RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER **No. 382-04-1781c** dated 02.06.2022

Re:

amendments to the Collection of the Rules for Containers, 2021, ND No. 2-090201-012-E

Item(s) of supervision:

containers, materials and products for containers

Entry-into-force date:

From the date of publication

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

Number of pages: 1 + 27

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to the Rules for Technical Supervision of Containers in Service

Director General Konstantin G. Palnikov

Text of CL:

We hereby inform that the Rules of Technical Supervision of Containers in Service shall be amended as specified in the Appendices to the Circular Letter.

It is necessary to do the following:

1. Bring the content of the Circular Letter to the notice of the RS surveyors, interested organizations and persons in the area of the RS Branch Offices' activity.
2. Apply the provisions of this Circular Letter in the RS practical activity from the date of amendments entering into force.

List of amended and/or added paras/chapters/sections:

Rules for Technical Supervision of Containers in Service

Person in charge: Dmitry. I. Yarveper 382 +7 (812) 315-46-98

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Appendix 1 to Circular Letter
No. 382-08-1781c dated 02.06.2022

Information on amendments introduced by the Circular Letter
(for inclusion in the Revision History to the RS Publication)

No.	Amended paras/chapters/ sections	Information on amendments	No. and date of the Circular Letter introducing the amendments	Entry-into-force date
1	Rules for Technical Supervision of Containers in Service	The text of the Rules has been completely revised considering General Regulations for the Technical Supervision of Containers and the amendments to the International Maritime Code for Dangerous Goods (40-20) entering into force	382-04-1781c of 02.06.2022	02.06.2022

COLLECTION OF THE RULES FOR CONTAINERS, 2021,

ND No. 2-090201-012-E

RULES FOR TECHNICAL SUPERVISION OF CONTAINERS IN SERVICE is replaced by the following text:

"**RULES FOR TECHNICAL SUPERVISION OF CONTAINERS IN SERVICE**

1 GENERAL

1.1 APPLICATION

1.1.1 The Rules for Technical Supervision of Containers in Service (hereinafter referred to as "these Rules") apply by the Russian Maritime Register of Shipping (RS) during the technical supervision of containers and products for containers in service, repair and modernization.

1.1.2 The requirements of these Rules are mandatory for all organizations and persons involved in service, repair and modernization of containers and products for containers.

When the technical supervision is performed in other countries the provisions of these Rules may be applied regarding salient features and differences in the in the production processes typical of each particular country.

1.1.3 Matters not covered by the Rules are within the competence of the RS Head Office (RHO).

1.1.4 Interpretation of provisions herein is within the RHO terms of reference.

1.2 DEFINITIONS, ABBREVIATIONS AND EXPLANATIONS

1.2.1 Definitions, abbreviations and explanations related to the general terminology of the Rules are given in 1.1, the General Regulations for the Technical Supervision of Containers. For the purpose of this Part, the following definitions and abbreviations have been adopted.

Verified gross mass is the total gross mass of a packed loaded container as obtained by one of the two methods:

method 1: weighing of a fully packed and sealed container;

method 2: weighing all cargo items, packages, securing means and other material equipment to be loaded and added tare mass of the container using the calculation procedures agreed by RS.

Shipper is a legal entity or a person named on the bill of lading or sea bill of landing or equivalent multimodal transport document (e.g. "through" bill of lading) as shipper and/or who (or in whose name or on whose behalf) a contract of carriage has been concluded with a shipper.

1.2.2 Abbreviations.

ACEP — Continuous Survey Program of containers.

RTM — Residual thickness measurement.

1.3 GENERAL

1.3.1 The purpose of the technical supervision is to determine and to establish compliance of items of technical supervision with the RS requirements at the time of survey.

1.3.2 All technical supervision services are rendered by the Register based on requests and agreements with organizations, firms and individuals (refer to 1.5).

1.3.3 Scope of technical supervision is established by the following provisions of these Rules.

1.3.4 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.

1.3.5 In its activity the Register does not substitute the prescribed activity of the state supervision authorities or officials, owners and firm.

1.3.6 In the course of technical supervision the Register may impose the 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.

1.3.7 In case of the differences associated with requirements and decisions of the surveyor carrying out technical supervision, an owner 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.

1.3.8 General recommendation on determination of technical condition of tank container are stated in the “Recommendations on determination of technical condition of tank container.

1.3.9 The Register charges for the services rendered, in accordance with the procedure established in the General Conditions for Rendering Services by RS.

1.4 GENERAL

1.4.1 Non-destructive testing and quality assessment of welded joints of containers, when required by these Rules, shall be performed by testing laboratories (centers), whose competence and status comply with the requirements for accreditation in accordance with national or international standards.

The Recognition (Accreditation) Certificate issued by the Register or by other authorized national body is a document confirming competence of the testing laboratory. In the latter case the copy of the Certificate with supplements shall be submitted to the Register surveyor prior to non-destructive testing.

Requirements for testing laboratories and procedure of their acceptance by RS are given in 1.6, Part I "Basic Requirements" of the Rules for Manufacture of Containers.

1.5 REQUESTS AND AGREEMENTS ON TECHNICAL SUPERVISION

1.5.1 Where the necessity of the RS technical supervision in contracted documentation for manufacture of items of the RS technical supervision is indicated, the firm shall address to RS a written request to carry out technical supervision and to guarantee payment of the Register services and reimbursement of the Register expenses, as well as with the confirmation of familiarization with the General Conditions for the Provision of Services by RS. The General Conditions for Rendering Services are constituent and integral part of all the contracts concluded by the Register.

1.5.2 The request shall provide the information to an extent sufficient for review and execution thereof.

1.5.3 On the results of the request review, depending on the particular conditions of the oncoming technical supervision (scope, item, duration, etc.) RS being guided by the current regulations, determines the necessity of signing an agreement on technical supervision or performs technical supervision in accordance with the request without signing an agreement.

1.5.4 The contract on technical supervision of the Register specifies the items of technical supervision and regulates mutual relations, rights and responsibilities of the parties in the course of the Register technical supervision.

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.

1.6 PROVISION OF TECHNICAL SUPERVISION

1.6.1 The manufacturer shall provide all the conditions necessary for the Register to carry out technical supervision, namely:

.1 provide a surveyor with:

.1.1 free access to all places of work performance;

.1.2 occupational health and safety compliance during the survey as applied to the items of technical supervision;

.1.3 availability of the officials authorized to present to the surveyor containers and container products for survey;

.1.4 timely information of the time and place of surveys and tests;

.1.5 possibility of inspection of any part and assembly of the container and/or product with the use of necessary means and tools;

.2 provide a surveyor with:

.2.1 necessary documentation.

1.6.2 Where the conditions required for performance of technical supervision are not fulfilled by the manufacturer, the surveyor has the right to refuse to carry out technical supervision.

1.7 DOCUMENTS

1.7.1 Based on results of the Register technical supervision, the documents provided for by the RS List of Documents to be Issued during Technical Supervision and specified in 1.4 of the General Regulations for the Technical Supervision of Containers, are drawn up.

2. RECOGNITION AND AURIDT OF FIRMS

2.1 GENERAL

2.1.1 The requirements of this section apply to firms performing the activity related to containers, the types of which are given in Table 2.1.5 of the General Regulations for the Technical Supervision of Containers.

2.1.2 Check of conformity or recognition of firm is confirmed by issuing RS СП, ССП or СПО and includes:

.1 review of documents confirming the firm's compliance with the Register 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. During periodical or renewal survey, to comply with this requirement the results of works or services previously endorsed by the Register, may be submitted 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 practically demonstrate the performance of works and specific services during the initial survey, the Register may issue a short-term certificate for a period not exceeding 90 days. All stages of work shall be performed in attendance of 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, after that a certificate can be issued for the full term.

2.1.3 When a firm has several work sites, each site shall be surveyed.

2.1.4 When a firm performs residual thickness measurement (RTM), in addition, the requirement of 2.3.4 shall be checked during the survey of firm.

2.2 GENERAL REQUIREMENTS TO FIRMS

2.2.1 Legal status.

2.2.1.1 Legal status of the manufacturer shall comply with the current legislation.

2.2.1.2 The manufacturer shall have organizational structure and the Head Officer.

2.2.2 Personnel.

2.2.2.1 Personnel of the firm shall have the appropriate vocational and special training, as well as qualification required to perform the activity in the area indicated.

2.2.2.2 The firm shall have the regular staff of specialists. Where specialists of other firms are involved in work performance, the firm which personnel in involved in work performance shall have ССП or СП.

