



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 382-08-1351c

dated 13.03.2020

Re:

amendments to the General Regulations for the Technical Supervision of Containers. Rules for the Manufacture of Containers. Rules for the Approval of Containers for the Transport of Goods Under Customs Seal. Rules for Technical Supervision during Manufacture of Containers. Rules for Technical Supervision of Containers in Service, 2019, ND No. 2-090201-010-E

Item(s) of supervision:

containers, technical documentation of containers, tests of containers

Entry-into-force date:

Valid till:

~~Validity period extended till:~~

From the date of publication

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

dated

Number of pages:

1+52

Appendices:

Appendix 1: information on amendments introduced by the Circular Letter

Appendix 2: text of amendments to the General Regulations for the Technical Supervision of Containers, Part I "Basic Requirements", Part II "General Freight Containers", Part IV "Tank Containers", Part V "Platform Containers and Platform-Based Containers", Part VI "Non-Pressurized Dry Bulk Containers", Part VII "Offshore Containers", Part VIII "Tank Container with Fiber-Reinforced Plastic (FRP) Shell" of the Rules for the Manufacture of Containers; Rules for Technical Supervision During Manufacture of Containers, Rules for Technical Supervision of Containers in Service.

Director General

Konstantin G. Palnikov

Text of CL:

We hereby inform that the General Regulations for the Technical Supervision of Containers, Rules for the Manufacture of Containers, Rules for the Approval of Containers for the Transport of Goods Under Customs seal, Rules for Technical Supervision During Manufacture of Containers, Rules for 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 the Circular Letter in the Register practical activity.

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

ND title;

General Regulations for the Technical Supervision of Containers;

Rules for the Manufacture of Containers:

Part I: Section 1, Table 2.1.2, paras 2.2.3; 2.3.2; 2.6.1.1, 2.6.1.2, 2.6.4, 2.6.6 and 3.2.4; Chapters 3.3 and 3.7, para 4.1.5

Part II: para 2.1.1 and Chapter 3.16

Part IV: para 1.4.1.2, Chapter 2.2, paras 2.2.3, 2.2.7 и 2.2.8

Part V

Part VI: heading of the Part, Chapter 1.1, paras 1.2.1, 1.4.1, 2.3.1, 2.3.4, 2.3.5, 3.1.1, 3.1.6 and 3.3.1

Part VII: paras 1.2.1 and 1.4.1.1, Section 4, paras 4.1.3, 4.1.4; 7.2.3, 7.4.7. 7.5.2, 7.5.3; 8.2.3, 9.2.7 and 9.6.5; Fig. 9.7.6 and para 9.7.6.2

Part VIII: Chapter 2.2, paras 2.2.8, 3.1.1, 3.3.2.2 and 3.3.2.3;

Rules for the Approval of Containers for the Transport of Goods under Customs Seal:

paras 2.3.1 and 3.1.3;

Rules for Technical Supervision During Manufacture of Containers:

paras 1.1.3; 1.4.2, 1.5.1.1, 1.5.5, 2.2.1, 2.3.3, 2.3.9.7, 2.3.9.8, 2.3.13, 2.4.1, 2.6.1, 3.4.1, 3.5.2 and 3.7.2

Appendix 1: paras 2.1.1 – 2.1.8, 2.2.2 – 2.2.6 and 2.4.1 and Section 3

Appendix 2: Section 1;

Rules for Technical Supervision of Containers in Service:

paras 3.4.5.1.4 and 4.3.1

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"Thesis" System No. 20-29301

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

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into- force date
1		General title for the collection of the Rules has been assigned	382-08-1351c of 13.03.2020	13.03.2020
2	General Regulations for the Technical Supervision of Containers	The General Regulations have been completely revised considering the provisions of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships (the Rules for Technical Supervision)	382-08-1351c of 13.03.2020	13.03.2020
3	Rules for the Manufacture of Containers, Part I, Section 1	The Section has been amended considering the Rules for Technical Supervision	382-08-1351c of 13.03.2020	13.03.2020
4	Rules for the Manufacture of Containers, Part I, Table 2.1.2	Requirements for tolerances of distance between centers of apertures in fittings have been specified considering ISO 668:2020	382-08-1351c of 13.03.2020	13.03.2020
5	Rules for the Manufacture of Containers, Part I, para 2.2.3	Requirements for protective plates have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
6	Rules for the Manufacture of Containers, Part I, para 2.3.2	Requirement for load transfer areas have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
7	Rules for the Manufacture of Containers, Part I, para 2.6.1.1	Requirements for availability of fork lift pockets have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
8	Rules for the Manufacture of Containers, Part I, para 2.6.1.2	Requirements for structure of fork lift pockets have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
9	Rules for the Manufacture of Containers, Part I, para 2.6.4	Requirements for cargo securing devices have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
10	Rules for the Manufacture of Containers, Part I, para 2.6.6	Requirements for shoring slot system inside the container have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
11	Rules for the Manufacture of Containers, Part I, para 3.2.4	Requirement for corner fitting materials have been specified considering the withdrawal of IACS recommendation No. 45	382-08-1351c of 13.03.2020	13.03.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
12	Rules for the Manufacture of Containers, Part I, Chapter 3.3	Requirements for materials of tank container vessels have been specified considering the experience of technical supervision	382-08-1351c of 13.03.2020	13.03.2020
13	Rules for the Manufacture of Containers, Part I, Chapter 3.7	Requirements for welding, welding consumables and qualification of welders have been specified considering the Rules for Technical Supervision	382-08-1351c of 13.03.2020	13.03.2020
14	Rules for the Manufacture of Containers, Part I, para 4.1.5	Requirements for CSC plate have been specified considering the provisions of the International Convention for Safe Containers	382-08-1351c of 13.03.2020	13.03.2020
15	Rules for the Manufacture of Containers, Part II, para 2.1.1	Requirements for corner fittings projecting into the container have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
16	Rules for the Manufacture of Containers, Part II, Chapter 3.16	Requirements for testing of cargo securing devices have been specified considering ISO 1496-1	382-08-1351c of 13.03.2020	13.03.2020
17	Rules for the Manufacture of Containers, Part IV, para 4.1.2	Reference to another Chapter of the Part has been specified	382-08-1351c of 13.03.2020	13.03.2020
18	Rules for the Manufacture of Containers, Part IV, Chapter 2.2	The heading of the chapter has been specified	382-08-1351c of 13.03.2020	13.03.2020
19	Rules for the Manufacture of Containers, Part IV, para 2.2.3	Requirement for design loading in designing have been specified considering the provisions of the International Maritime Dangerous Goods Code (IMDG Code)	382-08-1351c of 13.03.2020	13.03.2020
20	Rules for the Manufacture of Containers, Part IV, para 2.2.7	Requirements for equivalent metal thickness of the steel to be used have been specified considering the provisions of IMDG Code	382-08-1351c of 13.03.2020	13.03.2020
21	Rules for the Manufacture of Containers, Part IV, para 2.2.8	Requirements for equivalent metal thickness of the steel to be used have been specified considering the provisions of IMDG Code	382-08-1351c of 13.03.2020	13.03.2020
22	Rules for the Manufacture of Containers, Part V	The Part has been completely amended considering ISO 1496-5	382-08-1351c of 13.03.2020	13.03.2020
23	Rules for the Manufacture of Containers, Part VI	The heading of the Part has been specified	382-08-1351c of 13.03.2020	13.03.2020
24	Rules for the Manufacture of Containers, Part VI, Chapter 1.1	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
25	Rules for the Manufacture of Containers, Part VI, para 1.2.1	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
26	Rules for the Manufacture of Containers, Part VI, para 1.4.1	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
27	Rules for the Manufacture of Containers, Part VI, para 2.3.1	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
28	Rules for the Manufacture of Containers, Part VI, para 2.3.4	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
29	Rules for the Manufacture of Containers, Part VI, para 2.3.5	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
30	Rules for the Manufacture of Containers, Part VI, para 3.1.1	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
31	Rules for the Manufacture of Containers, Part VI, para 3.1.6	Reference to another Part of the Rules has been specified	382-08-1351c of 13.03.2020	13.03.2020
32	Rules for the Manufacture of Containers, Part VI, para 3.3.1	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
33	Rules for the Manufacture of Containers, Part VII, para 1.2.1	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
34	Rules for the Manufacture of Containers, Part VII, para 1.3.1.7	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
35	Rules for the Manufacture of Containers, Part VII, para 1.4.1.1	Requirements for technical conditions have been specified considering the Rules for Technical Supervision	382-08-1351c of 13.03.2020	13.03.2020
36	Rules for the Manufacture of Containers, Part VII, Section 4	The heading of the Section has been specified	382-08-1351c of 13.03.2020	13.03.2020
37	Rules for the Manufacture of Containers, Part VII, para 4.1.3	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
38	Rules for the Manufacture of Containers, Part VII, para 4.1.4	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
39	Rules for the Manufacture of Containers, Part VII, para 7.2.3	Para has been deleted	382-08-1351c of 13.03.2020	13.03.2020
40	Rules for the Manufacture of Containers, Part VII, para 7.4.7	The term "non-pressurized dry bulk cargo container" has been specified	382-08-1351c of 13.03.2020	13.03.2020
41	Rules for the Manufacture of Containers, Part VII, para 7.5.2	Requirements for information plate have been specified	382-08-1351c of 13.03.2020	13.03.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
42	Rules for the Manufacture of Containers, Part VII, para 7.5.3	Requirements for inspection plate have been specified	382-08-1351c of 13.03.2020	13.03.2020
43	Rules for the Manufacture of Containers, Part VII, para 8.2.3	A misprint in the Formula has been corrected	382-08-1351c of 13.03.2020	13.03.2020
44	Rules for the Manufacture of Containers, Part VII, para 9.2.7	Requirements for lifting set of offshore containers have been specified considering ISO 10855-2	382-08-1351c of 13.03.2020	13.03.2020
45	Rules for the Manufacture of Containers, Part VII, para 9.6.5	Requirements for applied WLL_{min} have been specified	382-08-1351c of 13.03.2020	13.03.2020
46	Rules for the Manufacture of Containers, Part VII, Figure 9.7.6	In the legend to the Figure the requirements for applied WLL_{min} have been specified	382-08-1351c of 13.03.2020	13.03.2020
47	Rules for the Manufacture of Containers, Part VII, para 9.7.6.2	Requirements for marking of lifting set of offshore containers have been specified	382-08-1351c of 13.03.2020	13.03.2020
48	Rules for the Manufacture of Containers, Part VIII, Chapter 2.2	Heading of the Chapter has been specified	382-08-1351c of 13.03.2020	13.03.2020
49	Rules for the Manufacture of Containers, Part VIII, para 2.2.8	Requirements for design loading in designing have been specified	382-08-1351c of 13.03.2020	13.03.2020
50	Rules for the Manufacture of Containers, Part VIII, para 3.1.1	References to another Part of the Rules have been specified	382-08-1351c of 13.03.2020	13.03.2020
51	Rules for the Manufacture of Containers, Part VIII, para 3.3.2.2	Reference to another Part of the Rules have been specified	382-08-1351c of 13.03.2020	13.03.2020
52	Rules for the Manufacture of Containers, Part VIII, para 3.3.2.3	References to another Part of the Rules have been specified	382-08-1351c of 13.03.2020	13.03.2020
53	Rules for the Approval of Containers for the Transport of Goods Under Customs Seal, para 2.3.1	Requirements for devices of customs seals have been specified considering the provisions of the Customs Convention on Containers	382-08-1351c of 13.03.2020	13.03.2020
54	Rules for the Approval of Containers for the Transport of Goods Under Customs Seal, para 3.1.3	Requirements for CSC plate have been specified considering the provisions of the Customs Convention on Containers	382-08-1351c of 13.03.2020	13.03.2020
55	Rules for Technical Supervision During Manufacture of Containers, para 1.1.3	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
56	Rules for Technical Supervision During Manufacture of Containers, para 1.4.2	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
57	Rules for Technical Supervision During Manufacture of Containers, para 1.5.1.1	Requirements for requests of firms not being manufacturers of products have been specified considering the Rules for Technical Supervision	382-08-1351c of 13.03.2020	13.03.2020
58	Rules for Technical Supervision During Manufacture of Containers, para 1.5.5	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
59	Rules for Technical Supervision During Manufacture of Containers, para 2.2.1	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
60	Rules for Technical Supervision During Manufacture of Containers, para 2.3.3.	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
61	Rules for Technical Supervision During Manufacture of Containers, paras 2.3.9.7 and 2.3.9.8	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
62	Rules for Technical Supervision During Manufacture of Containers, para 2.3.13.	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
63	Rules for Technical Supervision During Manufacture of Containers, para 2.4.1	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
64	Rules for Technical Supervision During Manufacture of Containers, para 2.6.1	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
65	Rules for Technical Supervision During Manufacture of Containers, para 3.4.1	Requirements for qualification of welders have been specified	382-08-1351c of 13.03.2020	13.03.2020
66	Rules for Technical Supervision During Manufacture of Containers, para 3.5.2	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
67	Rules for Technical Supervision During Manufacture of Containers, para 3.7.2	Requirements for welding procedures have been specified	382-08-1351c of 13.03.2020	13.03.2020
68	Rules for Technical Supervision During Manufacture of Containers, Appendix 1, para 2.1.1	Requirements for fitting manufacture method have been specified considering the withdrawal of IACS recommendation No. 45	382-08-1351c of 13.03.2020	13.03.2020

