according to the approved technical documentation on the item of application in accordance with 2.4.1.3, Part III of these Rules
13121300	**tubes and pipes for Class I and Class II boilers, heat exchangers and pressure vessels:**				
13121310	seamless	1M			
13121320	welded	1M			
13121400	**tubes and pipes for Class I and Class II piping and MODU/FOP special systems:**				
13121410	seamless	1M			
13121420	welded	1M			
13121500	Pipes used in the construction of cargo tanks, cargo process pressure vessels, cargo and process piping, secondary barriers	4M		K	
13130000	**Forgings:**				
13131110	forgings for hull structures of ships and MODU/FOP	4M		K	

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
13131120	forgings for anchor and its components, shipborne machinery including: crankshafts and its components, propeller shafts, intermediate shafts and thrust shafts, components of the main machineries gears, movement parts of cylinder, wheels, pinion sleeve	4M		K	
13131200	forgings for hull structures of ships, MODU/FOP and shipborne machinery intend for use in low temperature environment	4M		K	
13131300	forgings for cargo tanks, cargo technological vessels under pressure, cargo and technological pipelines, secondary barriers of gas carriers	4M		K	
13140000	**Castings:**				
13141100	**steel castings:**				
13141110	castings for anchor and its components, hull structures of ships and MODU/FOP, shipborne machinery	4M		K	
13141120	castings for hull structures of ships, MODU/FOP and shipborne machinery intend for use in low temperature environment	4M		K	
13141130	castings for cargo tanks, cargo technological vessels under pressure, cargo and technological pipelines, secondary barriers of gas carriers	4M		K	
13141200	**iron casting:**				
13141210	spheroidal or nodular graphite iron castings	4M		K	For non-serial production, single approval in accordance with 2.4.1.2, Part III of these Rules is allowed
13141220	malleable cast iron castings	4M		K	For non-serial production, single approval in accordance with 2.4.1.2, Part III of these Rules is allowed

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
13141230	grey iron castings	4M		К	For non-serial production, single approval in accordance with 2.4.1.2, Part III of these Rules is allowed
13150000	**Chains:**				
13151100	anchor chain	4M		К	
13151200	mooring chains	4M		К	
13152100	details of chains	4M		К	
13160000	**Stainless steel:**				
13161100	rolled plates, strips, sections and bars	4M		К	Single approval in accordance with 2.4.1.2, Part III of these Rules is allowed
13161200МК	steel for cargo holds of the oil tankers	4M		К	
13162000	pipes	4M		К	Single approval in accordance with 2.4.1.2, Part III of these Rules is allowed
13163000	forgings	4M		К	Single approval in accordance with 2.4.1.2, Part III of these Rules is allowed
13164100	castings	5M		К	
13164200	castings for propellers	4M		К	
13170000	**Wire ropes**	4M		К	
13180000	**Semi-finished products:**				
13181110	ingots	4M		К	
13181120	blooms	4M		К	
13181130	slabs	4M		К	
13181140	billets	4M		К	
13182110	steel for chains and accessories	4M		К	
13200000	**Aluminium, titanium and cooper alloys:**				
13201000	**cooper alloys:**				
13201100	rolled plates and bars	4M		К	
13201200	pipes	4M		К	
13201300	forgings	4M		К	
13201410	castings	4M		К	
13201420	castings for propeller shaft	4M		К	
13201500	extruded profiles	4M		К	
13202000	**aluminium alloys:**				
13202100	rolled plates and bars	4M		К	
13202200	pipes	4M		К	
13202300	castings	4M		К	
13202400	extruded profiles	4M		К	
13202500	welded panels	4M		К	