2.2.2.3 The firm in responsible for provision of qualification and training of its personnel in compliance with the particular national, international or industrial standard. At the absence of such standards, a firm on its own shall establish the standards for training and qualification of its personnel in compliance with functions to be performed by each employee. The personnel shall also have pertinent experience and be acquainted with operation of any equipment that may be required.

2.2.3 Technique.

2.2.3.1 The firm shall have the following:

.1 technique required for performing the activity in the declared area complying with the declared work based on its characteristics;

.2 place for performing the declared work. Where the work is performed throughout the year, the conditions for performing the declared work shall be provided.

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

2.2.4 Measurement assurance.

2.2.4.1 The firm shall have and apply the necessary measurement assurance, namely:

.1 measuring instruments checked (calibrated) in accordance with the established procedure (valid check-out documents);

.2 testing equipment certified in accordance with the established procedure;

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

2.2.5 Document files of the firm.

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

.1 list of activities performed (area of activity);

.2 operating and maintenance documentation of equipment;

.3 duty regulations;

.4 documents on records keeping and archives maintenance.

2.2.6 Subcontractors.

2.2.6.1 Subcontractors recruited by the firm to perform the activity in the area indicated in the request shall fulfill the requirements of this section.

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

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

2.3 RECOGNITION AND AUDIT OF FIRMS

2.3.1 General

2.3.1.1 Verification of a firm consists in confirming the ability of the firm to perform work in the declared area in compliance with the requirements of the RS Rules.

2.3.1.2 The firm shall meet the requirements of 2.2 and the requirements of this Chapter.

2.3.1.3 Recognition of the firm by the Register is confirmed by issuing ССП (Certificate of Firm Conformity) in accordance with 1.4 of the General Regulations for the Technical Supervision of Containers.

2.3.2 Requirements

2.3.2.1 *Document files of the firm.*

2.3.2.1.1 The firm shall have the valid normative and technical documents necessary to perform activity in the area indicated in the request, including the programs and testing procedures agreed with RS.

2.3.3 Special requirements to firms performing repair and modernization of containers (codes 40000001, 40000002).

2.3.3.1 *Document files of the firm.*

2.3.3.1.1 Container repair organizational chart implemented at the repair firm with indication of the location of test areas, production process monitoring, storage of materials, accessories, etc.;

2.3.3.1.2 Welder Approval Test Certificates;

2.3.3.1.3 Welding procedures;

2.3.3.1.4 Documents for applicable welding consumables;

2.3.3.1.5 Documents in accordance with 4.2.

2.3.3.2 *The firm shall confirm that it undertakes to:*

2.3.3.2.1 submit to the Register for inspection the containers under repair at various stages of repairing;

2.3.3.2.2 agree with the Register any alterations in the technical documentation on repairs and in repairing procedures;

2.3.3.2.3 fulfil the requirements of the RS Rules;

2.3.3.2.4 submit certificates and relevant documents for accessories and materials used in repairing containers.

2.3.4 Special requirements to firms performing residual thickness measurements of tank container shells (codes 40000001, 40000002, 40000006).

2.3.4.1 Specialists performing RTM shall undergo appropriate training and have valid certificates.

2.3.4.2 RTM shall be performed on the basis of the relevant test procedures agreed by RS, taking into consideration the environmental conditions. Use shall be made of:

.1 measuring instruments checked (calibrated) in accordance with the established procedure;

.2 certified testing equipment.

2.3.4.3 Technical facilities shall comply with the RTM procedures applicable at the firm.

2.3.4.4 Reporting.

2.3.4.4.1 RTM record shall contain:

.1 name and address of the firm;

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

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

.4 description (name) of the item, in relation to which the activity has been performed;

.5 place where the activity has been performed;

.6 date when the activity has been performed;

.7 full name, position and signature of the person who approved the report;

.8 number of every page and the total number of pages in the report;

.9 designation: "Test Report" or "Conclusion";

.10 test results with indication of units of measurements in accordance with the testing procedures;

.11 indication that the test results are valid only for the products tested.

2.3.4.4.2 Reports shall be stored in the firm for not less than 5 years under conditions of confidentiality. This requirement shall be specified in the firm documents.

2.4 RECOGNITION OF FIRMS

2.4.1 General.

2.4.1.1 Verification of a firm with issuing СП (Recognition Certificate) consists of confirming the possibility and capability of the firm to perform work in the declared area under consistent quality and of adequate level in compliance with the requirements of the Rules.

On receipt of СП the scope of technical supervision where the attendance of the RS is mandatory shall be agreed between the firm and RS.

N o t e . The RS surveyor shall be in attendance during the tightness and strength tests of tank containers.

2.4.1.2 The recognition of the firm with issuing СПО in each particular case shall be determined by the RHO and consists of verification of the feasibility and ability of the firm to perform work on examination of containers, except for tank containers, in compliance with the criteria of safe container operation stated in these Rules.

2.4.1.2 The firm shall meet the requirements stated in 2.3 and the requirements of this chapter.

2.4.1.3 Recognition of the firm by the Register is confirmed by issuing Recognition Certificate (СП) or Recognition Certificate for the Firm Performing Freight Container Inspection (СПО) that is issued in accordance with 1.4 of the General Regulations for the Technical Supervision of Containers.

N o t e . For СП obtaining, the firm shall submit to the RS surveyor at least 10 tank container or 30 containers of other types with the positive results. For СПО obtaining, the firm submit to the RS surveyor at least 30 containers with positive results.

2.4.2 Requirements.

2.4.2.3 *Checking and control.*

2.4.2.3.1 The firm shall ensure control of all services rendered. An authorized supervisor shall have at least two years of work experience as a performer in the work area in respect of which the recognition is requested by the firm.

2.4.2.3.2 The firm shall take measures on elimination and prevention of non-conformities and complaints against the firm activity in the area indicated in the request.

2.4.2.4 *Technique.*

2.4.2.4.1 A log of the applicable equipment shall be maintained and be available at the firm. Such a log shall contain the information on maintenance and the results of calibration and checkout.

2.4.2.5 *Data control.*

2.4.2.5.1 Where computers are used for collection, processing, recording, transfer, storage, measuring, assessment and control of data, the engineering capabilities (characteristics of software to be applied for the above purpose, shall be documented and confirmed by the firm. This requirement shall be met prior to using thereof and, where necessary, shall be repeatedly confirmed.

N o t e . Commercial software application (e.g. text editor, data bases and statistical software) being used with standard characteristics within the estimated field of application may be considered as sufficiently checked and requiring no further verification.

2.4.2.7 *Document files of the firm.*

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

.1 brief description of the firm, e.g., organizational chart and management structure, as well as subsidiaries included in the recognition process.

.2 programs and procedures of testing;

.3 a list of assigned agents, subsidiaries and subcontractors;

.4 the firm experience in the particular field of services rendering;

.5 a list (log) of the employees containing an information on the age, education received in educational institutions, occupational training and experience in respect of which the recognition is requested by the firm;

.6 documents confirming approval/recognition from other organizations (where available);

.7 a log of the customer claims and corrective actions;

.8 the documents for recording the detected damage and defects shall be available.

2.4.2.8 *Quality Management System.*

2.4.2.8.1 The firm shall have a documented quality management system to cover 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 programs of operators/technicians/surveyors;

.5 checking and control to ensure compliance of work results with working 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 periodical verification of procedures for working process, complaints, corrective actions as well as certificate issue, maintenance and management.

2.4.2.8.2 A documented quality management system corresponding to the latest version of ISO series 9001 standard and incorporating the above requirements shall be deemed complying with the requirement of 2.4.2.8.

2.4.2.9 *Reporting.*

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

.1 name and address of the firm;

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

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

.4 description (name) and identification of the item, in relation to which the activity has been performed;

.5 place where the activity has been performed;

.6 date when the activity has been performed;

.7 information on deviations from the requirements of the documents, in compliance with which the activity has been performed;

.8 entry that the activity has been performed under the RS technical supervision;

.9 full name, position and signature of the person who approved the report;

.10 number of every page and the total number of pages in the report.

2.4.2.9.2 Reports shall be stored in the firm for not less than 5 years under conditions of confidentiality. This requirement shall be specified in the firm documents.

2.4.2.10 *Subcontractors.*

2.4.2.10.1 The firm shall information on agreements and covenants, where any part of the services rendered is subcontracted. Subcontractor presenting anything except for the equipment shall also meet the general requirements specified in 9.3.2.

2.4.2.11 Information on alterations to the certified service operation system.

2.4.2.11.1 In case where any alteration to the documented service rendering system of the supplier is made, such alteration shall be immediately reported to the Register. Re-audit may be required when deemed necessary by the Register.

2.4.3 Special requirements to firms performing repair and modernization of containers (codes 40000001, 40000002).

2.4.3.1 *Document files of the firm.*

2.4.3.1.1 Container repair organizational chart implemented at the repair firm with indication of the location of test areas, production process monitoring, storage of materials, accessories, etc.