Nos.	Amended paras/chapters/sections	Information on amendments	Number and date of the Circular Letter	Entry-into- force date
69	Rules for Technical Supervision During Manufacture of Containers, Appendix 1, paras 2.1.2 – 2.1.8	Paras 2.1.2 – 2.1.4 have been deleted considering the withdrawal of IACS recommendation No. 45. The existing paras 2.1.5 – 2.1.8 have been renumbered 2.1.2 – 2.1.5, accordingly	382-08-1351c of 13.03.2020	13.03.2020
70	Rules for Technical Supervision During Manufacture of Containers, Appendix 1, paras 2.2.2 – 2.2.6	Para 2.2.2 has been deleted considering the withdrawal of IACS recommendation No. 45. The existing paras 2.2.3 – 2.2.6 have been renumbered 2.2.2 – 2.2.5, accordingly	382-08-1351c of 13.03.2020	13.03.2020
71	Rules for Technical Supervision During Manufacture of Containers, Appendix 1, para 2.4.1	Requirements for scope of information submitted to RS when manufacturing fittings have been specified considering the withdrawal of IACS recommendation No. 45.	382-08-1351c of 13.03.2020	13.03.2020
72	Rules for Technical Supervision During Manufacture of Containers, Appendix 1, Section 3	The Section has been deleted considering the withdrawal of IACS recommendation No. 45.	382-08-1351c of 13.03.2020	13.03.2020
73	Rules for Technical Supervision During Manufacture of Containers, Appendix 2	The heading of the Appendix has been specified	382-08-1351c of 13.03.2020	13.03.2020
74	Rules for Technical Supervision of Containers in Service, para 3.4.5.1.4	Reference to another part of the Collection of the Rules for Containers has been specified	382-08-1351c of 13.03.2020	13.03.2020
75	Rules for Technical Supervision of Containers in Service, para 4.3.1	Requirements for the recognition of repair firms have been specified considering the experience of technical supervision	382-08-1351c of 13.03.2020	13.03.2020

**GENERAL REGULATIONS FOR THE TECHNICAL SUPERVISION
OF CONTAINERS.
RULES FOR THE MANUFACTURE OF CONTAINERS.
RULES FOR THE APPROVAL OF CONTAINERS FOR THE TRANSPORT
OF GOODS UNDER CUSTOMS SEAL.
RULES FOR TECHNICAL SUPERVISION DURING MANUFACTURE
OF CONTAINERS.
RULES FOR TECHNICAL SUPERVISION OF CONTAINERS IN SERVICE, 2019
ND No. 2-090201-010-E**

1 General title "**COLLECTION OF THE RULES FOR CONTAINERS**" is assigned to **ND No. 2-090201-010-E**.

GENERAL REGULATIONS FOR THE TECHNICAL SUPERVISION OF CONTAINERS

2 The text of the **GENERAL REGULATIONS FOR THE TECHNICAL SUPERVISION OF CONTAINERS** is replaced by the following text:

**"GENERAL REGULATIONS FOR THE TECHNICAL SUPERVISION
OF CONTAINERS**

1 GENERAL

1.1 DEFINITIONS, ABBREVIATIONS AND EXPLANATIONS

1.1.1 Definitions.

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

Prototype (first lot) is a container, 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.

Freight container means transport equipment:

of a permanent character and accordingly strong enough to be suitable for repeated use;

specially designed to facilitate the transportation of goods by one or more modes of transport without intermediate reloading;

designed to be secured and/or readily handled, and having corner fitting for these purposes;

of a size such that the area enclosed by the four outer bottom corners is at least 14 m², or at least 7 m² if it is fitted with top corner fittings.

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.

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.

Safety in this particular case means safety of life at sea, safe carriage of goods and equipment.

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 or designer.

Product means an item of machinery, an appliance, a pressure vessel, an apparatus, a device, an item of equipment or outfit to which the requirements of the Rules are applicable.

Manufacturer is an organization (firm) that:
manufactures containers, 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 container, material or product compliance with the applicable RS requirements and approved documentation.

Surveyor is an RS official authorized to carry out (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.

ISO container means a freight container complying with all relevant ISO container standards in existence at the time of its manufacture.

Notes: 1. Definitions of container types, as well as other terms in relation to containers are given in ISO 830.

2. ISO series 1 container is an ISO container complying with ISO 668.

3. The term "container" includes neither vehicles, nor packaging; however, containers when carried on chassis are included.

Container owner is a legal entity or a physical person being the owner or leasee of containers.

Maximum permissible payload, P , means the difference between maximum gross mass R and tare mass T .

Note. In case when during testing gravitational forces are used, the inertial forces of the above values are denoted respectively by: R_g , T_g and P_g . For the purpose of these Rules $g = 9,81 \text{ m/s}^2$.

Maximum operating gross mass, R , means the maximum allowable combined mass of the container and its cargo.

Materials mean metal, welding, sealing materials, plastics, wood, clothes as well as plywood covered by the requirements of the Rules for the manufacture of containers.

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 containers, 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.

Pilot specimen (pilot lot) is a container, 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 and/or;

checking availability of the RS documents, recognized and competent organizations or persons on the items of technical supervision and/or;
examinations, including (where necessary) opening-up and dismantling and/or;
technical supervision during measurements, tests and/or;
assessment of the measurement and test results and/or;
drawing-up, endorsement, renewal and extension of the RS documents and/or;
checking of marking and/or;
branding (where necessary) of the item of technical supervision.

Offshore container (handed in open seas) means transport equipment having sufficient strength, designed for use in the transportation of goods or equipment, capable of being handled in open seas, to, from, and between fixed or floating facilities and ships.

Note. Not intended for permanent installation on ships and mobile offshore drilling units/fixed offshore platforms.

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 (listed in 1.3).

Note. Hereinafter referred to as the "Rules".

Recognition of a manufacturer is confirmation by the RS document of capability of a manufacturer to manufacture containers or materials and/or 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.

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

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

Type-series container means any container manufactured in accordance with the approved design type.

Tare mass, T , means the mass of the empty container including permanently affixed ancillary equipment.

Swap body means transport equipment having sufficient strength, designed, normally, for rail and road vehicle transportation by land or by water, having unified dimensions, unified means of securing and handling, and a width and/or a length exceeding those of ISO series 1 containers.

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 construction, service stages, including conversion, modernization and repair.

Type of container means the design type of container complying with requirements of these Rules and approved by the Register.

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.

Corner fittings mean the structural elements with apertures and faces, arranged at the top and bottom corners of a container for the purposes of handling, stacking and/or securing.

Bearing structural elements mean a set of structural components that receive static and dynamic loads during testing and operation of containers.

1.1.2 Abbreviations.

RHO – RS Head Office.

ADR – European Agreement Concerning the International Carriage of Dangerous Goods by Road.

CSC – Convention for Safe Containers.

CCC – Customs Convention on Containers.

IACS – International Association of Classification Societies.

IMDG Code – International Maritime Dangerous Goods Code.

RID – International Regulations for the Carriage of Dangerous Goods by Rail.

Register, RS – Russian Maritime Register of Shipping.

C – Certificate filled-in and signed by the Register (forms 6.5.23, 6.5.28, 6.5.29, 6.5.30, 6.5.34, 6.5.36).

C3 – 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 C3 on behalf of the manufacturer.

CDC – Welder Approval Test Certificate (form 7.1.30).

SMGS – Agreement on International Carriage of Goods by Rail.

COД – Certificate of Freight Container Safety Approval by Design Type (form 2.3.1); Design Type Approval Certificate of the Portable Tank (Tank Container) for Transportation of Dangerous Goods (form 2.3.4); Certificate of Container Approval at a Stage Container Subsequent to Manufacture (form 2.4.1); Certificate of Container Approval by Design Type (form 2.4.2); Type Design Approval Certificate for Offshore Container (form 2.3.5).

COCM – Certificate of Approval for Welding Consumables (form 6.5.33).

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).

СПО – Recognition Certificate for the Firm Performing Freight Container Inspection (form 7.1.4.5)

ССП – Certificate of Firm Conformity (form 7.1.27).

СТО – Type Approval Certificate (form 6.8.3).

IMO – International Maritime Organization.

ISO – International Organization for Standardization.

R – maximum gross mass, kg.

T – tare mass, kg.

P – maximum possible payload, kg.

1.1.3 Explanations.

The types of containers are given in ISO 830 standard.

The codes of dimensions and type are given in ISO 6346 standard.

1.2 THE REGISTER ACTIVITY ON TECHNICAL SUPERVISION

1.2.1 The Register is a body of technical supervision of containers. Being a member of the International Association of Classification Societies (IACS), the Register follows IACS decisions being guided by the provisions of the Code of Ethics of the Register. The Register Quality Management System (RS QMS) complies with applicable requirements of ISO 9001 and ISO/IEC 17020 standards, IACS QSCS and Regulation (EC) 391/2009, IMO resolution MSC.349(92), which is confirmed by the appropriate certificates.

1.2.2 The Register is authorized to exercise on behalf of the Government technical supervision of implementation of the provisions of international Conventions, agreements and contracts to which the Russian Federation or any other State, the Government of which has

authorized the Register to conduct this kind of activities is a party, insofar as matters within the Register scope are concerned.

1.2.3 The Register establishes technical requirements for containers guided by these Rules (specified in 1.3), as well as valid provisions of the Convention for Safe Containers (CSC), Customs Convention on Containers (CCC), International Maritime Dangerous Goods Code (IMDG Code) and performs technical supervision of the compliance with these requirements.

It considers the applicability of other Regulations, Conventions and Agreements, European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR), International Regulations for the Carriage of Dangerous Goods by Rail (RID) and Rules for the Transport of Dangerous Goods, Appendix 2 to the Agreement on International Carriage of Goods by Rail (SMGS).

1.2.4 Technical supervision is performed according to the Rules issued by the Register, and is aimed at determining whether the containers subject to technical supervision of the Register, as well as the materials and products, meet the provisions of the Rules and the additional requirements.

The requirements of the Rules and additional requirements are obligatory for design organizations, firms (manufacturers) of containers, container owners, firms manufacturing materials and equipment for containers and those engaged in the repair and maintenance of containers subject to technical supervision of the Register.

Technical supervision of the Register does not supersede the quality control services of the container owners and firms (manufacturers).

1.2.5 The Register performs technical supervision of the containers and associated materials and products during design, manufacture and service.

1.2.6 The Register reviews and approves Russian normative documents, as well as those of other countries and international normative documents, containing norms and requirements for items of the RS technical supervision.

When normative documents of another country are submitted as part of technical documentation for the items of the RS technical supervision, they are considered its integral part, and their application in each case is confirmed by the approval of technical documentation without separate approval of said normative documents.

1.2.7 The Register may participate in investigations of matters lying within its scope.

1.2.8 The fees for the performed work are charged by the Register according to the Register scale of fees. Additional fees are charged by the Register in the case of additional expenses incurred in the course of rendering of service (for instance, traveling expenses, services rendered out of hours etc.).

1.3 RULES

1.3.1 Applicable Rules.

1.3.1.1 The Rules used by the Register in technical supervision of containers under manufacture and in service are:

- .1** General Regulations for the Technical Supervision of Containers;
- .2** Rules for the Manufacture of Containers, consisting of the following parts:
 - I "Basic Requirements";
 - II "General Freight Containers";
 - III "Thermal Containers";
 - IV "Tank Containers";
 - V "Platform containers and platform-based containers";
 - VI "Non-Pressurized Bulk Containers";
 - VII "Offshore containers";
 - VIII "Tank Containers with Fiber-Reinforced Plastics (FRP) Shell";
- .3** Rules for the Approval of Containers for the Transport of Goods under Customs Seal;
- .4** Rules for Technical Supervision during Manufacture of Containers;
- .5** Rules for Technical Supervision of Containers in Service;
- .6** Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk, as applicable to containers;
- .7** Rules for the Classification and Construction of Sea-Going Ships as applicable to containers;

.8 Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships as applicable to containers.

1.3.1.2 In addition to the Rules stated in 1.3.1.1, other RS-developed normative documents applicable to containers are used by the Register in performing technical supervision.