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
13203000	**titanium alloys:**				
13203100	rolled plates and bars	4M		К	
13203200	pipes	4M		К	
13203300	forgings	4M		К	
13203400	castings	4M		К	
13203500	extruded profiles	4M		К	
13203600	alloys for nuclear power plants	4M		К	
13204010	Bimetallic	4M		К	Single approval in accordance with 2.4.1.2, Part III of these Rules is allowed
13205000	**Non-ferrous semi-finished products:**				
13205010	ingots	4M		К	
13205020	blooms	4M		К	
13205030	slabs	4M		К	
13205040	billets	4M		К	
13300000	**Non-metallic materials**				
13310000	**materials for reinforced plastic structures:**				
13310010	reinforcing materials	2M			
13310020	binders	2M			
13320000	Laminated textiles	2M			
13330000	Retro-reflective materials	2M			
13340000	Foam plastics	2M			
13350000	Polymer composition	2M			
13350110	Polymer material for chocking of machinery and equipment	2M	CTO MR		
13350120	Plating of reinforced polymer material for catwalks	2M			
13350210	Pipes and shape pieces of Glass I and Glass II	2M			
13350220	Pipes and shape pieces of Class III	2M			
13350310	ropes of natural and synthetic fibre	2M			
13360000	**Anticorrosion coatings of hull structures:**				
13361000МК	protective coating for dedicated seawater ballast tanks (IMO resolution MSC.215(82))	2M			
13361100	protective coatings for sea water ballast tanks	2M			
13362000МК	protective coatings for cargo oil tanks of crude oil tankers (IMO resolution MSC.288(87))	2M			
13363000	protective coating of internal surfaces of the cargo holds, internal and external surfaces of hatch coamings and hatch covers on bulk carriers	2M			
13370000МК	Antifouling coatings of ship's hulls	2M			
13380000	Ice-resistant coatings	2M			
13391000	Protective primers allowing to weld without their removal	2M			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
13392000	Anti-acid paints intended for protection of the interior of battery storage room against corrosion by electrolyte	2M	CTO MR		
13393000	Materials used for thermal insulation in cargo containment systems of LG carriers / liquefied gas fuel containment systems except for the items of technical supervision with codes 17010000 — 17012270	3M			
14000000	**WELDING CONSUMBLES**				
14100000	**Electrodes:**				
14100100	for ships hull and MODU structures	2M			
14100200	for boilers, heat exchangers and pressure vessels	2M			
14100300	for Glass I, Glass II and Glass III piping	2M			
14100400	for nuclear steam supply systems	2M			
14100500	for machinery, devices, equipment and welded parts of internal combustion engines	2M			
14200000	**Wire/flux:**				
14200100	for ships hull and MODU structures	2M			
14200200	for boilers, heat exchangers and pressure vessels	2M			
14200300	for Glass I, Glass II and Glass III piping				
14200400	for nuclear steam supply systems	2M			
14200500	for machinery, devices, equipment and welded parts of internal combustion engines	2M 2M			
14300000	**Wire/gas:**				
14300100	for ships hull and MODU structures				
14300200	for boilers, heat exchangers and pressure vessels	2M			
14300300	for Glass I, Glass II and Glass III piping	2M			
14300400	for nuclear steam supply systems	2M			
14300500	for machinery, devices, equipment and welded parts of internal combustion engines	2M 2M			
14000000MK	**CARGO HANDLING GEAR**				
14010000MK	**Ship derricks:**	5			
14010100MK	structures with fixed gear (masts, columns, gantries, etc.)	5			Group 5 — only if constructed out of the shipyard
14010200MK	derrick booms	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
14010300MK	cargo winches, span winches and slewing guy winches; span rope reels and preventer guy reels with drive:	3			
14010301	main shafts	1			
14010302	couplings	1			
14010303	frames and casings	1			
14010304	brakes	1			
14010305	ratchets	1			
14010400MK	span rope reels and preventer guy reels without independent drive	1			
14030000MK	**Cranes and hoists, upper structures:**	4/5			Group 4 — for serial products; Group 5 — in case of single approval
14030100MK	structures of cranes and hoists with permanently attached fixed gear (masts, posts, bell-shaped structures, bridges, gantries, understructures)	5			
14030200MK	derrick booms	5			
14030300MK	cargo lifting, luffing, slewing, travelling motion or counterbalance machinery:	5			
14030301	main shafts	1			
14030302	couplings	1			
14030303	bed frames and housings	1			
14030304	brakes	1			
14030305	wheels, rollers	1			
14030306MK	adjustable counterbalances	1			
14030307	hydraulic cylinders	1			
14030400MK	safety device (SWL indicators, limit-load switches, hi-jacking devices, limit switches, jib-radius indicators, safety switches, signal devices)	3			
14030500MK	**metal upper structurers:**				
14030600MK	posts, frames, supporting assemblies (jib and axles, etc.), trolleys, jibs, counterbalance attachments, bed frames and other structures, fastenings and supports of derrick when stowed for sea	5			
14030700MK	devices damping dynamic loads, stability of derrick against jack-knifing with the ship rolling or load drop	5			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