2.4.3.1.2 Welder Approval Test Certificates.

2.4.3.1.3 Welding procedures (for code 40000001).

2.4.3.1.4 Documents for applicable welding consumables.

2.4.3.1.5 Documents in accordance with 4.1.

2.4.3.2 *The firm shall confirm that it undertakes to:*

2.4.3.2.1 submit to the Register for inspection the containers under repair at various stages of repairing;

2.4.3.2.2 agree with the Register any alterations in the technical documentation on repairs and in repairing procedures;

2.4.3.2.3 fulfill CCC requirements for design of containers;

2.4.3.2.4 submit certificates and relevant documents for accessories and materials used in repairing containers.

2.4.4 Special requirements to the firm performing freight container examination (except for tank containers) in service in compliance with the CSC requirements (code 40000004 MK).

2.4.4.1 *Legal status.*

2.4.4.1.1 A firm that has the status of a legal entity during inspections of containers shall be independent of the parties interested in the results of inspections.

2.4.4.1.2 The firm shall be responsible for the impartiality and objectivity of the containers inspection results.

2.4.4.1.3 The firm shall be able to demonstrate that it is impartial and that neither the firm nor its personnel are under commercial or other pressure that could affect their technical solutions.

2.4.4.2 *Personnel.*

2.4.4.2.1 The firm's personnel performing the examination of containers shall have valid certificates to confirm completion of a theoretical training course on the subject "Freight containers, international and national requirements".

2.4.4.2.2 Personnel performing container examinations shall have at least 1 year of practical experience in the area of recording or appraisal of freight container technical condition.

2.4.4.3 *Document files of the firm.*

2.4.4.3.1 The firm shall have valid regulatory and technical documents required for stated activities including:

.1 documents which contain requirements for freight containers, CSC and the Register Rules included;

.2 container examination procedure and deformation measurement methodology agreed with RS;

.3 occupational safety documents for container inspection;

2.4.4.4 *Reporting.*

2.4.4.4.1 The form and contents of reports (container examination reports, damage description where necessary) shall comply with the requirements of the RS Rules and include at least the following:

.1 container identification numbers and necessary data from statutory plates;

.2 data on damage, wear and defects to be repaired;

.3 conclusion on the opportunity for the RS certificate issue;

.4 photos of the examined containers and their damage within the scope necessary to determine whether the container condition is in accordance with established requirements.

2.4.4.4.2 Subject to observance of confidentiality provisions, the firm shall keep records (databases) of requests, numbers of the examined containers, issued examination and survey reports.

2.4.4.4.3 The firm shall preserve copies of the issued reports for five years at least, which shall be specified in its documents.

2.5 RECOGNITION OF ORGANIZATIONS OR FIRMS OPERATING WITHIN IMO RESOLUTION MSC.380(94) TO COMMUNICATE THE VERIFIED GROSS MASS OF CONTAINERS

2.5.1 General.

2.5.1.1 The requirements of this section apply to the organizations or firms acting in compliance with IMO resolution MSC.380(94) and engaged in weighing packed and sealed containers using Method 1 as well as shippers using Method 2 to communicate the verified gross mass of containers.

2.5.1.2 Recognition of organizations or firms consists of the Register approval of the feasibility and ability of the firm or organization to perform the work with the consistent quality and at the appropriate level to determine the verified gross mass of containers using Method 1 and/or Method 2.

2.5.1.3 The organizations and firms shall meet the requirements of 2.2 and the requirements of this chapter.

2.5.1.4 Recognition of the firm by the Register is confirmed by issuing the СП (Recognition Certificate) in accordance with 1.4 of the General Regulations for the Technical Supervision of Containers.

2.5.2 Requirements.

2.5.2.1 *Files of documents*

2.5.2.1.1 For the firms performing the work on determination of the verified gross mass of containers using Method 1:

.1 the procedure and method for container weighing;

.2 a list of the equipment utilized for the containers weighing, the technical documentation (data sheet), information on the routine maintenance carried out, documents declaring the prescribed manner the equipment verification and calibration, the schedules of maintenance of equipment;

.3 documents on the identification system and recording of the documents issued;

.4 list of the trained personnel.

2.5.2.1.2 For the firms performing the work on determination of the verified gross mass of containers using Method 2:

.1 calculation procedure for gross mass of packed including cargo (cargoes), securing, separating and backing materials, etc., as well as their properties if they affect the mass, for example, humidity that shall be regarded by the calculation method;

.2 the documented procedure for weighing method of cargo items and package, including pallets, separating and backing and other materials intended to load and secure, to be packed in the container, and adding tare mass of the container. In doing so, if the third party, besides the shipper, participates in communicating the verified gross mass of a container which has either performed packing of all the cargo items in the container, or a part of them, such party shall notify the cargo owner of the weighing location, claim responsibility for delivery of information on the weighed mass of cargo items; in this case, when loading a container, individual, original sealed packages that have the accurate mass of the packages and cargo items (including any other material such as packing material and refrigerants inside the packages) clearly and permanently marked on their surfaces, do not need to be weighed again when they are packed into the container;

.3 a list of equipment used for weighting, including equipment used by a third party with presenting technical documentation (certificate), information on preventive maintenance made, documents confirming check-out and calibration of equipment, schedules of maintenance of equipment;

.4 documents on the identification system and recording of the documents issued.

2.5.2.2 *Reporting.*

2.5.2.2.1 Form and content of reports shall at least include the following:

.1 unique number and date of issue;

.2 applicant's name and address (shipper);

.3 place and date of weighing;

.4 weighing means and information on its calibration;

.5 identification number of a container;

.6 weighing procedure;

.7 value of the verified gross mass of each container;

.8 declaration confirming that the gross mass of a container(s) has been approved in compliance with SOLAS (refer to IMO resolution MSC.380(94) of 21 November 2014);

.9 performer's full name and signature.

Names of a record's fields shall be both in Russian and in English.

2.5.2.2.2 Under conditions of confidentiality, the organization or firm shall keep records (database) of the requests and issued documents.

2.5.2.2.3 The organizations or firms shall keep copies of the issued reports for at least six months, which shall be established in the documents of the organization or firm.

2.5.2.3 *Checking and control.*

2.5.2.3.1 The organizations or firms shall check the compliance of the activity in the declared area with the requirements established in the documentation, as well as the compliance of the RS-agreed procedures and methods during the work performance.

2.5.2.3.2 The organizations and firms shall take measures on elimination and prevention of nonconformities and claims against the organization and firm's activity in the declared area.

2.5.2.4 Organizations or firms shall confirm that they:

.1 bear responsibility for the correctness of procedure application and the obtained value of the verified gross mass;

.2 carries out the container weighing to comply with CSC;

.3 will agree with RS introducing of any amendments to the RS-approved documents.

3 PERIODICAL SURVEYS

3.1 GENERAL

3.1.1 The responsibility for submission of containers for surveys within the prescribed terms and in the stipulated cases, presentation of necessary documents, as well as testing, gauging and inspecting for defects tests with the owner of containers.

3.1.2 The CSC gives the owners of container power to choose survey procedures:

.1 submission of containers to survey with a period of time, refer to 3.2;

.2 submission of containers for survey in accordance with approved ACEP program, refer to 3.3.

3.1.3 The responsibility for maintaining containers in proper condition for safe operation thereof rests with the owner of containers.

3.1.4 At time intervals between prescribed surveys the owner shall ensure the necessary checks and examinations to reveal possible defects and faults, availability of marking of the containers and its compliance with the requirements of CSC, IMDG Code and the requirements of the Rules for the Manufacture of Containers.

3.1.5 If an approved container has ceased to comply with the CSC provisions and the requirements of the Rules for the Manufacture of Containers due to structural or manufacturing defects revealed during service, and such occurrence is observed on a considerable number of containers out of the approved series, the Register may cancel the documents issued.

3.1.6 In case of loss of a CSC and/or CCC Plate, approval of an individual container for further service is subject to special consideration by the Register in each particular case.

3.2 SURVEY OF CONTAINERS

3.2.1 The Register performs:

.1 first special survey — not later than 60 months (5 years) from the date of a container manufacture.

N o t e . 1. Date (month, year) prior to it is necessary to carry out the first survey is indicated on CSC Table affixed to container upon manufacture thereof.

2. For tank containers for transportation of dangerous cargo the first periodical survey shall be carried out within the period specified in 3.4;

.2 further periodical surveys — with an interval not exceeding 30 months (2,5 years).

N o t e . Date (month, year) prior to which a periodical survey shall be conducted is indicated on CSC Table;

.3 occasional surveys to be held on application from owners of the containers or other organizations concerned.