1.3.2 Application of the Rules to containers under manufacture and to products.

1.3.2.1 Newly published Rules, as well as amendments introduced into the Rules, come into force from the date specified in the annotation to the publication, unless other terms are fixed in particular cases. Until the date of entry into force, they shall be considered as recommendation.

1.3.2.2 Interpretation of the requirements of the Rules and other normative documents of the Register is within the Register competence only.

1.3.2.3 The containers and products whose designs are submitted for approval of the Register after the entry into force of the Rules, or amendments introduced into the Rules, shall comply with the requirements of these Rules and amendments.

To the containers being manufactured and products whose technical documentation was approved by the Register prior to the entry into force of the Rules, those Rules are applicable which were in force on the date of approving that documentation.

1.3.3 Deviations from the Rules.

1.3.3.1 The Register may allow to use materials, structures or separate devices and items of the container, other than those specified in the Rules, provided they are at least as effective as those required by the Rules; deviations from the Rules, which are covered by the international conventions and agreements, may be permitted by the Register only if the latter is satisfied that such deviations are permissible under these conventions and agreements. In these cases, the Register shall be provided with information enabling to ascertain that the materials, structures and products meet the requirements which ensure trouble-free handling of the container and safe carriage of goods.

1.3.3.2 If the design of the container, its separate machinery, devices, units, equipment and outfit or the materials used cannot be regarded as sufficiently proved in service, the Register may require additional tests to be performed during manufacture of the container and, as applied to containers in service, may reduce the intervals between periodical surveys or increase the extent of such surveys.

1.4 DOCUMENTS

1.4.1 In the course of technical supervision the Register issues the appropriate documents.

1.4.2 Based on the results of technical supervision of containers, the following documents provided for by the List of Forms of the Register documents are issued during technical supervision:

.1 CОД:

.1.1 Certificate of Freight Container Safety Approval by Design Type which certifies the compliance of the freight container design type with the requirements of CSC and the Rules;

.1.2 Design Type Approval Certificate of the Portable Tank (Tank Container) for Transportation of Dangerous Goods which certifies the compliance of the tank container design type with the requirements of IMDG Code and the Rules and with indication of other applicable normative documents;

.1.3 Certificate of Container Approval at a Stage Container Subsequent to Manufacture which certifies the compliance of the container design type with the requirements of CCC and the Rules;

.1.4 Certificate of Container Approval by Design Type which certifies the compliance of the container design type with the requirements of CCC and the Rules;

.1.5 Type Approval Certificate for Offshore Container which certifies the compliance of the offshore container design type with the requirements of the Rules and with the indication of other applicable normative documents;

.2 CTO which certifies the compliance of the types of materials, products or groups of products, type production processes with the requirements of the Rules;

.3 C:

.3.1 Certificate for Freight Containers which certifies the compliance of specific freight containers with the requirements of the CSC, CCC and the Rules;

.3.2 Certificate for Thermal Containers which certifies the compliance of specific thermal containers with the requirements of CSC, CCC and the Rules;

.3.3 Certificate for Tank Container which certifies the compliance of the specific tank container with the requirements of the CSC, CCC, IMDG Code and the Rules and with the indication of other applicable normative documents;

.3.4 Certificate for Offshore Containers which certifies the compliance of offshore containers with the requirements of the Rules and with the indication of other applicable normative documents;

.3.5 Certificate for Offshore Tank Container which certifies the compliance of a specific offshore tank container with the requirements of the Rules and with the indication of other applicable normative documents;

.3.6 Certificate is a document which certifies compliance of specific materials, products and groups of products with the requirements of the Rules and normative documents;

.4 Certificate (C3 which is a certificate filled and signed by an official of the firm and drawn up (certified) by the Register) which is a document certifying the compliance of specific materials, products or groups of products with the Rules and normative documents;

.5 СПИ which certifies the Register recognition of a manufacturer as the manufacturer of materials and products which are under the Register technical supervision;

.6 СП which certifies the recognition of a service supplier rendering services (carrying out works) in compliance with the Register requirements;

.7 СПЛ which certifies the laboratory competence in the performance of certain types of tests of materials, products and containers;

.8 СПО which certifies the Register recognition of the firm performing inspections of freight containers (excluding tank containers) in service in compliance with the CSC requirements and 3.2 of the Rules for Technical Supervision of Containers in Service;

.9 ССП which certifies the conformity of the firm with the Register requirements in rendering the declared services (carrying out the declared work);

.10 СДС which is a document of the Register certifying that a particular welder has successfully passed the tests for certification in the scope of the requirements of the Rules and is allowed to perform welding work on structures subject to Register technical supervision within the scope of approval specified in the Certificate;

.11 СОТПС which is a document of the Register certifying that the welding process used at the shipyard or firm that manufactures welded structures has been tested and approved by the Register for application;

.12 СОСМ which certifies the compliance of welding consumables with the RS requirements;

.13 reports.

1.4.3 The validity period of СОД and reports listed in 1.4.2.1.1 – 1.4.2.1.4, 1.4.2.11 is not specified. СОД are not valid for newly manufactured containers in case of expiration of the technical documentation validity period.

1.4.4 The validity period of СОД listed in 1.4.2.1.5, shall not exceed 6 years and the validity period of СТО listed in 1.4.2.2 shall not exceed 5 years. The validity period of СОД and СТО shall not exceed the approval period of the technical documentation for an item of technical supervision. Upon expiration of СОД and СТО validity period, it is renewed upon the request of the firm.

1.4.5 The validity period of С listed in 1.4.2.3.1 and 1.4.2.3.2 shall not exceed 5 years.

1.4.6 The validity period of С listed in 1.4.2.3.3 shall not exceed 2.5 years.

1.4.7 The validity period of С listed in 1.4.2.3.4 – 1.4.2.3.5 shall not exceed 1 year.

1.4.8 The validity period of СПИ, СПЛ, СПО and ССП listed in 1.4.2.5, 1.4.2.7 – 1.4.2.9 shall not exceed 5 years and is subject to endorsement not less than once a year. Endorsement shall be done within the period limited by 30 days before and 30 days after the date of the established endorsement date of the certificates.

The validity period of СП listed in 1.4.2.6 is 3 years and is not subject to endorsement.

Upon expiration of СП validity period, it is renewed upon the request of the firm.

RS reserves the right to carry out occasional surveys of a firm having a valid RS certificate in cases when:

.1 an item of technical supervision has been found non-complying with the RS requirements, in particular, based on information from a third party;

.2 the firm has not notified the Register either about the changes of the technical documentation for the item of technical supervision approved by the Register, or of changes of the item of technical supervision stated in the certificate.

1.4.9 Validity of the documents specified in 1.4.2.5 – 1.4.2.9 (СПИ, СП, СПЛ, СПО, ССП) may be suspended for a period agreed upon with the firm but not more than ninety (90) days from the specified date of endorsement, provided:

- .1 reporting documents have not been properly drawn up;
- .2 the firm has not applied with the request to endorse the certificate within the established period;
- .3 the firm has not informed the Register of the changes in the activity specified in the certificate;
- .4 a single nonconformity of the firm activity to the Register requirements have been found;
- .5 an item of technical supervision has been found non-complying with the Register requirements, in particular, based on information from a third party;
- .6 the firm has not notified the Register either about the changes of the technical documentation for the item of technical supervision approved by the Register or about changes of the item of technical supervision stated in the certificate.

1.4.10 СПИ, СП, СПЛ, СПО, ССП shall become invalid:

- .1 upon expiry of the certificate period of validity;
- .2 in case the certificate suspension reasons have not been eliminated within the agreed period;
- .3 if the repeatedly detected non-conformities of the firm activity or an item of technical supervision to the Register requirements that have previously been found;
- .4 the firm has not notified the Register either about the changes of the technical documentation for the item of technical supervision approved by the Register or about the changes of the item of technical supervision stated on the certificate affecting the safety of the objects of technical supervision or involving emergency cases;
- .5 in case the certificate has not been endorsed within the specified period;
- .6 in case the contract or agreement on technical supervision become void in cases stipulated under 4.6, Part I "General Regulations on Technical Supervision" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships;
- .7 in case of the firm's bankruptcy or liquidation.

1.4.11 The Register informs the firm in the writing about the suspension and loss of validity of the certificate in cases specified in 1.4.9.1, 1.4.9.3 – 1.4.9.6 and 1.4.10.2 – 1.4.10.4 and 1.4.10.6.

1.4.12 The documents are issued by the Register on the basis of satisfactory technical condition determined for the supervised item by means of surveys and tests.

1.4.13 The Register documents wherein the owner or the applicant is specified, do not confirm the right of ownership of the item of technical supervision.

1.4.14 The Register shall be notified about all the modifications (introduction of alterations to the design) of the surveyed containers. Such containers may be tested to the necessary extent, if required by the Register.

1.4.15 The Register may fully or partly recognize the documents issued by other classification societies, technical supervision bodies and other organizations.

1.4.16 Under the circumstances indicated below, the Register is entitled to suspend the validity of the certificates specified in 1.4.2.1 – 1.4.2.4:

- .1 structural defect of the design type approved by the Register has been revealed and the firm has not agreed the way to eliminate it with the Register within the specified terms;
- .2 the firm has not notified the Register either about the changes in the technical documentation for the item of technical supervision approved by the Register or about the changes of the item of technical supervision stated in the certificate affecting the safety of the objects of technical supervision or involving emergency cases.

1.4.17 The validity of such documents may be restored, if the Register is satisfied that the grounds, which caused the loss of validity have been eliminated.

1.5 THE REGISTER RESPONSIBILITIES

1.5.1 The Register entrusts the performance of inspections to adequately qualified experts performing their work in accordance with their functional duties.

The Register is responsible for failure to perform or for improper performance of its commitments only in case of established fault and the cause-effect relation between the damage caused and the Register activity.

2 TECHNICAL SUPERVISION

2.1 GENERAL

2.1.1 The scope of the technical supervision includes:

- .1 consideration of technical documentation;
- .2 technical supervision during manufacture of materials and products, specified in the Rules, intended for subsequent manufacture of items of technical supervision;
- .3 technical supervision during manufacture of containers;
- .4 technical supervision of containers in service including repair and modernization of containers;
- .5 recognition of firms (manufacturers), repair firms, design and engineering firms and other organizations involved in operation of containers, certification of laboratories for testing containers, materials and products intended for containers.;
- .6 recognition of firms and organizations engaged in weighing the packed containers in compliance with IMO resolution MSC 380(94).

2.1.2 Containers subject to the Register technical supervision are specified in the Register Nomenclature, Table 2.1.2.

Table 2.1.2

Code of Item of technical supervision	Name of item of technical supervision
30010000MK	Containers
30020000MK	General freight containers
30030000MK	Thermal containers
30030100MK	Tank-containers
30040000MK	Tank containers with fiber-reinforced plastic shell
30040100MK	Platform containers
30050000MK	Platform-based containers
30060000MK	Non-pressurized solid bulk containers
30070000	Named-cargo containers
30070000MK	Offshore containers
30070100	Offshore containers (if covered by the requirements of International Codices and/or Conventions)
30070100MK	Auxiliary offshore containers
30080000MK	Auxiliary offshore containers (if covered by the requirements of International Codices and/or Conventions)
30090000MK	Open top containers
30100000MK	Dry bulk tank containers
30100000MK	Containers capable of being folded

2.1.3 List of materials and products subject to the Register technical supervision is given in the Register Nomenclature, refer to Table 2.1.3.

Table 2.1.3

Code of Item of technical supervision	Name of item of technical supervision	Group of item of technical supervision (1 – 5)	Branding
	Materials for containers		
30080100	Sheet steel for tanks ¹	3M ²	K
30080200	Rolled metal for manufacturing of pad eyes for offshore containers ³	3M ²	K
30080300	Rolled metal for manufacturing of container framework members	1M	–
14000000	Welding consumables ⁴	2M	–
	Products for containers		
30090100MK	End frames ⁵	3	K
30090150MK	Corner and intermediate fittings	4	K
30090200MK	Shell (vessel) of tank containers ⁵	3	K
30090210MK	Tank heads ⁵	3	K
30090220MK	Tank shells ⁵	3	K
30090300MK	Tank hatches ¹	3	–
30090410MK	Frangible disks ¹	2 ²	–
30090420MK	Fusible elements ¹	2 ²	–
30090430MK	Pressure-relief (safety) valves ¹	3	–
30090500MK	Vacuum valves ¹	3	–
30090600MK	Stop valves of tank ¹	3	–
30090810MK	Covers for containers	2 ²	–
30090820MK	Ropes for fastening a cover to a container	2 ²	–
30090900	Lifting set for offshore containers	3	K
30091000	Components of lifting set for offshore containers ⁵	3	K
30091100	Refrigerating and/or heating appliances of a container	3	–
15110101	(Electrical) sensors and indicators of level ^{1,2}	2	–
¹ For tank containers that are intended for the carriage of dangerous goods. ² On agreement with RHO a limited lot/scope is possible to be supplied with the documents of the firm (manufacturer) certified by the RS surveyor (placing of electronic digital signature or signature and stamp on a hard copy) by applying incoming inspection if the Rules shall be additionally confirmed. ³ Thickness of rolled metal is 6 mm and over. ⁴ Codes of groups "Welding consumables" and relative issued documents refer to Appendix 1, Part I "General Provisions for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships. ⁵ For products supplied separately under cooperation agreement for assembly of containers or as spare parts. Note. Groups of technical supervision are specified in accordance with Section 5, Part I "General Regulations for Technical Supervision" of the Rules for Technical Supervision During Construction of Ships and Manufacture of Materials and Products for Ships.			