14040000MK	**Ship's cargo lifts with safe working load 250 kg and more and electrically driven passenger lifts:**	4/5			Group 4 — for serial products; Group 5 — in case of single approval
14040100MK	metal structures with all loose gear	3			
14040200MK	lift winches:	3			
14040201	main shafts	1			
14040202	couplings	1			
14040203	bed frames and housings	1			
14040204	brakes	1			
14040300MK	lift equipment (trunk doors, counterbalances, buffers, safety devices, etc.)	3			
14050000MK	**Parts and ropes of cargo handling gear:**				
14050100MK	**loose gear:**				
14050101MK	blocks, pulleys, hooks, chains, swivels, shackles, turnbuckles, triangle plates, boom and suspensions, etc.	2			
14050102MK	thimbles, ropes sockets and pressed clips	2			
14050200MK	**fixed gear:**				
14050201MK	cargo runner and span eye plates, guy eye plates on boom ends	2			
14050202MK	deck eye plates on ship hull structures	2			
14050203MK	derrick hel fork lugs	2			
14050204MK	span eye plates with shoes	2			
14050205MK	heel goosenecks with shoes	2			
14050206MK	built in sheaves with strops	2			
14050208MK	journals, bearing axles	2			
14050300MK	cargo gripping appliances (slings, spreaders, hoisting crossbars, frames, etc.)	3			
14050301	appliances to convey the personnel (nets, baskets, cradles or other products specially designed for this purpose)	3			
14050400MK	ropes (shrouds, stays, cargo runners, span ropes, tackles and slewing guy pendants, preventer guys and boom head guys in Union Purchase, etc.)	3			
14060000MK	**Ship elevating platforms:**	5			
14060100MK	platforms	5			
14060200MK	equipment of platforms (guides, shoes, blocking devices, buffers, fencing and locking mechanisms, mechanical or hydraulic drives)	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
14060300MK	load-carrying means (ropes and chains with guides and attachments, lever pooling system, hydraulic drives, gear racks, spindles)	3			
14060400MK	safety devices	3			
15000000	**AUTOMATION**				
15010000	Integrated control system of technical means (Integrated automation systems)	4			
15020000	Alarm and monitoring system, including computer-based systems	4			
15030000	**Main machinery automated (remote control) systems:**				
15030100	remote automated control systems of main internal combustion engines	4			
15030200	remote automated control systems of main machinery with CPP	4			
15030300	remote automated control systems of main gas turbines	4			
15030400	remote automated control systems of main steerable propellers	4			
15030500	dynamic positioning systems for ships and MODU	5			
15030510	computer-based systems, associated software and interfaces used for automated control systems of the thrusters with the use of the single control device (joystick) or several control devices	4			
15030520	operator panel system with controls and data displays	4			
15030530	position reference systems	2			
15030600	remote automated control systems of electrical propulsion plants with podded azimuth thrusters	4			
15030700	automated control systems of self-elevating MODU	4			
15030800	remote automated control system of ballast systems of column-stabilized MODU	4			
15030900	remote automated control systems of azimuth and tunnel thrusters	4			
15031000	remote control and automated hull stabilization systems of high-speed craft	4			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
15040000	**Control systems of electric power plants:**				
15040100	remote automated starting and stopping systems of diesel generator sets	4			
15040200	remote automated starting and stopping systems of turbo generator sets	4			
15040300	remote automated starting and stopping systems of shaft generator sets (where coupling control system is provided)	4			
15040400	remote automated control system of ship electric power plants	4			
15050000	**Control systems of boiler installation:**				
15050100	automated control systems of main boiler installations	4			
15050200	automated control systems of auxiliary boiler installations	4			
15050300	automated control systems of exhaust gas boiler installations	4			
15050400	automated control systems of hot water boiler installations	4			
15060000	**Control systems of auxiliary machinery:**				
15060100	automated control systems of compressors	4			
15060200	automated control systems of fuel oil, lub oil separators	4			
15060300	automated control systems of filters	4			
15060400	automated control systems of pumps (lubricating oil, fuel oil, cooling and etc.)	4			
15060500	automated control systems of fuel preparation (temperature, viscosity)	4			
15070000	**Remote control of ships systems and remote level gauges:**				
15070100	remote control systems of ballast and bilge system (together with remote controlled valves)	4			
15070200	remote control systems of heel and trim systems	4			
15070300	remote control systems of cargo piping systems of oil tankers	4			
15070400	remote control systems of cargo piping systems of gas carriers	4			
15070500	remote control systems of cargo piping systems of chemical tankers	4			
15080000	Automation systems of deck machinery	4			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
15090000	**Devices:**				
15090100	automation devices as part of control systems listed in codes 15010000 — 15080000	2			