3.2.2 Special surveys of the containers include:

.1 external examination including examination of the roof, base and internal volume of an empty container as well as examination of marking.

N o t e . If permissible load during the container stacking is less than 192000 kg of the force when testing for transverse racking is less than 150 kN, the marking of container type and size of container shall be applied/changed in compliance with ISO 6346;

.2 examination with provisions of access for examination, opening-up or dismantling of machinery (units), thermal insulation etc. at the discretion of the Register surveyor, depending on technical condition of the container;

.3 tests and inspections at the discretion of the Register inspector, depending on technical condition of the container.

3.3 CONTINUOUS SURVEY PROGRAM (ACEP)

3.3.1 Containers shall be surveyed under ACEP by means of:

.1 complete surveys which constitute surveys carried out upon major repair, updating, modification or taking on/off lease;

.2 examinations in service, which are considered as re-inspections performed with the aim to reveal any damage or wear which can necessitate corrective measures.

3.3.2 The containers, examination of which shall be made under ACEP, shall be subjected to complete survey in cases specified in 3.3.1.1, but at any case not less than once every 30 months.

3.3.3 The ACEP Program to be submitted to Register Head Office for approval, shall contain the following information:

.1 number of containers included in the program;

.2 numbers of Approval Certificates according to CSC provisions for each type of container design;

.3 information on technical characteristics of container models included in the program;

.4 a system for recording and updating the identification numbers of all containers included in the program;

.5 conditions and procedure for adding containers into an already approved program;

.6 methods, scope and criteria of the condition assessment being used during the container survey;

.7 qualifications of the personnel authorized to carry out surveys;

.8 the nature and periodicity of inspections;

.9 terms of surveys and measures to ensure container surveys at least once per 30 months (2,5 years);

.10 information on control system of the survey terms;

.11 measures that shall be taken by the owners in respect of containers which cease to comply with the CSC requirements and the requirements of the Rules;

.12 system of keeping records and documents that shall capture:

.12.1 the owner's unique serial number of the container;

.12.2 the date of the container manufacture;

.12.3 the date on which the survey was carried out;

.12.4 a competent person who carried out the survey;

.12.5 the name of the organizations and firms where the container survey and/or technical maintenance (repair) will be carried out;

.13 the survey results.

3.3.4 If satisfied with the results of consideration of the submitted ACEP Program, the Register shall notify the owner and other concerned parties on the approval of the Program.

3.3.5 A sign containing letters with the name of country and the number of approved ACEP program shall be marked on the CSC Plate or in immediate proximity thereof to indicate that the container is operated in conformity with the RS-approved program.

3.3.6 The approval of ACEP program is valid for not more than 10 years. The program shall be confirmed at least once per 30 months (2.5 years).

3.3.7 ACEP program does not cover tank containers.

3.4 SURVEY OF TANK CONTAINERS

3.4.1 General

3.4.1.1 The scope and frequency of surveys of tank containers shall comply with the requirements of Table 3.4.1.1.

Table 3.4.1.1

The scope and frequency of tank container surveys

Interval	RS Rules paras	Tests/survey			
		Visual examination of tank container, including a shell	Visual examination, testing, functional test of service equipment and fittings	Tightness tests	Strength tests
Special, with an interval of 30 months (2.5 years)[1, 2]	3.4.2	+	+	+	–
Special, with an interval of 60 months (5 years)[2]	3.4.3	+	+	+	+[3]
After repair or modernization	3.4.2 and 3.4.3	+	Up to discretion of RS surveyor based on the damage degree		

[1] Where the term of the scheduled survey exceeds 3 months from the prescribed date, a survey in the scope of 5 years shall be conducted.

[2] Where a survey is conducted at an early date, the date of the next special survey shall be changed.

[3] For tank containers UN T75 strength tests of shell is not required.

Note. It is permitted to conduct occasional surveys in compliance with the requirements of paras 6.7.2.19.7, 6.7.3.15.7 and 6.7.4.14.7 of the IMDG Code.

3.4.1.2 Tank container shall not be filled and submitted for carriage upon expiration of the last 5-year or 2,5-year periodical survey and testing in compliance with the requirements of the IMDG Code and Table 3.4.1.1.

However, tank container being filled prior to the expiry date of the last periodical survey and testing may be transported during a period no exceeding three months upon expiry date of the last periodical survey or survey. Moreover, tank container may be transported upon expiry of the last periodical testing and survey:

.1 after emptying but prior to cleaning for the purposes of conducting the next required testing and survey prior to the re-filling; as well as

.2 where not otherwise approved by a competent body, for the period not exceeding six months upon expiry of the last periodical testing or survey in order to permit transportation of dangerous goods for proper utilization or upcycling. A reference to this permit shall be indicated in a shipping document.

Except for the cases provided by this para, tank containers, for which the dates of the scheduled 5-year or 2,5-year survey are missed, may be filled and permitted to transportation only in case of conducting a survey in a 5-year scope.

3.4.1.3 Periodical surveys of tank containers shall be performed on RS-inspected or recognized firms the requirements for which are specified in Section 2.

The possibility of conducting periodical survey of tank container at the firms uninspected or unrecognized firms shall be determined by RS in each particular case.

3.4.1.4 Tank containers prepared for survey by the RS surveyor shall be cleaned from inside, degassed and ventilated, as well as decontaminated and cleaned from the residues of previously transported goods from the outside (fitting compartment and shutoff safety valves).

Prior to the survey, a documents issued by a cleaning station, as well as a valid document on gas analysis in the shell, containing a conclusion on the possibility of conducting work inside the shell signed by a specialist who performed air analysis, shall be submitted to the surveyor.

Testing of tank containers shall be performed in compliance with the RS-approved program and testing procedure.

3.4.1.5 Criteria of safe operation of containers set forth in 4.3.5 and 4.3.6 are minimum ones for periodical surveys.

3.4.2 Surveys every 30 months (2,5 years) shall include the following.

3.4.2.1 Assessment of technical conditions all bearing structural elements of tank container (fittings, side rails and cross-members, corner posts, elements attaching a shell to a framework), as well as welding joints.

In particular cases, depending on technical condition pf tank container, RS may require to perform non-destructive testing of weld agreed with RS.

N o t e . The requirements to non-destructive testing of welds are specified in 5.10 of the Rules for the Manufacture of Containers.

3.4.2.2 Assessment of technical condition of shell.

.1 Where the following is detected:

.1.1 cuts, cracks, shears or;

.1.2 dents and bends over 10 mm in depth or;

.1.3 sharp dents or;

.1.4 scores, improper grinding in excess of 0,1 mm, tool marks or;

.1.5 grinding by tools with a coarse grit below 120 or;

.1.6 improper repair or any other damage and/or defects, including corrosion which could make tank container unsafe for transportation, a shell of tank container shall be checked for residual thickness and/or be subject to non-destructive testing.

.2 Where during an examination a corrosion of shell material is detected, the nature and dimensions of which may result in reduction of the shell wall below the minimum value required by the design of tank container, RS may require to perform a check of residual thickness.

When the detected corrosion results in reduction of the shell wall below the minimum value required by the design of tank container, the renewal shall be performed. The repair scope and technology shall be agreed with RS.

Tank containers aged over 20 years shall be subjected to RTM inspection at least once in 5 years.

.3 It is permitted to perform RTM with the involvement of test laboratories, which scope of accreditation allows to perform such work or the personnel of the firm where the survey is conducted, when the compliance with the requirements of 2.3.4 is confirmed.

.4 RS may require to perform non-destructive testing of the shell welds depending on their condition, as well as a type and nature of damage, by a method and in the scope agreed with RS.

.5 RS may require partial or complete dismantling of tank container jackets and insulating material of tank container (except for tank containers UN T75) in case any doubts of possible damage of the shell arise during an external or internal examination.

.6 A jacket and insulating material of tank containers UN T75, which are designed with insulation but without vacuum, shall be dismounted within the limits required for reliable estimate of the shell condition.

3.4.2.3 Assessment of lining, where available, shall be made in compliance with the criteria established by the firm (manufacturer).

3.4.2.4 Assessment of condition of running boards and stairs.

Running boards shall be in a satisfactory condition and shall ensure the possibility to perform inspection and tests.