2.1.4 Table 2.1.4 contains forms of technical supervision during design, manufacture and tests of containers which are chosen by the firm (manufacturer) and agreed with RS.

Table 2.1.4

Stage of technical supervision during manufacture of containers		Forms of technical supervision	
		1	2
Prototype (first lot)	Approval of technical documentation	x	x
	Examination of welders, approval of welding consumables and welding production processes	x	x
	Technical supervision during manufacture	x	x
	Technical supervision during testing in the scope prescribed for a prototype	x	x
	Survey of finished container(s)	x	x
	Branding	x	x
	Documents issued by RS	СОД and С ¹	СОД and С ¹
Type-series container ²	Survey of the firm	—	СПИ
	Technical supervision during manufacture	x	—
	Technical supervision during testing to confirm manufacture stability	x	x
	Technical supervision during testing at serial manufacture	x	— ³
	Survey of finished container(s)	x	x
	Branding	x	x
	Documents issued by RS	С ¹	С ¹
¹ Except for form 6.5.30. ² Serial manufacture of containers is carried out upon positive results of manufacture and test of a prototype (first lot). ³ Required for tank containers. Notes: 1. "x" means "required", "—" means "not required". 2. Requirements for firms (manufacturers) of containers to receive СПИ are specified in 1.4 and 1.5, Part I "Basic Requirements" of the Rules for the Manufacture of Containers. 3. Requirements for the scope of survey are specified in Appendix 2 to the Rules of Technical Supervision During Manufacture of Containers.			

2.1.5 RS carries out technical supervision for the activity indicated in Table 2.1.5.

Table 2.1.5

Code	Name of activities	Documents issued by RS
40000001	Repair and modernization of containers	ССП or СП
40000002	Repair and modernization of containers except for tank containers	ССП or СП
40000003MK	Test of containers	СПЛ
40000004MK	Freight containers examination/inspection (excluding tank containers) in service in compliance with the CSC requirements	СПО
40000005MK	Confirmation of gross mass of containers	СП
40000006	Preparation and tests of tank containers for periodical survey	ССП or СП
40000007	Design engineering services for containers and associated products	ССП ¹
¹ Carried out on a voluntary basis. Note. Requirements for firms are specified in Sections 4, 6 and 7 of the Rules for Technical Supervision of Containers in Service.		

2.1.6 Materials and products applied during manufacture of containers are permitted to be installed subject to the availability of the certificates of compliance with requirements of the Rules or other documents confirming their compliance with RS requirements, Conventions and Codices, etc., normative documents as applicable to containers.

The containers, materials and products subject to the Register technical supervision shall be manufactured according to technical documentation approved by the Register.

Technical supervision during manufacture of containers, materials and products shall be performed in relation to those properties only, which are regulated by the Rules, as well as parameters and characteristics indicated in the approved technical documentation. During technical supervision the Register shall not determine a grade or a category of the product quality and shall not check if the safety engineering, sanitary and labor organization requirements are met, or other production aspects beyond the Register terms of reference.

2.1.7 Recognition of documents for materials and products manufactured under ACS technical supervision without Register authorization is defined in each case by the Register during survey of these materials and products in the scope sufficient to confirm their compliance with the Register requirements, Conventions, IMO recommendations, standards and normative documents.

2.1.8 In particular cases, at the RS discretion, technical supervision may be performed of the containers, materials and products not listed in the RS Nomenclature, which are newly developed (pilot specimens). Later, based on the results of technical supervision during manufacture of containers and in service, these containers, materials and products may be introduced in the relevant parts of the Rules for containers and the RS Nomenclature.

2.1.9 The basic method used by the Register in exercising technical supervision is random inspection, unless any other procedure has been adopted.

2.1.10 For the technical supervision to be carried out, container owners and firms shall provide RS surveyors with all conditions for the technical supervision to be performed:

- 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.

2.1.11 Container owners, design organizations and firms shall fulfill the requirements set forth by the Register to perform technical supervision.

2.1.12 Any changes relating to materials and the structural design of containers and products to which the requirements of the Rules apply, planned by container owners and firms, shall be approved by the Register before they are implemented.

2.1.13 Controversial issues arising in the course of technical supervision may be transferred by container owners, firms (manufacturers) and other interested organizations directly to the higher Register Branch Office. The decision of RHO is final.

2.1.14 The Register may refuse from the technical supervision in case when the firm systematically violates the Rules or contract on technical supervision concluded with the Register.

2.1.15 In case of revealing defects in a material or a product with a valid document, the Register may require additional tests or appropriate corrections to be made, and if the defect cannot be remedied, may cancel this document.

2.1.16 A container manufactured in conformity with the approved technical documentation shall undergo the appropriate tests according to the procedures set out in the relevant parts of the Rules for the Manufacture of Containers.

2.1.17 If, in the result of testing of the prototype(s), the design of type-series containers, the associated equipment or the process of manufacture shall be changed as compared with the approved documentation of the prototype, the firm (manufacturer) shall submit for consideration of the Register the documentation for series production of the containers, inclusive of the changes proposed, upon results of which RS may decide to carry out additional tests.

3 TECHNICAL DOCUMENTATION

3.1 GENERAL

3.1.1 Prior to the commencement of the manufacture of containers, materials and products, subject to the Register technical supervision, the appropriate technical documentation shall be submitted to the Register in the scope specified in the relevant parts of the Rules for the Manufacture of Containers.

Standards for certain materials and products agreed with the Register may substitute the documentation as a whole or a part thereof.

If necessary, the Register may require the scope of documentation to be increased.

The documents shall be submitted in electronic form, in Russian or in English, in pdf format, and the method of transferring files shall be agreed with the Register.

Where landmark decisions are taken, the performance specification, engineering proposal, concept design, preliminary design, as well as the research and development results may be submitted to the Register for review. Such documents are not subject to approval (agreement) and their review results are reported in a written conclusion (opinion).

3.1.2 In general, the Register review of the documentation set takes 45 working days.

In case the documentation is submitted by parts, its review takes 45 working days from the date of receiving the last portion.

Duration of the documentation review may be reduced upon agreement with the Register in each particular case.

The procedure, place, terms and other conditions of detailed design documentation review by the Register shall be determined upon agreement with the RS Branch Office responsible for review of detailed design documentation.

3.1.3 The changes which are introduced in the approved technical documentation in respect of the elements and structures covered by the Rules shall be submitted for consideration of the Register before proceeding with such changes.

3.1.4 The technical documentation submitted for consideration to the Register shall be drawn up in such a way, or shall supply such particulars, so as to afford clear evidence that the requirements of the Rules are met. The technical documentation shall be signed by the persons responsible for the development and duly issued.

3.1.5 The calculations necessary for determining parameters and values regulated by the Rules shall be done according to the requirements of these Rules and according to procedures approved by the Register. The calculation procedures shall ensure sufficient accuracy of solving the problem, which is confirmed by prototype tests carried out under the appropriate provisions.

The Register does not verify the accuracy of calculations, including those obtainable from the computer, while taking into account their results during the consideration of the technical documentation.

Check calculations may be prepared using any program, if required by the Register.

3.1.6 The approval of technical documentation shall be confirmed by the corresponding stamps of the Register.

The approval does not apply to the elements and structures which are not covered by the Rules.

The documents contradicting the Register requirements shall be returned with comments to the designer for updating and/or correcting.

3.1.7 The production of containers subject to technical supervision of the Register shall be made according to the technical documentation approved by the Register.

3.2 DURATION OF VALIDITY OF APPROVED TECHNICAL DOCUMENTATION

3.2.1 The Register approval of the technical documentation is valid for the period of 6 years.

3.2.2 In justified cases, when serial products are manufactured, the validity term of the approved technical documentation specified in accordance with 3.2.1, may be extended by the Register for a period not longer than that required to manufacture (order) a batch of products.

3.2.3 The normative and technical documents for the containers and associated materials and products shall be approved for a period of their validity.

3.2.4 Irrespective of the approval validity, the technical documentation as well as agreed standards and other normative documents are subject to mandatory updating with regard to adopted requirements of international conventions and agreements that have come into force after approval of the documentation. All approved and agreed documentation is also subject to updating, with regard to the requirements of the RS circular letters prescribing their mandatory fulfillment.

3.2.5 The requirements of the Rules as well as of international conventions and agreements that are in effect on the date of submission of the documents shall be taken into consideration in the technical documentation submitted for re-approval upon expiry of validity of its previous approval.

3.2.6 The Register approval of the technical documentation loses its validity:

- .1 upon expiry of approval validity;
- .2 upon expiry of the documentation validity (where the term is indicated);
- .3 in case amendments were introduced without consent of the Register into the approved documentation dealing with the issues, which are within the Register terms of reference.

3.2.7 The Register may cancel its approval of the technical documentation or change the terms of approval in the following cases:

- .1 if the documentation has not been timely brought in line with the provisions of international conventions and agreements, as well as with the requirements of the RS circular letters as set forth under 2.2.3;
- .2 if the quality and reliability of materials and items are regularly low and do not meet the RS requirements.

4 KEEPING RECORD ON CONTAINERS

4.1 GENERAL

4.1.1 RHO keeps record on the following:

СОД for all types of containers;

СТО for products;

C, C3 and survey reports for all types of containers issued during manufacture and in service;

СПИ, СПО, СП, ССП and СПЛ."

RULES FOR THE MANUFACTURE OF CONTAINERS

PART I. BASIC REQUIREMENTS

3 **Section 1** is replaced by the following text:

"1 GENERAL

1.1 APPLICATION

1.1.1 The requirements of the Rules for the Manufacture of Containers (hereinafter referred to as these Rules) apply to freight containers with gross mass of 10 t and more, intended for the carriage of goods by water, rail and road and for interchange between these modes of transport, unless expressly provided otherwise in these Rules.

Besides, the requirements of these Rules apply to offshore containers as well as to ship equipment storage containers in the scope applicable to such containers.

1.1.2 Requirements to the containers of ISO series 1 are set forth in Part I "Basic Requirements", II "General Freight Containers", III "Thermal Containers", IV "Tank Containers", V "Platform and Platform-based Containers", VI "Non-Pressurized Solid Bulk Containers" and VIII "Tank Containers with Fiber-Reinforced Plastic Shell" of these Rules.

1.1.3 Taking into account that there shall always be a need for special containers for particular transportation, containers may differ from ISO series 1 containers in dimensions and be in excess of the maximum gross masses specified in Table 2.1.2. Operation of such containers may require special arrangements and agreements.

1.1.4 Containers differing in design and dimensions from the requirements specified in these Rules are subject to special consideration by the Register in each particular case.

1.2 DEFINITIONS AND EXPLANATIONS

1.2.1 Definitions, abbreviations and explanations related to the general terminology of these Rules are given in 1.1 of General Regulations for the Technical Supervision of Containers.

1.3 APPROVAL OF CONTAINERS

1.3.1 Approval of containers means the decision of the Register that a design type or an individual container is safe within the terms of these Rules and is suitable for the transportation of cargoes according to designation.

1.3.2 The container manufactured and tested in accordance with the requirements of these Rules, is considered to be approved under the CSC and CCC terms.

1.3.3 An application made in writing shall be submitted to the Register to obtain approval of a container by design type.

1.3.4 The application for approval for each design type of a container shall be accompanied by the following documentation:

.1 design or technical specification (for firms for which the container design specification is not provided according to the applied normative documents) of the container with description of its purpose, structure, technical characteristics, mechanical and chemical properties of materials involved, with indication of manufacturers of the components purchased under cooperation agreement, adopted welding procedures as well as methods of assembling, finish and painting;

.2 general view drawings, sectional views, drawings of assemblies and separate elements as well as the materials involved, drawings of marking and convention plates;

.3 prototype test list, test program and procedure of series containers to be performed at the firm (manufacturer).

Additional technical documentation may be required by the Register if considered necessary.

N o t e . The test program and procedures for a prototype shall be submitted by a testing laboratory during preparations for testing the prototype.