15090500	oil mist detectors in crankcases of internal combustion engines (as well as internal combustion engines bearing temperature monitors or equivalent devices for the prevention of explosion in the crankcase)	3			
15090600	ships computers and programmable logic controllers (PLC)	2	CTO MR		
15090700	electronic devices of operation of internal combustion engines	2			
15100000	**Indirect action controllers of:**				
15100101	level	2			
15100102	pressure	2			
15100103	temperature	2			
15100104	viscosity	2			
15100105	speed	2			
15110000	**Sensors and indicators of:**				
15110101	level	2	CTO MR		
15110102	pressure	2	CTO MR		
15110103	temperature	2	CTO MR		
15110104	flow	2	CTO MR		
15110105	salinity	2			
15110106	vibration	2			
15110107	position	2	CTO MR		
15110108	sensors of position ship and external force sensors	2			
15110110	gas concentration	2			
15119999	other	1	CTO MR		
15120000	Panels, switchboards and other enclosures for automation systems	1			
15130000	Remote-reading measuring devices, instruments	1			
15130100	Equipment diagnostic facilities	1			
16000000	**FIBER-REINFORCED PLASTIC SHIPS**				
16010000	Fiber-reinforced plastic for hull and lifeboats	2			
16020000	Hull	5			
17000000	**SHIPS CARRYING LIQUIFIED GASES IN BULK (LG CARRIERS)**				
17010000	**Materials and products**				
17011000	**Membrane cargo containment system — Mark III:**				
17011100	**Metallic materials and products**				
17011110	**Stainless steel plates**				
17011111	stainless steel sheets < 3 mm	4M			
17011112	stainless steel sheets ≥ 3 mm	4M			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
17011120	**Aluminium for reinforcement elements**	4M			
17011130	**Metallic products**				
17011131	staples	1/2			Group 1M — for staples of Category 3; Group 2M — for staples of Category 1 and 2
17011132	inner hull studs, nuts and washers	1			
17011133	stainless steel studs, nuts and washers	4			
17011134	expansion rivets (15 mm)	1			
17011135	stainless steel corners prefabricated elements	3			
17011136	anchor strips for primary barrier	4			
17011200	**Non-metallic materials and products**				
17011210	**Wooden materials**				
17011211	plywood	3M			
17011220	**Fibrous materials**				
17011221	glass wool	2M			
17011222	glass cloth	2M			
17011230	**Polymer compositions**				
17011231	reinforced polyurethane foam (R-PUF)	3M			
17011232	high density reinforced polyurethane foam (HDR-PUF)	3M			
17011233	low density foam (LDF)	1M			
17011240	**Adhesive materials**				
17011241	load bearing mastic	2M			
17011242	insulating panel adhesive	2M			
17011243	adhesive for secondary barrier	2M			
17011250	**Protective and interlayer materials**				
17011251	paint for inner hull protection	2M			
17011260	**Heat insulation blocks**				
17011261	thermal protection	1M			
17011262	secondary barrier components (rigid and flexible material) (RSB, FSB)	3			
17011263	primary barrier components	3			
17011264	flat wall panels prefabricated elements	3			
17011265	top bridge pads prefabricated elements	3			
17011266	flat joints based on glass wool	1			
17011267	corner panels prefabricated elements	3			
17011268	single legs prefabricated elements	3			
17012000	**Membrane cargo containment system — NO96:**				
17012100	**Metallic materials and products**				
17012110	Fe — Ni alloy (36 % Nickel) strips	4M			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
17012120	Fe — Ni (36 % Nickel) welding filler metal	2M			
17012130	**Metallic products**				
17012131	staples	1/2			Group 1M — for staples of Category 3; Group 2M — for staples of Category 1 and 2
17012132	collar stud	4			
17012133	self-locked nuts	2			
17012134	spring washers	2			
17012135	wood screws	1			
17012136	coupler base socket	4			
17012200	**Non-metallic materials and products**				
17012210	**Wooden materials**				
17012211	plywood	3M			
17012220	**Fibrous materials**				
17012221	glass wool	2M			
17012222	glass cloth	2M			
17012223	glass wool (for insulating box)	2M			
17012230	**Polymer compositions**				
17012231	reinforced polyurethane foam (R-PUF)	3M			
17012240	**Adhesive materials**				
17012241	load bearing mastic	2M			
17012242	insulating panel adhesive	2M			
17012243	glue	2M			
17012250	**Protective and interlayer materials**				
17012251	anti-sticking film	1M			
17012260	**Heat insulation blocks**				
17012261	thermal protection	1M			
17012262	insulating material	2M			
17012263	insulating boxes prefabricated elements	3			
17012264	flat wall panels (L03)	3			
17012265	flat wall panels (L03+)	3			
17012266	plywood cleat (L03, L03+)	3			
17012270	perlite	2M			
17020000	**Fittings:**				
17020110MK	cargo system valves (working temperature below – 55 °C)	4			
17020120	safety relief valves of cargo pipelines	4			
17020130MK	safety relief valves of cargo tank vent system (working temperature below – 55 °C)	4			
17020140MK	vacuum safety relief valves of cargo tanks (working temperature below – 55 °C)	4			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
17020210MK	expansion bellows for cargo systems (working temperature below – 55 °C)	4			
17020310MK	cargo vapour hoses (working temperature below – 55 °C)	4			