3.4.2.5 Assessment of technical condition and completeness of installed service equipment, fittings, devices for producing and maintaining of pressure and temperature, meanwhile:

.1 all stop valves and vents shall be checked for operability. In case of any doubts about proper functioning of any equipment, it shall be dismantled and checked;

.2 all safety valves shall be dismantled and inspected. The safety valve turn-on pressure shall be inspected for compliance with the value specified on valve marking keeping due note of pressure required by the international and national normative documents, as well as 2.3.2.2 and 2.3.3.2 , Part IV "Tank containers" of the Rules for the Manufacture of Containers;

.3 the frangible disks shall be visually inspected for integrity, availability of marking and compliance of the breakdown pressure specified on a tag to the pressure required in accordance with 2.3.2.6, Part IV "Tank Containers" of the Rules for the Manufacture of Containers, as well as the international and national normative documents. Membranes without labels or non-legible information on them shall be replaced.

In case of reasonable doubts in the integrity, the membranes shall be bench-tested with the pressure of 0,5 of the container working pressure;

.4 replaceable instrumentation shall be verified and have valid documents and marking.

A manometer for monitoring (indication) of integrity of a membrane placed in series with safety valves is an exception;

.5 All lacking or loose bolts or nuts in any flange connection or on blind flanged shall be installed and tightened;

.6 Remote closing arrangements of locking valves and self-closing check valves shall be tested in operation for checking their working order.

3.4.2.6 Conducting of leakproofness tests in accordance with 3.7.8, Part IV "Tank Containers" of the Rules for the Manufacture of Containers, without removal of insulation and protective coating;

3.4.2.7 Inspection of marking:

.1 check of availability of all required plates, correctness and readability of notes thereon.

N o t e . Tables: CSC with the tank data and CCC, in case of their loss, shall be renewed with regard the applicable requirements of Section. 4, Part I "General", 4.3, Part IV "Tank containers" of the Rules for the Manufacture of Containers and 3.1 of the Rules for the Approval of Containers for the Transport of Goods under Customs Seals;

.2 check of compliance of tank container marking with the requirements of Section 4, Part IV "Tank containers" of the Rules for the Manufacture of Container, as well as the requirements of 3.3.2.1;

.3 in case of satisfactory survey results, the plates shall be marked in compliance with Section 5.

3.4.3 Surveys every 60 months (5 years) shall include the following.

3.4.3.1 Assessment of technical supervision of tank container and its fittings in compliance with 3.4.2.1 — 3.4.2.5.

3.4.3.2 Conducting of a shell strength tests (except for UN T75 tank container) by the pressure indicated on the nameplate with tank data, without removing insulation and protective coatings, in compliance with 3.7.4, Part IV "Tank containers" of the Rules for the Manufacture of Containers, without removing insulation and protective coatings;

conducting of cooling and heating systems (where available) in compliance with 3.7.9, Part IV "Tank containers" of the Rules for the Manufacture of Containers, without removing insulation and protective coatings.

3.4.3.2.1 Prior to hydraulic test of a tank the safety and vacuum valves shall be removed and replaced by hermetic plugs of the relevant design and strength. For the purposes of strength tests, a manhole gasket may be replaced by a rubber one. A tank shall remain under pressure for at least 30 min.

3.4.3.2.2 Upon agreement with RS, it is permissible to replace hydraulic tests of the tank by other testing methods according to the Register approved test program.

3.4.3.2.3 Absence of a leak and pressure drop in a tank, its fittings and refrigerating or heating systems (where available) shall be checked during the test.

3.4.3.3 Conducting of leakproofness tests based on the satisfactory results of strength test of the tank in accordance with 3.4.2.6.

Prior to the leakproofness test, the sealings of material required for operation shall be fitted to all connections between the tank and equipment.

3.4.3.4 Check of marking in compliance with 3.4.2.7.

3.5 SURVEY OF TANK CONTAINERS WITH FIBER-REINFORCED PLASTICS

3.5.1 General

3.5.1.1 General requirements for conducting of survey of tank containers with fibre-reinforced materials (FRP) are stated in 3.4.1.

3.5.1.2 Requirements and definitions of Part VIII "Tank Containers with Fiber-Reinforced Plastics (FRP) Shell" of the Rules for the Manufacture of Containers and the requirements of 3.4 of these Rules shall apply to tank containers with FRP shell.

3.5.2 Survey every 2.5 years shall include epy the following.

3.5.2.1 The extent of survey of tank containers with FRP shell, besides the requirements specified in 3.4.2 (except for Notes 2 and 3 to 3.4.2.2.1), shall include the following:

.1 survey of tank with FRP shell:

.1.1 technical condition of FRP shell shall be determined as per the procedures approved by the Register;

.1.2 determining of the technical condition of FRP shell shall include checking of the condition of a chemically resistant layer, structural layer, and fireproof coating for compliance with the criteria specified in Table 3.5.2.1;

Table 3.4.2.1

List of possible operational damages of FRP shell

Item No.	Type of damages	Criterion
Chemically resistant layer		
1	Non-through thickness cracks on the chemically resistant layer surface	Max. 0.5 mm in depth; max. 0.05 mm in width; max. 100 mm in length; total length max. 1 m
2	Non-through thickness cracks on a chemically resistant layer in the area of jointing of cylindrical part and heads	Not allowed
3	Through cracks on chemically resistant layer	Not allowed
4	Hairlike cracks	Allowed
5	Change of color tones of chemically resistant layer	Allowed
Fireproof coating		
6	Non-integrity of fireproof coating	Baring of structural layer on the area max. 100 cm²
7	Blistering of fireproof coating	Not more than 500 cm² (without baring of structural layers)
8	Change of color tones of fireproof coating	Allowed
9	Notches, scratches, attritions of fireproof coating without baring of structural layers	Total reduced area max. 1.0 m²
Structural layers		
10	Non-through cracks, delaminations or cracks in structural layers	Maximum linear dimension 100 mm, depth of crack max. 0,1 of structural shell thickness
11	Non-tightness in the area of shut-off valves and safety devices	Not allowed

.1.3 technical condition of FRP shell shall be determined in production areas or outdoors at an ambient temperature, which is not lower than 5 °C with no precipitations and with observance of the provisions of EN 13018;

.1.4 non-destructive testing of FRP shell shall be carried out in case of operational damages mentioned in the technical documentation of the tank container manufacturer using the methods approved by the Register;

.1.5 measurement of surface resistance and resistance to discharge to ground of each manufactured tank in accordance with the procedure approved by the Register.

3.5.3 Survey every 5 years.

3.5.3.1 In addition to survey specified in 3.5.2, the inspections and tests in accordance with the requirements of 3.4.3 shall be carried out.

3.5.4 Occasional surveys.

3.5.4.1 Occasional surveys shall be carried out in accordance with the requirements of 3.5.3 in case of damage of a tank container with FRP shell and after its repair.

3.5.5 Requirements for technical supervision of repair of tank containers with FRP shell.

3.5.5.1 Repair of tanks with FRP shell shall be carried out in accordance with the Repair Manual approved by the Register.

3.5.5.2 Materials used for repair of FRP shells shall meet the requirements of 2.2.5 and 2.2.6, Part VIII "Tank Containers with Fiber-Reinforced Plastics (FRP) Shell" of the Rules for the Manufacture of Containers.

3.5.5.3 Tank container with FRP shell with detected damages shall be sent to repair after reporting that confirms the necessity of the repair and is stipulated by the method of establishing of the technical state of the tank container approved by the Register.

3.5.5.4 FRP shell shall be repaired at a specialized repair firm according to the technology agreed with the firm (manufacturer) and approved by the Register or at the firm (manufacturer's). Upon completion of FRP shell repair, the Register shall survey the shell to determine the possibility of its further operation.

3.6 SURVEY OF THERMAL CONTAINERS

3.6.1 The scope of survey of thermal containers shall comply with the requirements of 3.2.

Additionally, in accordance with the application of the owner or lessee, a survey of the unit operation may be carried out in the scope agreed with the owner or lessee.

3.6.2 Criteria for safe operation of containers set forth in 4.3.5 are considered as minimum requirements for survey for compliance with these Rules and the CSC.

3.6.3 In case of satisfactory survey results, the CSC plate shall be marked in accordance with Section 5.

3.7 SURVEY OF OFFSHORE CONTAINERS

3.7.1 The scope and frequency of surveys of offshore containers shall comply with the requirements of Table 3.7.1.

Table 3.7.1

The scope and frequency of offshore container surveys

Interval	Tests/survey			
	Lifting test[1]	**Non-destructive testing of lifting eyes**	**Visual examination**	**Branding on inspection plate[2]**
Special surveys at interval not exceeding 12 months (1 year)	Up to discretion of RS surveyor	Up to discretion of RS surveyor	+[3]	T or VN or V
Special surveys at interval not exceeding 48 months (4 years)	Up to discretion of RS surveyor	+	+	T or VN
After major repair or modernization[4]	+	+	+	T

[1] The procedure of lifting test of offshore containers shall be in accordance with 8.1, 8.2.1 and 8.2.2, Part VII "Offshore Containers" of the Rules for the Manufacture of Containers. No residual deformation preventing use of a container for its purpose shall remain after testing.