1.3.5 A prototype of a container shall be manufactured in accordance with the technical documentation approved by the Register and under the Register technical supervision at the firm where manufacture of type-series products is intended. The scope of supervision is set forth in the Rules for Technical Supervision during Manufacture of Containers. A prototype shall be subjected to testing in accordance with these Rules in a laboratory recognized by the Register in the presence of the Register representative. In exceptional cases, tests may be conducted by a laboratory not having a Recognition Certificate, however, this shall be subject to special consideration by the Register.

Containers tested in accordance with procedures specified in ISO 1496 are considered tested in compliance with the CSC requirements.

1.3.6 With satisfactory results obtained in testing and surveying a prototype, the Register issues a Certificate of Container Safety Approval by Design Type to the applicant.

1.3.7 The Certificate of Approval shall entitle the applicant to affix a Safety Approval Plate (refer to 4.1) to every type-series container, manufactured under the Register technical supervision to the design type approved by the Register.

1.3.8 The Register may approve for service the containers manufactured as modifications of the approved design type, provided that the modifications do not affect the results of tests made in the course of approval by design type.

1.4 GENERAL REQUIREMENTS FOR FIRMS

1.4.1 General.

1.4.1.1 The requirements of this Chapter apply to all the firms carrying out the activity related to the items of the Register technical supervision and are subject to the verification of compliance and recognition by the Register.

1.4.1.2 The verification of compliance or recognition of the firm by the Register includes:

.1 review of the documents confirming compliance of the firm 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, for which the 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 practically demonstrate 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.

1.4.1.3 The firm shall submit for review:

- .1 documents or their copies confirming compliance with the requirements of 1.4.2.1, 1.4.2.2, 1.4.2.6, 1.4.2.7 and 1.4.2.8.3 taking into account the relevant requirements of 1.5 – 1.7;
- .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 1.4.2.2.1 taking into account the relevant requirements of 1.5 – 1.7;
- .4 lists of the equipment and facilities indicated in 1.4.2.3.1 and 1.4.2.4.1 as well as welding and testing equipment taking into account the relevant requirements of 1.5 – 1.7;
- .5 lists of the documents indicated in 1.4.2.4.3 and 1.4.2.5.1 taking into account the relevant requirements of 1.5 – 1.7;
- .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.

1.4.1.4 Survey of the firm aims to confirm the compliance of the firm with the requirements of 1.4.2.

The requirements for the firms performing certain activities are specified in the relevant chapters.

1.4.1.5 Duration of the firm's documentation review shall comply with that indicated in 3.1.2, Part I of the General Regulations for the Technical Supervision of Containers.

1.4.2 Requirements.

1.4.2.1 Legal status.

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

1.4.2.1.2 The firm shall have organizational structure and the chief executive officer.

1.4.2.2 Personnel.

1.4.2.2.1 Personnel of the firm shall have the appropriate education, vocational and special training, qualification and experience required to perform the activity in the area indicated.

1.4.2.2.2 The firm is responsible for qualification and professional training of its personnel in compliance with the national, international and industrial standards; and in case of absence of such standards – in compliance with the standards of the firm. This requirement shall be established in the documents of the firm.

1.4.2.3 Technique.

1.4.2.3.1 The firm shall have the technique necessary to perform the activity in the area indicated in the request, including appropriate equipment, premises and facilities certified in the established order.

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

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

1.4.2.4 Measurement assurance.

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

- .1 measuring equipment verified (calibrated) in accordance with the established procedure;
- .2 testing equipment certified in accordance with the established procedure;
- .3 references and type specimens;
- .4 appropriate consumables (chemicals, substances, etc.).

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

1.4.2.4.3 The firm shall have and adhere to the current standard and certified procedures approved by the Register:

- .1 for testing of items of technical supervision with the required accuracy;
- .2 for handling of samples.

1.4.2.5 *Files of the firm documents.*

1.4.2.5.1 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 approved by the Register;
- .3 production documentation on performance, checking and control of each kind of activity.

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

1.4.2.6 *Reporting.*

1.4.2.6.1 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 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 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.

1.4.2.6.2 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.

1.4.2.7 *Checking and control.*

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

1.4.2.7.2 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. This requirement shall be specified in the firm documents.

1.4.2.8 *Subcontractors.*

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

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

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

1.4.2.9 *Information on alterations to the certified service operation system.*

1.4.2.9.1 In case where any alteration to the certified service operation 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.

1.5 RECOGNITION OF FIRMS (MANUFACTURERS)

1.5.1 General.

1.5.1.1 The requirement of this Chapter covers firms (manufacturers) of containers listed in the Register Nomenclature. Recognition of the firm means the Register confirmation of the firm's

capability to manufacture containers with sustained quality of adequate level.

1.5.1.2 The firm shall meet the requirements of 1.4 and the requirements of this Chapter.

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

Note. The firms newly entering upon the manufacture of containers in order to obtain the Recognition Certificate for Manufacturer (СПИ) shall manufacture at least 20 containers under the Register technical supervision.

1.5.1.4 The firm shall inform the Register of the existing experience required for manufacture of containers, types and dimensions of the containers manufactured or planned to be manufactured thereat specifying the models approved by the Register (if any), in addition to 5.1.3 and shall also submit for review:

- .1 particulars of tests which may be carried out at the firm;
- .2 information on production processes of container manufacture;
- .3 production processes of welding for approval or copies of approved production processes of welding, if any;
- .4 Welder Certification Program if welders approved by the Register are unavailable or copies of Welders Approval Test Certificates;
- .5 copies of certificates and licenses issued previously to containers (if any);

Note. The firm (manufacture) of containers shall have valid Quality Management System (QMS) complying with ISO 9001.

1.5.1.5 The firm shall carry out checking and control of the compliance of materials and accessories with the approved documentation, as well as control of the process of manufacture and testing of containers and equipment.

1.5.2 Requirements.

1.5.2.1 Personnel.

1.5.2.1.1 The firm shall have documents on the personnel containing the following information:

- .1 functional duties;
- .2 personnel training and its terms of validity;
- .3 certification and terms of its performance.

1.5.2.1.2 The firm shall have the regular staff of specialists.

1.5.2.1.3 The firm shall have and adhere to the plans (schedules) for:

- .1 training and re-training of the personnel;
- .2 certification of the personnel with respect to certain activities.

1.5.2.1.4 Welders shall be certified by the Register. When manufacturing tank containers, the firm shall have specialists in non-destructive testing.

1.5.2.2 Technique.

1.5.2.2.1 The firm shall have the lists of equipment, premises and facilities necessary to perform its activity in the area indicated.

The firm shall have the technique necessary for series manufacture and testing of containers including benches for assembly and welding of units, appropriate equipment, premises and area to store materials, accessories and finished containers as well as other necessary facilities to move containers across the territory of the firm.

1.5.2.2.2 The firm shall have and adhere to the schedules of maintenance of the equipment and facilities.

1.5.2.3 Measurement assurance.

1.5.2.3.1 In cases when testing of materials and products is carried out in the testing laboratory, this laboratory shall comply with the requirements stated in Chapter 1.6.

1.5.2.4 Files of the firm documents.

1.5.2.4.1 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 the activities performed (area of recognition);
- .2 operating and maintenance documents of the equipment;
- .3 operating and maintenance documents of measuring instruments and metrological equipment;

- .4 duty regulations;
- .5 documents on records keeping and archives maintenance.
- .6 the description of the operation checking system of the manufacture of containers and/or equipment;
- .7 the description of the periodical monitoring system for production processes;
- .8 approved welding production processes.
- 1.5.2.5 Quality Management System.**
- 1.5.2.5.1** 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 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.
- 1.5.2.6 Reporting.**
- 1.5.2.6.1** Reporting documents on the manufacture of containers shall include additionally:
 - .1 manufacturer's number of the container, code and number of the container owner;
 - .2 date of launching the production;
 - .3 marks on passing operation checking with the signatures of responsible persons;
 - .4 sheets of containers measurement to the extent specified in the Register rules;
- 1.5.2.6.2** The firm shall keep records (databases) of the containers and/or equipment manufactured and delivered to customers.

1.6 RECOGNITION OF TESTING LABORATORIES

1.6.1 General.

1.6.1.1 The requirements of this Chapter apply to testing laboratories (TL) conducting tests and measurements of containers.

1.6.1.2 The testing laboratory shall meet the requirements listed in 1.4 and the requirements of 1.6.2.

1.6.1.3 Recognition of TL by the Register is confirmed by СПЛ issued in compliance with 1.4 of the General Regulations for the Technical Supervision of Containers.

1.6.1.4 The Recognition Certificate of Testing Laboratory is not issued to the firms recognized by the Register and incorporating TL.

Note. Containers may be tested in third-party testing laboratories approved by the Register.

1.6.1.5 In particular cases, at the discretion of the Register, tests may be conducted at the testing laboratories not recognized by the Register. In so doing, prior to the tests performance the compliance of the testing laboratory with the requirements listed in 1.4 and requirements of 1.6.2.1.1, 1.6.2.2.1, 1.6.2.2.2, 1.6.2.4.1, 1.6.2.4.2, 1.6.2.5 and 1.6.2.6 shall be verified.

1.6.1.6 Recognition of the testing laboratory by the Register includes:

- .1 review of the documents confirming compliance of TL with the Register requirements;
- .2 survey of the testing laboratory and participation in check tests.

1.6.2 Requirements.

1.6.2.1 Personnel.

1.6.2.1.1 The testing laboratory is responsible for the qualification and vocational training of its personnel. The personnel of the testing laboratory shall have the work experience of at least 2 years.

1.6.2.1.2 The testing laboratory shall have documents on the personnel containing the following information:

- .1 functional duties;
- .2 education;

- .3 experience;
- .4 personnel training and its terms of validity;
- .5 certification and terms of its performance.
- 1.6.2.1.3** The testing laboratory shall have the regular staff of specialists.
- 1.6.2.1.4** The testing laboratory shall have and adhere to the plans for:
 - .1 training and re-training of the personnel;
 - .2 refresher training of the personnel;
 - .3 certification of the personnel with respect to carrying out certain tests.

1.6.2.2 *Technique.*

1.6.2.2.1 The technique of the testing laboratory shall comply with the test procedures used for carrying out the tests specified in the Register requirements for items of technical supervision.

1.6.2.2.2 Tests shall be carried out according to the appropriate test procedures considering also the environmental conditions corresponding to each type of tests in the area indicated in the request. Use shall be made of:

- .1 measuring instruments checked (calibrated) in accordance with the established procedure;
- .2 certified testing equipment;
- .3 ancillary equipment;
- .4 references and type specimens for maintenance and measurement assurance of measuring instruments;
- .5 appropriate consumables (chemicals, substances, etc.).

1.6.2.2.3 The testing laboratory shall have valid contracts for rented testing and measuring instruments.

1.6.2.2.4 The testing laboratory shall have the lists of:

- .1 measuring instruments including that for certification of testing equipment;
- .2 testing and ancillary equipment;
- .3 references and standard specimens.

1.6.2.2.5 The testing laboratory shall have and adhere to the schedules for:

- .1 maintenance of measuring and testing equipment;
- .2 checking (calibration) of measuring equipment;
- .3 certification of testing equipment.

1.6.2.3 *Files of the testing laboratory documents.*

1.6.2.3.1 The testing laboratory shall have valid normative and technical documents necessary to carry out tests in the area indicated in the request, including:

- .1 list of the activities performed (area of recognition);
- .2 Quality Manual or another similar document;
- .3 duty regulations;
- .4 operating and maintenance documentation on measuring and testing equipment;
- .5 documents on records keeping and archives maintenance;
- .6 valid test procedures for testing items of technical supervision with the required accuracy.

1.6.2.4 *Reporting.*

1.6.2.4.1 In addition to the information specified in 1.4.2.6.1, 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.

1.6.2.4.2 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).

1.6.2.4.3 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.

1.6.2.5 Checking and control.

1.6.2.5.1 The testing laboratory shall do the checking and exercise control over the test results.

1.6.2.5.2 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.

1.6.2.5.3 The testing laboratory shall conduct check tests in compliance with the area of recognition indicated in the request witnessed by the RS representative.

1.6.2.6 Conditions of taking, transport and storage of samples (if applicable).

1.6.2.6.1 Conditions of taking, transport and storage of samples shall meet the requirements of the testing procedures.

1.6.2.6.2 The testing laboratory shall identify the samples.

1.6.3 Special requirements.

1.6.3.1 Special requirements for testing laboratories engaged in penetrant testing (PT), radiographic testing (RT), ultrasonic testing (UT), magnetic particle testing (MT) of weld quality and thickness measurements of tank materials.

1.6.3.1.1 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.

Assessment of the qualification level and certification of personnel involved in NDT shall be performed in accordance with the requirements of the national standards (GOST R ISO 9712) unified with ISO 9712, as well as other requirements recognized by the Register.

Bodies operating certification of persons in NDT shall comply with the requirements of the international standard ISO/IEC 17024.