17030000	**Auxiliary machinery of cargo systems:**				
17030100	cargo transfer pumps (working temperature below – 55 °C)	4			
17030200MK	main cargo pumps (working temperature below – 55 °C)	4			
17030210MK	cargo stripping pumps (working temperature below – 55 °C)	4			
17030300MK	portable emergency cargo pumps (working temperature below – 55 °C)	4			
17030400MK	high duty compressors	5			
17030500MK	low duty compressors	5			
17040000	**Systems for disposing the evaporated cargo:**				
17040100	gas combustion unit (GCU)	5			
17040200	steam dumping arrangement	5			
17050000	**Cargo pressure and temperature control systems:**				
17050100	cargo refrigeration units	5			
17050200	reliquefaction units for cargo vapours	5			
18000000	**NUCLEAR SHIPS AND NUCLEAR SUPPORT VESSELSS**				
18010000	**Ship hull (additionally to non-nuclear ships):**	5			
18010100	components of containment structures	5			
18020000	**Nuclear reactors:**	5			
18020100	reactor vessels	5			
18020200	roofs with their securing items	5			
18020300	removable and non-removable internals	5			
18030000	**Cores:**	5			
18030100	fuel elements	5			
18030200	fuel assembly	5			
18030300	protective covers	5			
18030400	rods:	5			
18030401	emergency shutdown rods	5			
18030402	burnable poison rods	5			
18030403	shim rods	5			
18030500	working neutron sources	5			
18040000	**Automation and protective systems of NSSS:**	5			
18040100	automatic and remote control and protective systems of nuclear reactors	5			
18040200	automatic monitoring and alarm systems of nuclear reactors	5			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
18040300	automatic and remote control, protection, monitoring and alarm systems of NSSS	5			
18040400	control, protection, monitoring and alarm devices of NSSS	5			
18040401	drives and actuating mechanisms of automatic and remote controls	5			
18040402	drives and actuating mechanisms of emergency protection of automatic and remote control, protection, monitoring and alarm systems	5			
18040403	measuring equipment of nuclear reactor power	5			
18040404	level gauges	5			
18040405	thermocouples and resistance thermometers	5			
18040406	NSSS parameter transducers	5			
18040407	pressure sensors	5			
18040407	flowmeters	5			
18050000	**NSSS machinery:**	5			
18050100	primary coolant circulating pumps	5			
18050200	fresh water pumps for equipment cooling and protection	5			
18050300	sea water pumps for equipment cooling	5			
18050500	pumps and ejectors of NSSS space drainage system	5			
18050600	pumps of primary coolant make-up system	5			
18050700	pumps of emergency core cooling system	5			
18050800	pumps of automation hydraulic system	5			
18050900	pumps of residual heat removal system	5			
18051000	sorbent transfer pumps	5			
18051100	high-pressure gas compressors	5			
18051200	controlled area fans	5			
18051300	high pressure air compressors	5			
18051400	medium pressure air compressors	5			
18051500	vacuum compressors	5			
18060000	**Heat exchangers and pressure vessels:**				
18060100	Steam generators:	5			
18060101	housings	5			
18060102	tube system	5			
18060106	fittings	5			
18060200	pressure compensators	5			
18060300	filters: primary circuit, primary coolant filling and makeup system, fresh water cooling system, radioactive drainage and process water treatment systems	5			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
18060400	heat exchangers of fresh water cooling and protection circuit	5			
18060500	air coolers	5			
18060600	sludge collecting tanks of primary circuit and fresh water cooling and protection system filters	5			
18060700	coolers of primary circuit filters	5			
18060800	drainage and collecting tanks	5			
18060900	gas and air bottles	5			
18061000	pneumatic and hydraulic receivers	5			
18061100	steel-water protection tanks	5			
18061200	first circuit recuperative heat exchangers	5			
18070000	**Equipment, components of systems of safety classes 1, 2 and 3:**	5			
18080000	Fittings and valves of systems of safety classes 1, 2 and 3	5			
18090000	Radiation monitoring system and means	5			
18100000	Protection means against radioactive radiation and radioactive substance spreading	5			
18110000	Liquid radioactive waste treatment equipment	5			
18120000	Shielding	5			
18130000	Fuel assembly storage facilities	5			
18140000	Core handling equipment	5			
18150000	The complex of technical means of physical protection	5			
18160000	Rolled products, forgings, castings, pipes for equipment and systems of safety classes 1, 2 and 3	5M			
18170000	Pipes and pipeline sections of systems of safety classes 1 and 2, fittings of systems of safety classes 1 and 2	5			
19000000MK	**EQUIPMENT AND ARRANGMENTS FOR THE PREVENTION OF POLLUTION FROM SHIPS**				
19020200MK	15 ppm Bilge Separators (IMO resolution MEPC.107(49))	3			
19030100MK	Discharge monitoring and control systems and meters for automatic measuring oil content in ballast and washing water discharge (IMO resolution MEPC.108(49))	3			
19030202MK	15 ppm Bilge Alarm (IMO resolution MEPC.107(49))	3			
19040000MK	Oil/water interface detectors in slop tanks	3			
19070000MK	Washing systems:				
19070100MK	washing machines	3			