[2] T means the performance of visual examination, load test and non-destructive testing;
VN – marking denoting visual examination and non-destructive testing;
V means the performance of visual examination only.

[3] + — is performed.

[4] The major repair or modernization means repair or modernization of members of container affecting its structural strength.

3.7.2 The scope of visual inspection shall comply with that specified in 3.2.2. Special attention shall be paid to condition of welds of pad eyes and members impacting the structural strength of the container.

3.7.3 Non-destructive testing of pad eye welds and mating elements shall be carried out by magnetic particle inspection check, dye penetrant inspection or eddy current method (considering the requirements of 8.3 of ISO 10855-3).

The Register may require diagnostic examination by other methods. The requirements for nondestructive testing and quality assessment of welded joints are specified in 5.10.3 of the Rules for Technical Supervision during Manufacture of Containers, Materials and Products for Containers.

Note. Non-destructive testing report shall be attached to the container survey report.

3.7.4 Offshore tank containers intended for the transport of dangerous goods shall in addition pass surveys listed in 3.4.

3.7.5 The survey scope and frequency of the lifting sets of offshore containers shall meet the requirements of Table 3.7.5.

Table 3.7.5

The survey scope and frequency of the lifting sets of offshore containers

Interval	Application	Tests/survey			
		Load test	**Non-destructive testing[1]**	**Visual examination**	**Branding of identification tag**
Special surveys at interval not exceeding 12 months	Complete lifting set	–	–	+	V
Special surveys at interval not exceeding 48 months	Sling components and joining links	Load test or non-destructive testing		+	T or VN
	Wire legs	–	–	+	–
	Chain sling legs	Load test or non-destructive testing[2]		+	T or VN
	Shackles	–	–	+	–
After substantial repair or modernization	Complete lifting set	+[3]	+[3]	+	T

[1] The magnetic particle method is used for the non-destructive testing of the lifting set items but steel wire ropes.
[2] Non-destructive testing shall be carried out at end links of each sling +10 % of a sling length. The location of these 10 % shall be selected based on visual examination.
[3] In compliance with the applicable standards including EN 818-6.
T means the performance of visual examination, load test and non-destructive testing.
VN means the performance of visual examination and non-destructive testing.
V means the performance of visual examination only.

3.7.6 The Register may require the diagnostics performance by other methods as well as carrying out additional surveys and tests.

3.7.7 The survey of chain and wire lifting sets and members thereof shall be carried out in accordance with the applicable requirements of EN 818-6 and EN 13414-2 standards respectively.

3.7.7.1 The following defects of wire rope slings are prohibited:

.1 at any point of its length equal to ten diameters, the number of broken wires is 5 % or above of the total number of wires in the rope;

.2 a strand is broken;

.3 breaks of external wires 4 — 6 — 16 pcs at lection with a length of 3*d* — 6*d* — 30*d* accordingly;

.4 the availability of corrosion, particularly of the internal corrosion;

.5 reduction of the wire rope diameter as a result of surface abrasion or corrosion by 7 % and more, a compared with a nominal value;

.6 reduction of a wire rope diameter by 10 % of the nominal value due to core damage (internal wear, cuddling, tearing up, etc);

.7 increase of diameter by 7 %;

.8 deformation of thimbles or their wear with reducing the initial section by more than 15 %;

.9 more than one broken wire immediately adjacent to a compressed metal ferrule (pressed clamp/bush) or end fitting;

.10 cracks on a pressed clamp (liner);

.11 shifting of a wire rope in the pressed clamp (liner);

.12 difference of sling lengths due to residual elongation by more than 3 %;

.13 birdcaging (refer to Fig. 3.7.7.1.13);

Fig. 3.7.7.1.13
Birdcaging.

.14 core protrusion (refer to Fig. 3.7.7.1.14);

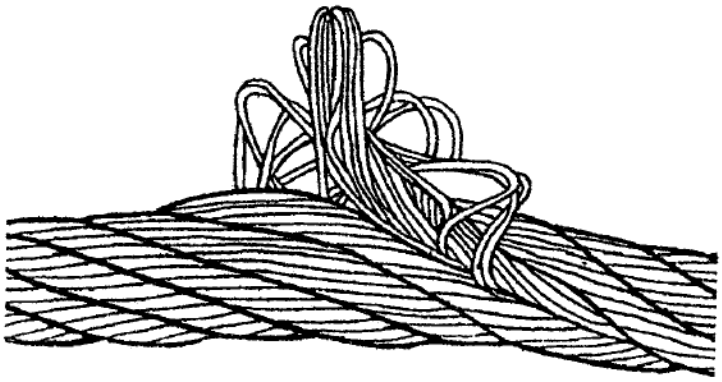

Fig. 3.7.7.1.14
Core protrusion

.15 local increase/reduction of a wire rope diameter (refer to Fig. 3.7.7.1.15);

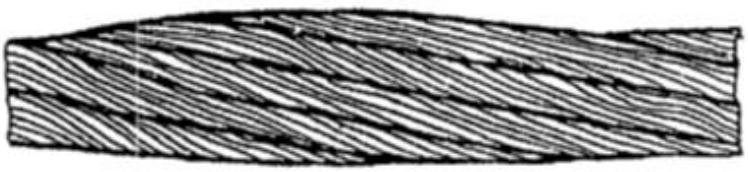

Fig. 3.7.7.1.15
Local increase/decrease of a rope diameter

.16 the availability of separated areas (refer to Fig. 3.7.7.1.16);

Fig. 3.7.7.1.16
The availability of separated areas

.17 wire squeezing-out or delamination of strands (refer to Fig. 3.7.7.1.17);

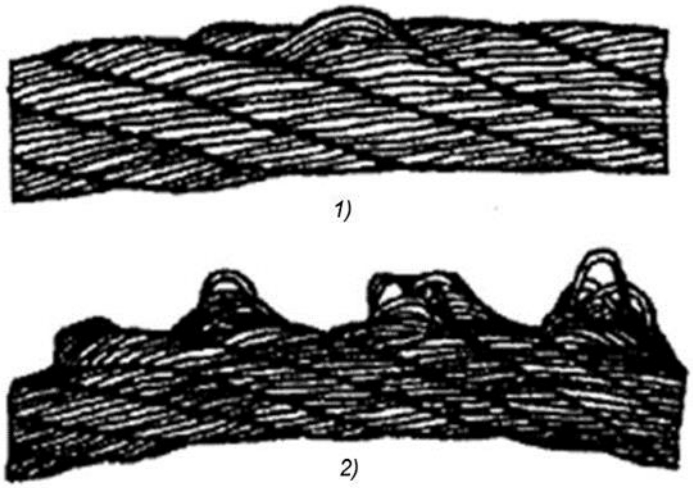

Fig. 3.7.7.1.17
Wire squeezing-out or delamination of strands:
1) — one strand; *2)* — in several strands

.18 twisting (refer to Fig. 3.7.7.1.18);

Fig. 3.7.7.1.18
Twisting

.19 kinks, bends (refer to Fig. 3.7.7.1.19);

Fig. 3.7.7.1.19
Kinks, bends.

.20 damage as a result of temperature exposure or electrical arc discharge (to be determined based on the availability of soot, burns, changes of color);

.21 residual undulation (refer to Fig. 3.7.7.1.21) with the ratio of $\frac{d_u}{d_w} > 1{,}33$ in this case the length of the examined area H_u the examined area shall not exceed 25*d*;

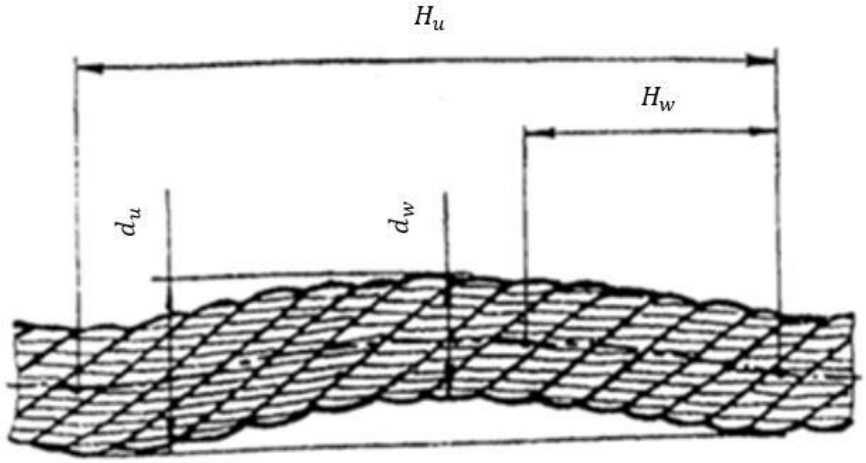

Fig. 3.7.7.1.21
Residual undulation

.22 thermal damage. Any changes of the metal color caused by exposure to high temperatures (welding signs).