1.6.3.1.2 Reporting.

1.6.3.1.2.1 The testing laboratory shall have and maintain test logs (data bases).

1.6.3.1.2.2 The Statement (Test Report), in addition to the specified in 1.6.2.4.1, and test logs shall contain:

.1 reference to the Register rules or another normative document on agreement with RHO regarding the application of criteria for assessing the quality of welds at radiographic examination;

.2 reference to normative documents regarding the application of criteria for assessing the quality of welds at UT, PT and MT;

.3 thicknesses of components at UT and RT (refer to Part XIV "Welding" of the Rules for the Classification and Construction of Sea-Going Ships), and at thickness measurements;

.4 description of defects in accordance with applicable national or international standards.

1.6.3.1.2.3 The designation of controlled lengths at duplicating radiographic examination shall correspond to the designation of controlled lengths at UT.

1.6.3.1.3 Files of the documents.

1.6.3.1.3.1 The testing laboratory shall have instructions on performing assessment of the quality of welds taking into account the RS requirements.

1.6.3.1.4 The recognition certificates of testing laboratory (СПЛ) are subject to endorsement not less than once a year.

1.7 VERIFICATION OF DESIGN AND ENGINEERING FIRMS OF CONTAINERS AND ASSOCIATED PRODUCTS

1.7.1 General.

1.7.1.1 Verification of compliance of design and engineering firms of containers and products operating in accordance with code 40000007 is carried out on a voluntary basis. The verification includes consideration of documents confirming that design and engineering firms are in compliance with the requirements of the Register and design and engineering firms' certification.

1.7.1.2 Compliance of such firms with the established requirements is confirmed by a Certificate of Manufacturer Conformity (ССП).

1.7.1.3 The design and engineering firms shall submit for review:

.1 documents or their copies confirming compliance with the requirements of 1.4.2.1;

.2 information and documents confirming the education, experience and qualifications of the personnel involved in designing;

.3 lists of current regulatory documents;

.4 information on software products used in design;

.5 information on subcontractors (if any).

1.7.2 Requirements.

1.7.2.1 Personnel.

1.7.2.1.1 The firm shall have documents on the personnel containing the following information:

.1 functional duties,

.2 vocational training and its terms of validity.

1.7.2.1.2 The design and engineering firm shall have permanent staff, have and adhere to the plans (schedules) for training and retraining of personnel.

1.7.2.1.3 Personnel of the design and engineering firm shall demonstrate knowledge of the regulatory requirements for the equipment designed, knowledge of the principles of the unified system of design documentation, knowledge of software products used in the design and drawing up of documentation in the electronic format. If any subcontractors are involved in designing and engineering (e.g. for calculations), the design and engineering firm shall report on the terms of cooperation with such organizations.

1.7.2.2 Files of documents.

1.7.2.2.1 The design and engineering firm shall have valid (updated) normative documents legally acquired, other necessary reference books, dictionaries, etc. necessary for the implementation of activities, have documents on records management and archive maintenance."

2 GENERAL TECHNICAL DATA

4 **Table 2.1.2** is replaced by the following text:

"Table 2.1.2.

Dimension	Height <i>H</i> , mm	Width <i>W</i> , mm	Length <i>L</i> , mm	Maximum gross mass <i>R</i> , kg	Distance between centres of apertures in fittings, mm (reference)			<i>k</i> _{1max} , mm	<i>k</i> _{2max} , mm
					<i>S</i> (corner fittings)	<i>S</i> _i (intermediate fittings)	<i>P</i>		
1EEE	2869 ⁰ ₋₅	2438 ⁰ ₋₅	13716 ⁰ ₋₁₀	30480	13509 ⁺⁷ ₋₆	11985 ⁺⁷ ₋₆	2259 ^{±4}	19	10
1EE	2591 ⁰ ₋₅	2438 ⁰ ₋₅	13716 ⁰ ₋₁₀	30480	13509 ⁺⁷ ₋₆	11985 ⁺⁷ ₋₆	2259 ^{±4}	19	10
1AAA	2869 ⁰ ₋₅	2438 ⁰ ₋₅	12192 ⁰ ₋₁₀	30480	11985 ⁺⁷ ₋₆	—	2259 ^{±4}	19	10
1AA	2591 ⁰ ₋₅	2438 ⁰ ₋₅	12192 ⁰ ₋₁₀	30480	11985 ⁺⁷ ₋₆	—	2259 ^{±4}	19	10
1A	2438 ⁰ ₋₅	2438 ⁰ ₋₅	12192 ⁰ ₋₁₀	30480	11985 ⁺⁷ ₋₆	—	2259 ^{±4}	19	10
1AX	< 2438	2438 ⁰ ₋₅	12192 ⁰ ₋₁₀	30480	11985 ⁺⁷ ₋₆	—	2259 ^{±4}	19	10
1BBB	2896 ⁰ ₋₅	2438 ⁰ ₋₅	9215 ⁰ ₋₁₀	30480	8918 ⁺⁷ ₋₆	—	2259 ^{±4}	16	10
1BB	2591 ⁰ ₋₅	2438 ⁰ ₋₅	9215 ⁰ ₋₁₀	30480	8918 ⁺⁷ ₋₆	—	2259 ^{±4}	16	10
1B	2438 ⁰ ₋₅	2438 ⁰ ₋₅	9215 ⁰ ₋₁₀	30480	8918 ⁺⁷ ₋₆	—	2259 ^{±4}	16	10
1BX	< 2438	2438 ⁰ ₋₅	9215 ⁰ ₋₁₀	30480	8918 ⁺⁷ ₋₆	—	2259 ^{±4}	16	10
1CCC	2896 ⁰ ₋₅	2438 ⁰ ₋₅	6058 ⁰ ₋₆	30480	5853 ⁺⁵ ₋₄	—	2259 ^{±4}	13	10
1CC	2591 ⁰ ₋₅	2438 ⁰ ₋₅	6058 ⁰ ₋₆	30480	5853 ⁺⁵ ₋₄	—	2259 ^{±4}	13	10
1C	2438 ⁰ ₋₅	2438 ⁰ ₋₅	6058 ⁰ ₋₆	30480	5853 ⁺⁵ ₋₄	—	2259 ^{±4}	13	10
1CX	< 2438	2438 ⁰ ₋₅	6058 ⁰ ₋₆	30480	5853 ⁺⁵ ₋₄	—	2259 ^{±4}	13	10
1D	2438 ⁰ ₋₅	2438 ⁰ ₋₅	2991 ⁰ ₋₅	10160	2787 ^{±4}	—	2259 ^{±4}	10	10
1DX	< 2438	2438 ⁰ ₋₅	2991 ⁰ ₋₅	10160	2787 ^{±4}	—	2259 ^{±4}	10	10

Notes: 1. ISO series 1 containers with a gross mass exceeding that indicated in the table, but not more than 36000 kg are ISO containers. Such containers shall be properly labeled and properly tested.
2. Attention shall be given to the required accurate adherence to the reference dimensions *S* and *P* (refer to Figs. 2.2.1-5 and 2.2.1-6) The tolerances applied to *S* and *P* are determined by the tolerances specified for the total length and width of a container in ISO 1161.

5 **Para 2.2.3** is supplemented by the following text:

"If protective plates are provided in the vicinity of the top corner fittings, such plates shall not protrude above the upper faces of the top corner fittings and shall not extend more than 750 mm from either end of the container or on either side of intermediate fittings but may extend the full width."

6 **Para 2.3.2** is replaced by the following text:

"**2.3.2** Containers except for 1D and 1DX shall have load transfer areas in their base structure in the same plane, to permit vertical load transfer when carried on chassis."

7 **First paragraph of para 2.6.1.1** is supplemented by the following text:

"Fork-lift pockets shall not be provided on 1 EEE, 1 EE, 1AAA, 1AA, 1A, 1AX, 1BBB, 1BB, 1B and 1BX containers."

8 **Para 2.6.1.2** is supplemented by the following text:

"It is not necessary for the base of the fork-lift pockets to be the full width of the container but it shall be provided in the vicinity of each end of the fork pockets."

9 **Para 2.6.4** is replaced by the following text:

"2.6.4 Cargo securing devices.

2.6.4.1 A cargo securing system is designed to restrain the movement of cargo resulting from dynamic forces induced during transportation.

N o t e . For general purpose containers, cargo securing devices are optional.

2.6.4.2 Cargo securing systems consist of:

shoring, or
cargo securing devices, or
a combination of both.

2.6.4.3 Cargo securing devices only shall be permanent fixtures to which lashings (such as ropes, straps, chains, cables, etc.) may be attached.

Such devices are not intended for any other purpose, for example handling or securing containers. They are either fixed, hinged or sliding eyes, rings or bars.

2.6.4.3.1 Anchor points are securing devices located in the base structure of the container.

2.6.4.3.2 Lashing points are securing devices located in any part of the container other than their base structure.

2.6.4.4 Cargo securing devices shall not infringe on the prescribed minimum internal dimensions of the container.

2.6.4.5 The typical number, *N*, of cargo securing devices shall be:

.1 for anchor points:

for 1EEE, 1EE, 1AAA, 1AA, 1A, 1AX containers, *N* = 16;

for 1BBB, 1BB, 1B, 1BX containers, *N* = 12;

for 1CCC, 1CC, 1C, 1CX containers, *N* = 10;

for 1D, 1DX containers, *N* = 8.

.2 for lashing points, *N* is unspecified.

2.6.4.6 Neither anchor points nor lashing points shall obstruct the door opening dimensions.

2.6.4.7 Cargo securing devices shall provide, on all sides, an unobstructed access for a minimum of 50 mm from any fixed surface to allow for:

passage of the through the aperture of cargo securing devices, or
attachment of restraint fixtures such as hooks, clips, shackles, etc.

2.6.4.8 Each anchor point as specified in 2.6.4.5.1 and 2.6.4.6 shall be designed and installed to provide a minimum rated load of 1 000 kg applied in any direction.

2.6.4.7 Each lashing point as specified in 2.6.4.5.2 shall be designed and installed to provide a minimum rated load of 500 kg applied in any direction."

10 **New para 2.6.6** is introduced reading as follows:

"2.6.6 Shoring slot system

2.6.6.1 A shoring slot system is designed to restrain the cargo from forcing the door open during sudden stops or tilts of the container during transportation. It also serves to restrain dislocated cargo

to prevent it from spilling out of a container when the container's doors are opened.

2.6.6.2 Shoring slot systems consist of shoring slots and one or more cargo securing bars.

The shoring slot is a permanent fixture into which cargo securing bars or boards can be inserted and which will prevent cargo from placing loads in excess of the container's doors' design loads on the doors during sudden motion.

2.6.6.3 The shoring slots shall not infringe on the prescribed minimum internal dimensions of the container.

2.6.6.4 There shall be a set of two shoring slots in each container located just inward of the rear doors when the doors are in the closed position such that there is a zero clearance between inserted shoring bars and the doors' inner faces. The shoring slots shall be provided at each side wall, from floor to ceiling.

The shoring slot design shall provide for a clear container width of at least 2300 mm.

2.6.6.5 The door opening dimensions shall not be obstructed by the shoring slots.

2.6.6.6 The shoring slots shall be a minimum of 51 mm wide to allow for insertion of one or more shoring bars. The shoring slot shall be manufactured to support a $0,4P_g$ load applied in the longitudinal direction at any point in the shoring slot.

2.6.6.7 Supports shall be installed inside each shoring slot to support and hold the shoring bars in place horizontally. The spacing of the shoring supports, in each shoring slot, shall correspond horizontally to each other and be located at least every 380 mm from the floor up. For an eight foot container (a 1A, 1B or 1C container) there shall be a minimum of three supports located in each slot.

2.6.6.8 Support bars are not part of the container. Bars used should be able to withstand a minimum force of 1 000 kgf in any direction."

3 MATERIALS AND WELDING

11 **Para 3.2.4** is replaced by the following text:

"3.2.4 The material of the corner fittings manufactured by casting shall meet the following requirements: mechanical properties of the castings after heat treatment according to procedures specified in the documentation approved by the Register shall comply with the requirements of Table 3.2.4. Test specimens shall be taken either from the cast corner fitting or from a separately cast sample for testing may be taken from casted corner fitting or from separately cast test pieces.

Table 3.2.4

Mechanical properties					
Yield strength R_e , MPa, min.	Tensile strength R_m , MPa, min.	Elongation A_5 , %, min.	Reduction of area Z , %, min.	Impact energy KV^1 , J, min, at temperature, °C	
				– 20	–40 ²
275	480	25	40	27	21

¹ Average value obtained at testing of three sharp-notch specimens in accordance with 2.2.3, Part XIII "Materials" of the Rules for Classification and Construction of Sea-Going Ships. The value of impact energy determined on one test specimen may be assumed less than that given one in the Table, but in any case it shall not be less than 70 % of this value.