Code of item of technical supervision	Item of technical supervision	Technical supervision of the Register			Remarks
		Group of item of technical supervision (1 — 5)	Other documents issued by RS	Branding	
1	2	3	4	5	6
19080000MK	Incinerators	3			
19080300MK	Oil residues processing (tank for mixing oil residues with fuel oil, oil residues preheating system, homogenization system)	2			
19090000MK	Sewage treatment plants (IMO resolution MEPC.227(64))	3			
19090001MK	Sewage treatment plant (IMO resolution MEPC.159(55))	3			
19100000MK	Sewage comminution and disinfection systems	3			
19120000	Sewage pumps (ejectors)	3			
19140000MK	Garbage treatment plants	3			
19150000MK	Garbage containers	1			
19160000MK	Equipment and arrangements for prevention of pollution by noxious liquid substances	3			
19170000MK	Equipment and arrangements for prevention of air pollution	3			
19170100MK	Exhaust gas cleaning (EGC) unit to reduce SO_x emission (IMO resolution MEPC.259(68), survey under Scheme A)	3			
19170101MK	SO_x continuous exhaust gas monitoring system (IMO resolution MEPC.259(68))	3			
19170102MK	Exhaust gas cleaning (EGC) unit to reduce SO_x emission (IMO resolution MEPC.259(68), survey under Scheme B)	2	SECC		
19170300MK	Sampling equipment	3			
19210000	Oily waters deep purification plants as part of separator for 5 ppm, indicator/oil content meter for 5 ppm and automatic stopping device control for oil discharge	3			
19220000MK	Ballast water management systems (IMO resolution MEPC.174(58))	3	СОТО		
19220001MK	Ballast water management systems (IMO resolution MEPC.300(72))	3	СОТО		
20000000	**SOFTWARE**				
20100000	**Software for ship theory and strength calculations**				
20101000	Design software for ship theory and strength calculations	2	СТОП		
20102000	Onboard software for ship theory and strength calculations	4	СТОП		
20200000	Machinery software	2	СТОП		
20300000	Electrical equipment and automation software	2	СТОП		