3.7.7.2 The following defects of rings and joints are prohibited:

.1 lack of marking;

.2 availability of crack of any sizes and location;

.3 extension of chain links for more than 3 per cent of the initial size (refer to Fig. 3.7.7.2.3-1) (the length is determined by measuring a chain part consisting of five links per every 2 m of the ling, the length of a sling part is equal to the production of a chain pitch to link number) and at reduction of the chain links diameter in placed of intersection/contact of the chain link due to wear above 10 % (refer to Fig. 3.7.7.2.3-2);

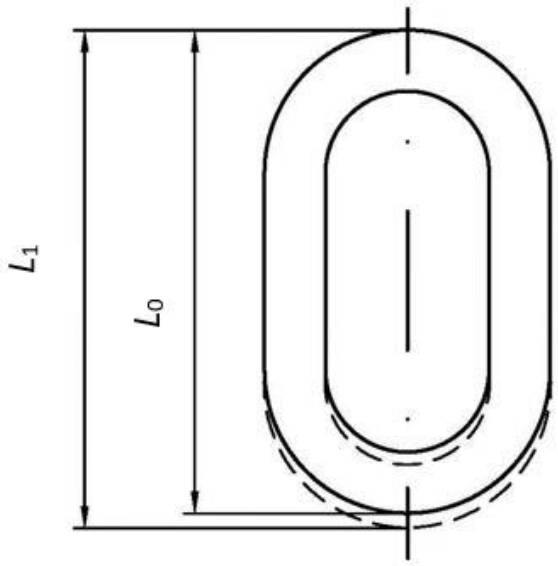

Fig. 3.7.7.2.3-1
Increasing a chain link:
$L_1 \leq L_0 + 3\%L_0$
L_0 — initial link length, mm;
L_1 — increased link length, mm

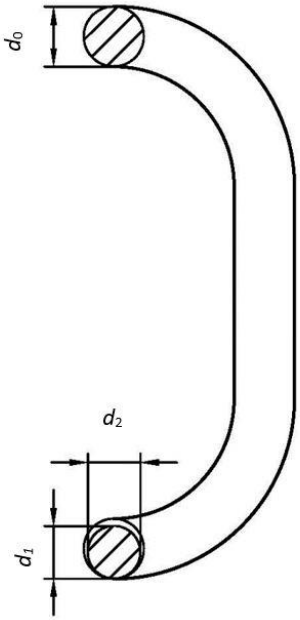

Fig. 3.7.7.2.3-2
Reducing of a chain link diameter:
$\frac{d_1+d_2}{2} \geq 0{,}9d_0$; d_0 — initial diameter, mm; d_1, d_2 — actual section diameters of a link, measured in orthogonally related directions, mm

.4 deformation, defects of upper/lower links/connecting rings, cuts, notches, dents, excessive corrosion, changing of color at heating, bent or distorted links.

3.7.7.3 The following defects of shackles are prohibited:

.1 cracks and deformations;

.2 bending and excessive wear in the of a thimble contact point;

.3 lack of free rotation of a pin in the shackle.

3.7.8 During survey, it is necessary to make sure that the marking plate and the information thereon corresponds with the technical characteristics of the presented lifting set it is attached to. The slings of the lifting set shall be attached to the container and the fore runner, if any, without twisting.

3.7.9 During testing of chain sling legs of lifting sets, a load $2{,}5 \times WLL \pm 2\ \%$ shall be statically applied to each sling. The minimum time for exposure under load – 5 min. Upon completion of the testing, the visual and measuring examination and, if necessary, nondestructive magnetic particle testing shall be carried out in the scope agreed with the Register.

N o t e . WLL for testing of each sling of the lifting set shall be assumed according to EN 818-4 (Table 3) for a "single sling leg" depending on the chain caliber indicated on the lifting set marking plate.

3.7.10 Testing of the rings and connecting links of chain and wire lifting sets by test load is carried out according to the requirements of standards in compliance with which the products are made. The minimum time for exposure under load — 5 min. Upon completion of the testing, the visual and measuring examination and, if necessary, nondestructive magnetic particle testing shall be carried out in the scope agreed with the Register.

3.7.11 No permanent deformations and damages preventing the safe use of the lifting set and its components according to their purpose shall be detected after testing.

3.7.12 In case of satisfactory results of the survey, the marking shall be applied on the lifting set in compliance with Section 5.

4 REPAIR AND MODERNIZATION

4.1 GENERAL

4.1.1 Containers which sustained damages during operation involving impairment of strength performance of bearing structures shall be repaired under the RS technical supervision at RS-inspected or recognized firms.

The possibility of conducting periodical survey of container at the uninspected or unrecognized firms shall be determined by RS in each particular case.

4.1.2 Container modernization shall be conducted at the firm (manufacturer) or on the RS-inspected or recognized firms.

4.1.3 The requirements to survey or recognition of the firms are stated in Section 2.

4.2 TECHNICAL DOCUMENTATION

4.2.1 Repair of container members listed in 4.3 shall be performed in compliance with RS-approved technical documentation.

4.2.2 The technical documentation submitted for repairs shall contain:

.1 description of repair procedure that may be based on the national and international normative documents agreed or recognized by the Register;

.2 necessary drawings;

.3 the table of welding procedures and welding materials, and in the case of repair of tank containers intended for the transport of pressurized goods, Welding Procedure Approval Test Certificate of a due form;

.4 description of welding quality control methods.

4.2.3 A volume of technical documentation for container modernization is agreed with RS in each particular case based on the level of modernization.

4.3 DAMAGES

4.3.1 Damages which require the following may be referred to damages related to violation of strength characteristics of bearing structures:

.1 replacement of one or more corner fittings;

.2 full or partial replacement of primary structure parts, (corner posts, side rails, cross-members);

.3 full or partial (more than 1/3 area) replacement of side and end panels, roof panels;

.4 full replacement of floor.

4.3.2 In addition to damages listed in 4.3.1, the following damages and malfunctions of the thermal containers shall be repaired under the Register technical supervision:

.1 damage of insulation;

.2 damage of cold (heat) generation means;

.3 impairing of weathertightness;

.4 damage of drainage system;

.5 damage of closures;

.6 malfunction of control, protection and control devices;

.7 malfunction of electrical equipment.

4.3.3 In addition to damages listed in 4.3.1, the following damages of tank containers shall be remedied under technical supervision of the Register:

.1 damage of tank shell and heads;

.2 damage of supports and fastenings;

.3 damage of safety devices;

.4 damage of pipes and fittings;

.5 damage of monitoring devices;

.6 damage of cold (heat) generation means, if any;

.7 damage of thermal insulation, if any.

4.3.4 In addition to damages listed in 4.3.1, the following damages of offshore containers and lifting sets shall be repaired under the Register technical supervision:

.1 damages of bearing structure;

.2 damages of pad eyes;

.3 calculation of lifting sets for offshore containers.

N o t e . In respect to offshore tank containers and offshore thermal containers one shall be also guided by the provisions of 4.3.2 and 4.3.3.

4.3.5 As criteria for defining the possibility of safe operation of damaged containers, the Register recommends to use those listed below:

.1 for corner fittings:

.1.1 dimensions of corner fitting apertures shall not exceed ISO tolerances;

.1.2 corner fitting shall have no cracks and notches and shall not be detached from structural elements of the container;

.2 for corner posts:

.2.1 depth of a single deformation shall not exceed 25 mm, irrespective of its length and location;

.2.2 with two or more indentations, none of these shall exceed 15 mm in depth; cracks, ruptures and punctures shall be repaired regardless of their size;

.2.3 deformation of corner posts shall not cause the external dimensions of the container change that could exceed ISO tolerance by more than 5 mm;

.2.4 deformation of the rear corner posts shall not render the doors inoperable and impair the watertight integrity;

.3 for top and bottom side rails and cross-members:

.3.1 top side rails and cross-members:

.3.1.1 deformations of top side rails and the front end rails (dents, bendings, etc.) shall not exceed 25 mm in depth;

.3.1.2 deformation of rear top cross-member shall not exceed 35 mm, render the doors inoperable and impair the watertight integrity;

.3.2 bottom side rails:

.3.2.1 deformations on the webs of side rails shall not exceed 50 mm in depth;

.3.3 lower cross-members:

.3.3.1 deformations on a web shall not exceed 50 mm in depth;

.3.3.2 deformation of the rear bottom rails shall not render the doors inoperable or impair the watertight integrity;