² Test at a lower temperature may be carried out at the request of the customer with due regard for the climatic design version of the product.

"3.3 MATERIALS FOR TANK CONTAINER VESSELS

3.3.1 Materials used in the manufacture of tank container vessels, piping, manholes and their covers, flanges, fittings, safety devices along with the materials used for their attachment, shall withstand the temperatures, the pressure produced by the goods carried and their vapours under the operating conditions, and be immune to attack by the goods transported and their vapours, with regard to the corrosion allowances (if applicable), or shall be passivated or neutralized by chemical reaction, or lined with corrosion-resistant material.

3.3.2 Depending on the type of tank container, kind of cargo carried and operating conditions, use may be made of carbon-manganese steel, silicon-manganese steel, alloy steel, acid-resistant steel, austenitic steel, aluminum alloys.

3.3.3 Chemical composition of the materials, their mechanical properties, scope and methods of testing shall meet the requirements of valid national and/or international standards applied to rolled steel products for pressure vessels or other materials indicated in the Register approved technical documentation, but the testing scope shall comply with the requirements of national and/or international standards applied to rolled steel products for pressure vessels

3.3.4 The materials with thickness of 6 mm shall be impact tested with V-type notch at minimum operating temperature of the tank container. The minimum value of impact energy obtained during testing of V-notched specimens at the minimum operating temperature shall not be less than 27 J for transverse specimens and 41 J for longitudinal specimens.

Notes: 1. Impact tests for austenitic steels shall not be performed unless it is specified in the technical documentation.

2. The dimensions of test specimens and the impact test procedure shall comply with c 3.2.8.

3.3.5 Value of yield strength of the material made of fine-grain steel shall not exceed 460 MPa, and a guaranteed value of upper limit of tensile strength shall not exceed 725 MPa in accordance with technical requirements for materials.

Note. Fine grain steel means steel which has a ferritic grain size of 6 or finer when determined in accordance with ASTM E 112 or as defined in EN 10028-3.

3.3.6 Use of material with R_e/R_m ratio of more than 0,85 is not allowed for manufacture of welded vessels. To define this ratio, values of R_e and R_m indicated in the certificate for material shall be used.

Steels used in the manufacture of vessels shall have an elongation at fracture, in %, of not less than $10000/R_m$ with an absolute minimum of 16 % for fine grain steels and 20 % for other steels.

Aluminium and aluminium alloys used in the manufacture of vessels shall have an elongation at fracture, in %, of not less than $10\,000/6R_m$ with an absolute minimum of 12 %.

3.3.7 Materials used in the manufacture of tank container vessels and subject to survey under approved technical documentation are supplied with the Register Certificates (C, form 6.3.30) or with the Certificate of Manufacturer of 3.2 as per EN 10204 and the scope of information given in the Certificates shall be agreed with the Register in advance."

"3.7 WELDING

3.7.1 The welding consumables used for construction of containers shall meet the requirements of Section 4, Part XIV "Welding" of the Rules for the Classification and Construction of Sea-Going Ships.

Note. The decision on recognition of test results (reports on approval) of the welding consumables surveyed by another classification society or an authorized competent body is made by the Register in each particular case on the basis of sufficiency of the submitted documents for evaluation of the compliance of the welding consumables with the requirements of Section 4, Part XIV "Welding" of the Rules for the

Classification and Construction of Sea-Going Ships. The results of considering the above mentioned documents and confirmation of possible admission for welders shall be issued as a Report (form 6.3.29).

3.7.2 The production process of welding used during manufacture of containers shall comply with the requirements of Section 6, Part III "Technical Supervision during Manufacture of Materials" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships as applicable to containers.

3.7.3 Welding operations at the firms (manufacturers) of containers shall be performed by certified welders complying with the requirements of Section 4, Part III "Technical Supervision during Manufacture of Materials" of the Rules for Technical Supervision during Construction of Ships and Manufacture of Materials and Products for Ships."

4 MARKING

14 **Para 4.1.5** is replaced by the following text:

"**4.1.5** The CSC Plate shall be permanently affixed to the container at a readily visible place where it would not be easily damaged or unauthorizedly removed."

PART II. GENERAL FREIGHT CONTAINERS

2 TECHNICAL REQUIREMENTS

15 **Para 2.1.1** is supplemented by the following text:

"**Note**. Where a top corner fitting projects into the internal space specified in Table 2.1.1, that part of the corner fitting projecting into the container shall not be considered as reducing the size of the container."

3 TESTING

16 **Chapter 3.16** is replaced by the following text:

"3.16 STRENGTH OF CARGO SECURING DEVICES

3.16.1 The test shall be carried out for containers fitted with cargo securing devices. For this testing a hook or shackle having a maximum diameter of 20 mm shall be used, the base frame of the container being approximately horizontal.

3.16.2 The cargo securing devices shall be capable of withstanding a loading which is 1,5 times higher than the design loading (refer to Fig. 3.16.2). The lines of action of the forces applied are directed:

for arrangements fitted on the base structure, at right angles to the centre line of the structural elements and at an angle of 45° to the horizontal plane;

for arrangements fitted above the base structure, at an angle of 45° upwards and downwards (where applicable) in respect to the horizontal plane;

for arrangements fitted on top beams of the container, at an angle of 45° downwards to the horizontal plane.

3.16.3 When containers are fitted with cargo securing devices of different types, at least one device of each type shall be tested.

3.16.4 The minimum design loading for the arrangements fitted on the floor is equal to 1000 kg, for other arrangements it is 500 kg. The arrangements shall be subjected to the loading for at least 5 min.

On completion of the test, neither the cargo securing devices, nor their attachments to the container structure, nor the container structure itself shall show any permanent deformation or abnormality which will render it unsuitable for continuous service at full rated load.

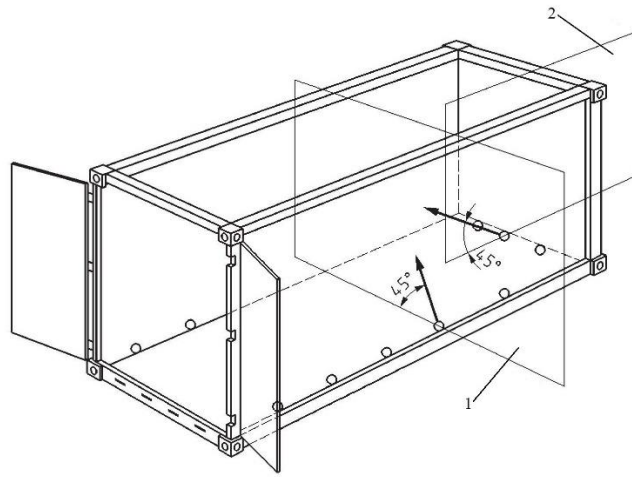


Fig. 3.16.2

1 – transverse plane; 2– longitudinal plane".

PART IV. TANK CONTAINERS

1 GENERAL

17 **Para 1.4.1.2** and the **Note** to this para, The reference "3.8" is replaced by the reference "3.7".

2 TECHNICAL REQUIREMENTS

18 Title of the **Chapter 2.2** is replaced by the following text:

"2.2 TANKS, SUPPORTS AND ATTACHMENTS".

19 **Para 2.2.3** is replaced by the following text:

"2.2.3 The tank, supports and attachments when loaded to the maximum allowable gross mass R , shall withstand the following static forces applied separately:

.1 in the moving direction: doubled gross mass R multiplied by the acceleration of gravity g ($2Rg$).

In design of tank containers for dangerous goods, strength of the tank, supports and attachments shall be additionally tested by the static forces in the longitudinal direction equal to $4Rg$;

.2 horizontally at a right angle to the moving direction: gross mass R multiplied by the acceleration of gravity g (Rg). If the direction of movement is not exactly determined, then the loads shall be taken equal to $2Rg$;

.3 vertically upwards: gross mass R multiplied by the acceleration of gravity g (Rg);

.4 vertically downwards: doubled gross mass R multiplied by the acceleration of gravity g ($2Rg$).".

20 **Para 2.2.7** is replaced by the following text:

"2.2.7 The equivalent metal thickness other than the value specified for reference steel in 2.2.5 and 2.2.6 shall be determined by the formula

$$e_1 = \frac{21,4 \times e_0}{\sqrt[3]{R_{m1} \times A_1}} \quad (2.2.7)$$

where

e_1 – required equivalent thickness of the steel to be used, in mm;

e_0 – minimum thickness for reference steel, in mm;

R_{m1} – guaranteed minimum tensile strength of the material used at the tensile test, in MPa;

A_1 – guaranteed minimum elongation of the metal used at the tensile test in compliance with the national and international standards, %".

21 **Para 2.2.8** is replaced by the following text:

"2.2.8 For certain types of UN tanks, regardless of the size of the internal diameter of the vessel D_{ins} , the minimum thickness of the walls and bottoms for reference steel shall be as follows:
8 mm for UN portable tanks those comply with UN T20;
10 mm for portable UN tanks that comply with UN T21 – UN T22 instructions.

In this case, the equivalent value of the thickness of the metal used shall be determined by the formula

$$e_1 = \frac{21,4 \times e_0 \times d_1}{1,8 \times \sqrt[3]{R_{m1} \times A_1}} \quad (2.2.8)$$

where

e_1 – required equivalent thickness of the steel to be used, mm;

e_0 – minimum thickness for standard steel, mm;

d_1 – case diameter (in m), but not less than 1,8 m;

R_{m1} – guaranteed minimum tensile strength of the material used at the tensile test, MPa;

A_1 – guaranteed minimum elongation of the metal used at the tensile test in compliance with the national and international standards, %."

PART V. PLATFORM CONTAINERS AND PLATFORM-BASED CONTAINERS

22 **Part V** is replaced by the following text:

"PART V. PLATFORM CONTAINERS AND PLATFORM-BASED CONTAINERS

1 GENERAL

1.1 APPLICATION

1.1.1 The provisions of this Part apply to 1AAA, 1AA, 1A, 1AX, 1BBB, 1BB, 1B, 1BX, 1CC, 1C, 1CX platform containers and platform-based containers.

1.1.2 Platform containers and platform-based containers shall comply with the applicable requirements of Part I "Basic Requirements" and with the requirements of this Part.

1.1.3 The platform containers and platform-based containers differing in design, dimensions and mass from those defined in this Part are subject to special consideration by the Register in each particular case.

1.2 DEFINITIONS AND EXPLANATIONS

1.2.1 The definitions and explanations relating to the general terminology of these Rules are given in Part I "Basic Requirements". For the purpose of this Part the following definitions and explanations have been adopted.

Platform (platform container) means a container having no superstructure but having only a base with floor with the same length and width as the base of series 1 containers, and equipped with top and bottom corner fittings, located as on other series 1 containers.

Platform-based container means a container which has no side walls but has a base similar to that of a platform container.

Platform-based container may be:

platform-based container with incomplete superstructure and fixed ends is a container having a base with floor and non-folding ends equipped with top corner fittings; top longitudinal members are not provided;

platform-based container with incomplete superstructure and folding ends is a container having a base with floor and folding ends equipped with top corner fittings; top longitudinal members are not provided;

platform-based container with complete superstructure is a container having a base with floor, top side end rails equipped with top corner fittings, roof or open top.

Folding ends of a platform-based container mean the structures which may be laid on (folded down) the floor for the purpose of transportation or stowage of empty containers.

Incomplete superstructure is a superstructure lacking any permanently fixed longitudinal load-carrying structure between the ends other than at the base.

Module of containers is a certain number of identical platform-containers or platform-based containers with a folding end structure, folded into a single pile (module).

Interlocking devices of platform container with folding ends are devices securing the end structure in vertical position, as well as those interconnecting empty containers to form an interlocked pile (module).