APPENDIX 2

INSTRUCTIONS ON BRANDING OF ITEMS OF THE REGISTER TECHNICAL SUPERVISION

1 GENERAL

1.1 These Instructions supplement and explain the RS Nomenclature (refer to Appendix 1).

1.2 Materials that have appropriate entry in the RS Nomenclature are subject to mandatory branding. Semi-finished products, testing samples as well as products and parts are subject to branding if required by the relevant Parts of the RS rules.

1.3 In the course of manufacture of certain materials, products and their parts under technical supervision of the RS surveyor and/or the manufacturer technical personnel in accordance with the contract on technical supervision (refer to 4.4 of this Part), these materials, products and parts as well as samples taken therefrom may be branded at certain stages of their manufacture.

1.4 All the provisions of these Instructions equally refer to all spare parts, irrespective of the fact whether they have been produced for a newbuilding constructed under the Register standards or to replace the products and parts on ships in service.

1.5 In case it is found in the course of processing, assembly, construction or installation at the shipyard that the material, product or parts are defective or do not comply with the RS rules and other RS normative documents, as well as with the technical documentation approved by the Register, they may be rejected, irrespective of the presence of the RS brand. In this case, the RS brand shall be cancelled.

The cancellation of the brands shall be done in the presence of the RS surveyor, the manufacturer technical personnel authorized under the contract on technical supervision to do branding.