.3.3.3 deformation of the cross-member shall not cause the external dimensions of the container to change so as to exceed ISO tolerance by more than 5 mm;

.3.3.4 deformation shall not cause a change in length of diagonals between the corner fitting apertures to exceed the ISO tolerance;

.3.3.5 cracks, ruptures and punctures shall be repaired, irrespective of their size;

.4 for walls and roof:

.4.1 front and side walls:

.4.1.1 no deformation, such as dents, bends, etc. on a plane portion of the side and front wall where the marking shall be applied, or on internal or external corrugations, shall exceed 35 mm;

.4.1.2 any two deformations existing on the opposite walls and facing one another shall not cause the distance between the walls to decrease by more than 50 mm against the constructional dimension;

.4.1.3 no deformation involving the length or height of a wall shall lead to the reduction of internal dimensions by more than 50 mm;

.4.1.4 any deformation of the side walls shall not exceed ISO tolerance by more than 10 mm;

.4.1.5 any deformation of the front wall — by more than 5 mm;

.4.1.6 any deformation which may result in sharp edges liable to cause damage to cargo shall be eliminated;

.4.1.7 cracks and punctures, irrespective of their dimensions, shall be repaired;

.4.2 roof:

.4.2.1 deformation shall not exceed 35 mm in depth; no deformation involving the length or width of a roof shall lead to the reduction of internal dimensions by more than 50 mm;

.4.2.2 punctures, cracks, ruptures shall be repaired, irrespective of their dimensions;

.5 for floor decking:

.5.1 cracks and cleavings shall not exceed 15 mm in depth, irrespective of the damage length, or shall not exceed 5 mm when the damage width is more than 150 mm;

.5.2 difference in height between the faces of the adjoining boards shall not exceed 5 mm;

.5.3 any through holes, spallings of material, splittings shall be repaired;

.5.4 floor boardings shall be dry, clean and shall not emit specific odour;

.6 for bottom cross-members:

.6.1 no deformation on a web of cross-members, or on the top plate of fork lift pockets and gooseneck tunnel shall exceed 50 mm;

.6.2 deformations on a top flange shall not intrude more than 50 mm into the container;

.6.3 clearance between the top face plate of the cross-member and the floor boardings shall not exceed 10 mm;

.6.4 in no instance shall the deformations on the bottom flange of cross-members, fork lift pockets and gooseneck tunnel project below the plane 1 mm above the plane of the bottom faces of bottom corner fittings;

.6.5 any cracks, notches, ruptures shall be repaired;

.6.6 no deformation of fork lift pockets and gooseneck tunnel shall cause their dimensions to change so as to exceed ISO tolerances by more than 10 mm;

.7 for doors:

.7.1 no deformation of the door panel shall exceed 35 mm;

.7.2 no deformation shall render the doors inoperable and shall cause the ISO tolerance for external dimensions to be exceeded by more than 5 mm;

.7.3 doors shall not have cracks, punctures and other damages which may entail failure of the container waterproofness;

.8 for door lock:

.8.1 broken or notched cams, cam retainers, hinges, hinge bolts, door locking bars shall not be allowed;

.8.2 bent door locking bars and door locking handles preventing the door from being properly opened or closed, shall be repaired or replaced;

.9 for other damages:

.9.1 partial or complete lack of marking shall not be allowed.

N o t e . The Register may approve the use of other international or national regulations and guidelines based on the CSC and CCC provisions and submitted by the owners of containers, repair firms or surveying companies. The criteria determining the safe operation of dry fright containers and related to their framework apply to the frame of tank containers.

4.3.6 In addition to the requirements of 4.3.5, RS recommends to use the following criteria defining possibility of safe use of tank containers:

.1 for the tank container in general:

.1.1 absence of any damage leading to impossibility of the use of tank container for the purposes it is intended for;

.1.2 absence of any deformation leading to excess of ISO tolerances for outer dimensions by more than 5 mm for end surfaces and by 10 mm — for side surfaces;

.2 for the framework and elements attaching a shell to a framework:

.2.1 cracks, cuts, ruptures, punctures, etc. shall be repaired regardless of their size;

.2.2 when the bottom rear end rail is deformed the gap between a rail and securing device of the bottom discharge shall not be less than 5 mm;

.2.3 deformation of the diagonal braces in side, end, bottom and top surfaces of a frame shall not exceed 20 mm;

.2.4 a value of deformation of the elements attaching a shell to a framework shall not exceed 13 mm;

.2.5 corrosion of the framework member and welds shall not result in reduction of strength of a tank container;

.3 for the vessel (made of metal materials):

.3.1 cracks, ruptures, punctures, etc. shall be eliminated regardless of their size;

.3.2 corrosion of vessel material or welds shall not result in reduction of the tank shell thickness below the minimum value required.

N o t e . The minimum value required is determined basing on the requirements of the relevant sections of Chapter 6.7 of the IMDG Code regarding the type and design of the tank container;

.3.3 depth of scratches, grooves, machining traces shall not exceed 5 % of the vessel metal thickness;

.3.4 no shell repairs made by fitting patches on the inner surface;

.3.5 deformation of the shell walls within the upper third of the tank cross-section shall not exceed 6 mm;

.3.6 deformation of the shell walls within the upper third of the tank cross-section shall not exceed 10 mm;

.4 for thermal insulation and its coating:

.4.1 cracks, cuts, ruptures, punctures, etc. shall be repaired regardless of their size;

.4.2 delamination of thermal insulation covering in the place of butts, joints, etc., loss of components and fastenings shall be eliminated.

4.3.7 Upon completion of the repair, containers with the CCC Plates shall comply with requirements of the Rules for the Approval of Containers for the Transport of Goods Under Customs Seals.

4.3.8 Materials used for repairing containers shall have characteristics equivalent to those of the materials used for the manufacture of containers or exceeding them. Material used for repairing shells of tank containers shall have a document confirming technical supervision of the Register.

4.3.9 Tank container shells shall be repaired keeping due consideration to calculation standards for pressure vessels used for the design of the tank container.

4.3.10 Repair of container members listed in 4.3.1 — 4.3.4 shall be performed by welders certified by the Register and having the Welder Approval Test Certificate of a due form.

4.4 CHECKS AND TESTS

4.4.1 Upon the repair results of mixed cargo containers, the following shall be performed:

.1 examination to assure that the repair has been properly performed;

.2 examination to assure that the Customs requirements are complied with;

.3 inspection of the prescribed dimensions and marking of the container;

.4 weathertightness testings.

N o t e . In particular cases, the Register may require additional tests.

4.4.2 For other type of container it may be required to perform additional examinations and tests in the scope established by RS in each particular case.

5 MARKING AND BRANDING

5.1 GENERAL

5.1.1 After performing the surveys according to the CSC, the stamp of the Register of approved type and date (month, year) of subsequent survey shall be marked on the CSC Plate or as close thereto as possible. The date may be also marked on the sticker of the approved type without RS branding.

5.1.2 Following the survey of tank containers, the Register brand of approved type shall be put in the appropriate column of the identification plate with tank data, and the date (month and year), test pressure and the applicable units of measurement shall be specified.

N o t e . On identification plates of tank containers manufactured in accordance with the Rules for the Manufacture of Containers, issued before 2003 without taking into consideration the subsequent amendments, indication of the type of survey and test pressure is not required.

5.1.3 On the results of container survey under ACEP, the availability of a number of the approved ACEP program shall be checked on CSC Table, in this case no RS stamp and a survey date shall apply.

5.1.4 Marking of the container shall comply with the requirements of these Rules, Rules for the Manufacture of Containers and Rules for the Approval of Containers for the Transport of Goods under Customs Seals.

5.1.5 Containers with dangerous goods or toxic atmosphere inside, in addition to marking according to 5.1.4 shall bear signs in conformity with the applicable rules for the carriage of dangerous goods.

5.1.6 After survey of offshore containers the stamp of the Register of approved type and date (in YYYY.MM.DD format) of the performed survey and marks in accordance with Table 3.7.1 shall be marked on the Inspection Plate.

N o t e . Offshore tank containers intended for the transport of dangerous goods shall be additionally marked in accordance with 5.1.2.

5.1.7 According to the results of the lifting sets of offshore containers survey, the Register brand of approved type shall be put in the first column of the identification plate of the lifting set (refer to 9.7.6 and 9.7.7, Part VII "Offshore Containers" of the Rules for the Manufacture of Containers), and the date of the survey conducted in format YY.MM.DD and the marks according to Table 3.7.5 shall be specified.

N o t e . Where the lifting set shackles were replaced, the appropriate alterations shall be entered in the identification plate or the latter shall be replaced.".