1.6 All the provisions of these Instructions equally refer to the RS surveyors and the manufacturer technical personnel in accordance with the contract on technical supervision (refer to 4.4 of this Part), as well as to officials of the manufactures.

2 REGISTER BRAND

2.1 For branding materials, products and parts, use is made of brands and stamps.

2.2 Brands are used for branding materials, products and parts made of metal or material enabling to put a durable brand imprint.

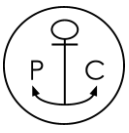


Fig. 2.2
Imprint specimen of brand

2.3 The RS surveyor or the manufacturer technical personnel in accordance with the contract on technical supervision (refer to 4.4 of this Part) may put the RS brand on:

.1 test specimens and products from which these specimens are taken for mechanical tests and examinations;

.2 products and parts, which production process has not been completed, subject to further machining;

.3 finished materials, products or parts manufactured, surveyed and tested in compliance with the RS rules and other RS normative documents as well as with the technical documentation approved by the Register.

2.4 In case materials, products or parts bearing brands are rejected, the brand imprint shall be destroyed.

2.5 The RS surveyor′s stamp may be used for branding with indelible paint of non-metal products made of materials where the brand impression cannot be preserved for a long time, but the area available is enough to put a stamp (lifebuoys, lifejackets, inflatable liferafts, etc.).

2.6 The RS surveyor's stamp imprint is shown in Fig. 2.6.



Fig. 2.6
Imprint specimen of the RS surveyor's stamp

2.7 In case the product is rejected after a stamp has been put thereon, the whole imprint shall be filled with the indelible paint.

3 GENERAL INSTRUCTIONS ON BRANDING

3.1 Presence of brands of the RS surveyor or the manufacturer technical personnel in accordance with the contract on technical supervision (refer to 4.4 of this Part) on the materials and products does not relieve the supplier from submittal of the documents required by the Register.

3.2 The Register does not put its brand on the parts after repair.

3.3 Brands and stamps shall be kept by the RS surveyor and the manufacturer technical personnel in accordance with the contract on technical supervision (refer to 4.4 of this Part) under conditions preventing them from an unauthorized use.

3.4 Branding of materials, products and parts shall be done in the presence and under the instructions of the RS surveyor, the manufacturer technical personnel in accordance with the contract on technical supervision (refer to 4.4 of this Part).

3.5 Brands shall be generally put on materials, products and parts in readily accessible places in such a way that they can be easily found after installation on board the ship.

3.6 Where it is difficult to find the places of brands (plates, rolled products, forgings, castings, etc.), the brand shall be put in the frame made with a contrast paint.

3.7 In branding the products to undergo further machining the brand shall be put in places, which will not be machined later. If it is impracticable, the brand shall be transferred in the course of machining as stated in Section 4.

3.8 Finished products as well as products, which manufacturing process has not been completed and which shall undergo further machining at other manufacturers, in case the products bear the Register brand, shall be provided with a certificate or another appropriate document.

Such documents shall bear an imprint of the brand (stamp), which has been put on the product. If there is no place specially provided for the imprint, the latter shall be put in the bottom part of the form above the RS surveyor′s signature.

4 TRANSFER OF BRANDS

4.1 The RS brands shall be preserved in any machining or assembly of the parts. Where brands shall be cut because of the processing conditions, they shall be transferred to another place. For this purpose manufacturer′s marking shall be transferred to a new place, and then the part shall be presented to the RS surveyor for transference of the brand.

4.2 In particular cases, the RS surveyor may allow to cut the brand and to transfer manufacturer's marking of the part to a new place under supervision of the manufacturer′s supervisor. In such cases, the supervisor shall make an entry in the workshop′s log, draw up a report and put their brand on the part.

Based on log entry or report and the manufacturer's supervisor brand, the RS surveyor puts the new RS brand on the part.

Russian Maritime Register of Shipping

Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships
Part I
General Regulations for Technical Supervision

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