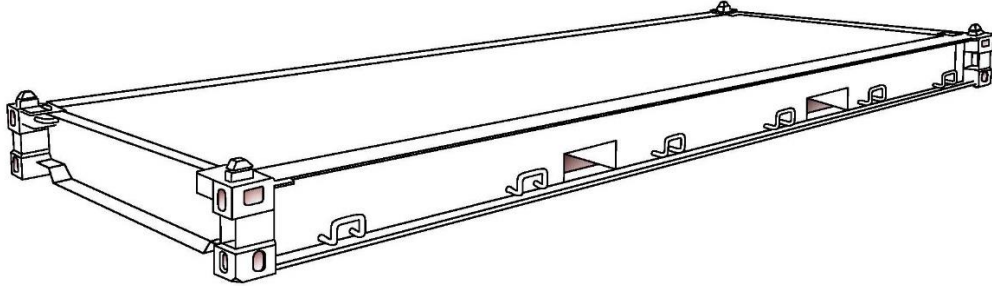


Fig. 1.2.1-1 Platform container

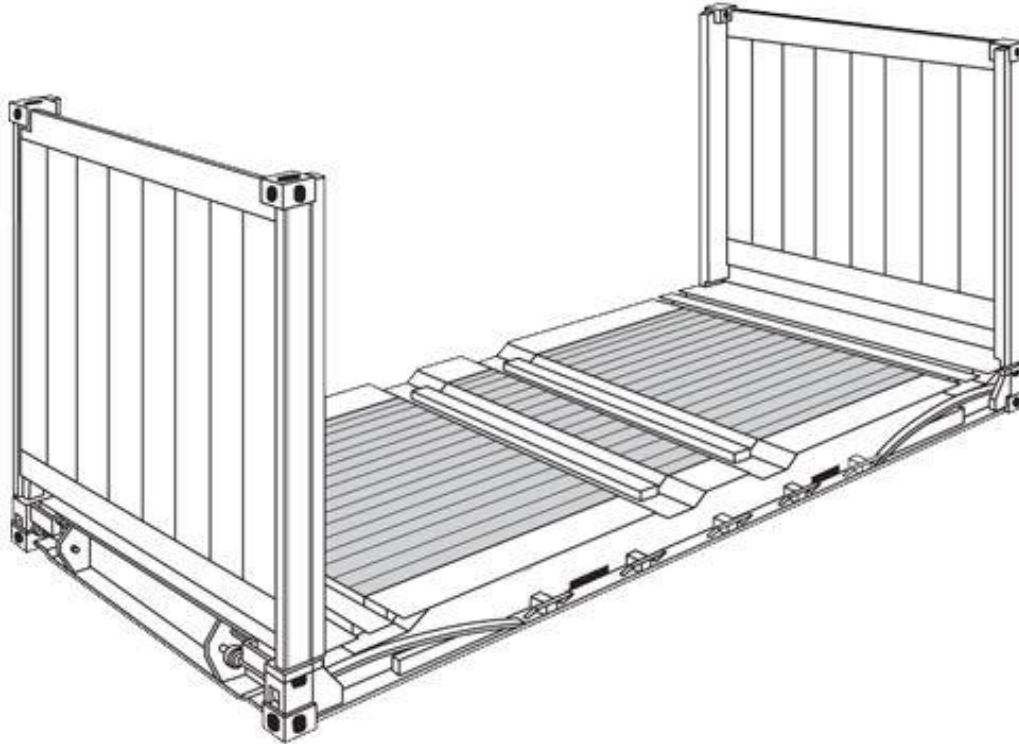


Fig. 1.2.1-2 Platform-based container

1.3 SCOPE OF TECHNICAL SUPERVISION

1.3.1 Technical supervision of the Register shall cover:

- .1 base structure with floor;
- .2 corner fittings;
- .3 end structure of platform containers;
- .4 locking devices of end structure;
- .5 framework.

1.4 TECHNICAL DOCUMENTATION

1.4.1 For platform containers and platform-based containers, the technical documentation stated in 1.3.3, Part I "Basic Requirements", shall comprise:

.1 technical conditions or technical specification (for firms for which the container design specification is not provided according to the applied normative documents);

.2 test program and test procedure for the containers;

.3 State Health Authorities approval of the coverings, the floor material with antiseptic impregnation, and the sealants;

.4 drawings of the following parts, assemblies and general views, inclusive of the specified dimensions:

corner fittings;

bottom side rails;

bottom end rails;

corner posts, if any;

base structure with corner fittings, and the "gooseneck" tunnels;

end walls, if provided;

hinges and locking devices of end walls, in case of folding end structure;

interlocking devices connecting similar empty platform containers or platform-based containers with folding ends to form a pile (module);

securing devices for cargo;

floor (fastening, caulking, size of panels and boards, construction of planking);

CSC Plate;

framework;

general views and markings of containers.

The extent of the above documentation is the minimum required.

2 TECHNICAL REQUIREMENTS

2.1 DIMENSIONS AND MASS

2.1.1 The dimensions of the base (width W and length L) for platform containers and platform-based containers shall comply with those shown in Table 2.1.2, Part I "Basic Requirements".

2.1.2 The length of platform-based containers with incomplete superstructure, taken between the top corner fittings shall comply with the figures shown in Table 2.1.2.

Table 2.1.2

Designation	Overall top dimension in tare condition T L_{\max} , mm	Overall top dimension when loaded to R L_{\min} , mm
1AAA, 1AA, 1A, 1AX	12202	12172
1BBB, 1BB, 1B, 1BX	9135	9105
1CC, 1C, 1CX	6068	6042

Notes: 1. Any movement of the corner posts resulting from the change from the empty to the fully loaded condition of the container shall, as far as practicable, be equally disposed about the mean of the values of L_{\max} and L_{\min} .
2. Taking into account the fact that the mechanism of the folding end structures may introduce natural play, the values of L_{\max} and L_{\min} specified in this Table shall be met. Failure to comply with this requirement is liable to lead to handling difficulties.

2.1.3 No part of the platform container or platform-based container shall project beyond the external dimensions specified in:

Table 2.1.2, Part I "Basic requirements" and ISO 668 standard for the external dimensions of the base structure, the external dimensions of the top part of platform-based container with

complete superstructure and the overall maximum height which may also be of reduced dimensions; or

Table 2.1.2 for the external dimensions of platform-based containers with incomplete superstructure.

2.1.4 A module of containers made of platform containers or platform-based containers with folded ends in folded position shall comply with the dimensions specified in Table 2.1.2 of Part I "Basic Requirements" and those established in ISO 668, and its height shall not exceed 2591 mm.

2.1.5 External dimensions are not specified in this Part except for minimum external dimensions of 1CC, 1C и 1CX platform-based containers given in Table 2.1.5.

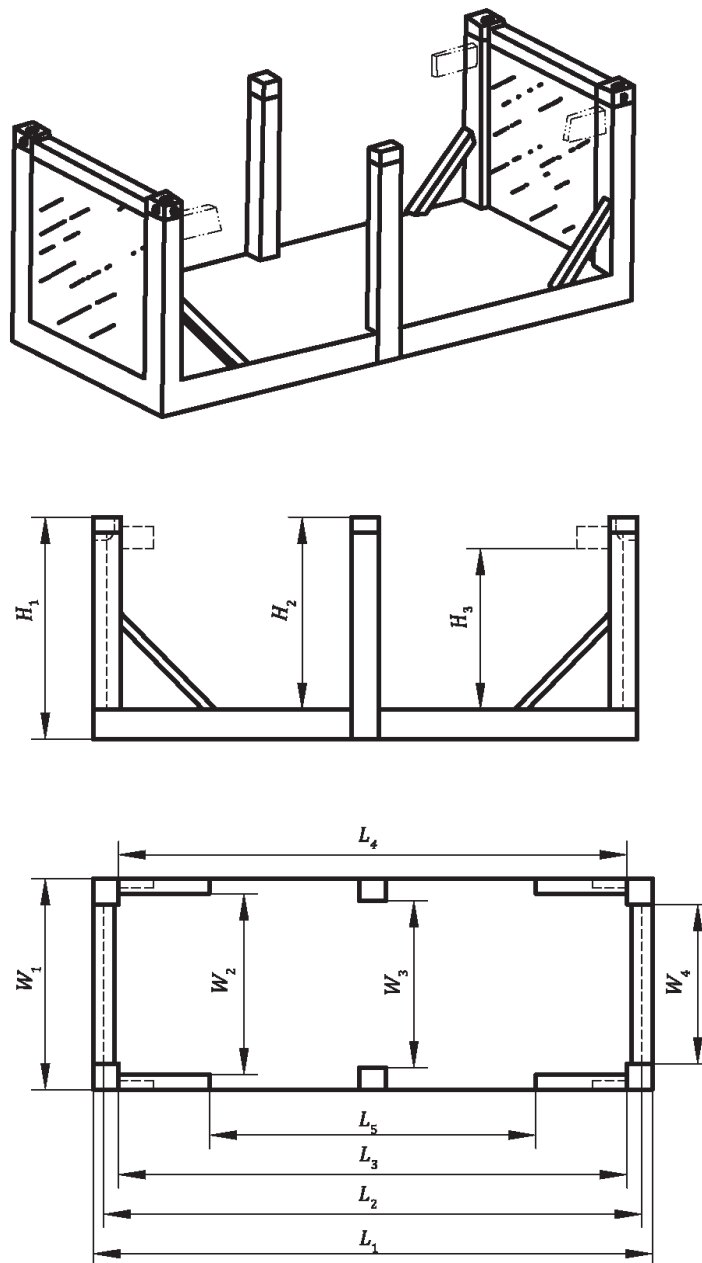


Fig. 2.1.5:

L_1 – overall external length (= 6 058 mm); L_2 – internal length between walls (5800 mm); L_3 – internal length between top transverse member (5600 mm);

L_4 – internal length between corner posts (5600 mm); L_5 – internal length between the diagonals of the lateral stiffeners (if any) (5200 mm); W_1 – overall external width (2438 mm); W_2 – internal width between the diagonals of the stiffeners (if any) (2100 mm); W_3 – internal width between intermediate posts (if any) (2100 mm); W_4 – internal width between corner posts (1700 mm); H_1 – overall external height; H_2 – internal height; H_3 – internal height under bearer (if any) of intermediate side longitudinal rail

Table 2.1.5

	1CC	1C	1CX
H ₁	2591 mm	2438 mm	<2438 mm
H ₂	2200 mm	2000 mm	H ₁ – 390 mm
H ₃	2000 mm	1800 mm	H ₁ – 590 mm

2.1.6 Maximum gross mass *R* of containers shall comply with those given in Table 2.1.2, Part I "Basic Requirements" and established in ISO 668.

2.1.7 Maximum mass of module of containers (considering interlocking devices for containers) shall not exceed maximum gross mass given in Table 2.1.2, Part I "Basic Requirements" and established in ISO 668 for dimensions of this module.

2.2 CORNER FITTINGS

2.2.1 All containers shall be equipped with top and bottom corner fittings. The requirements and positioning of the corner fittings are given in ISO 1161, except for the case described in 2.1.2.

Note. 1. For 1CX platform containers, the top and bottom corner fittings can be combined providing they comply with ISO 1161.

2. Due to greater inherent flexibility of all sizes of platform-based containers with incomplete superstructure, the top aperture of top corner fittings can be increased by 10 mm in the direction of their end wall. In such a case, the end aperture shall be omitted in order to retain corner fitting strength.

2.2.2 Platform-based containers with folding ends shall be equipped with features such that, in the folded condition, they may be stacked and secured, lifted from the top by means of a spreader equipped with corner fitting locking devices and interlocked with other platform-based containers having similar folding end structures.

The features shall have at least an equivalent to the upper face and internal cavity of the top corner fitting.

The positioning of these features on the platform-based container with ends in the folded condition shall meet the requirements of ISO 1161.

2.2.3 For all containers, including platform-based containers with folding ends folded down, the upper faces of the top corner fittings or equivalent features specified in 2.2.2 shall protrude above the top of the container by a minimum of 6 mm. "Top of the container" is understood as the highest level of any part of the container, for example the level of the top of a soft cover.

However, if reinforced zones or doubler plates are provided to afford protection in the vicinity of the top corner fittings, such plates and their securements shall not protrude above the upper faces of the top corner fittings.

These plates shall not extend more than 750 mm from either end of the container but may cover the full width.

2.3 BASE STRUCTURE

2.3.1 The base structure shall meet the requirements of 2.3, Part I "Basic Requirements" and ISO 668.

2.3.2 The base structure shall be designed to withstand all forces, particularly lateral forces, induced by the cargo in service (refer to 2.6.3, 2.6.4 and Figs. 2.3.2-1 and 2.3.2-2). This is particularly important where provisions are made for securement of cargo to the base structure of the container.

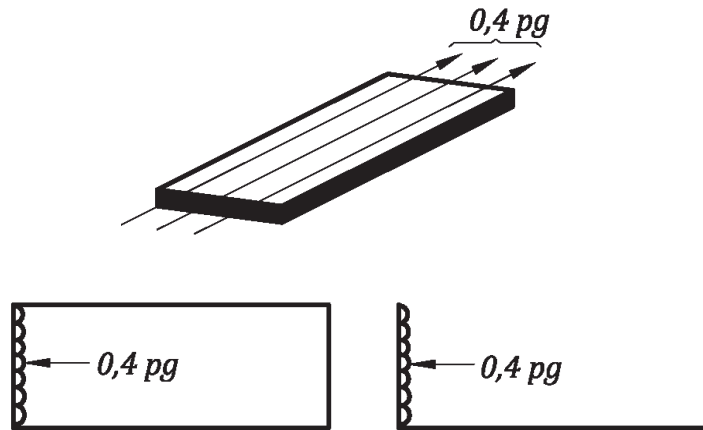


Fig. 2.3.2-1

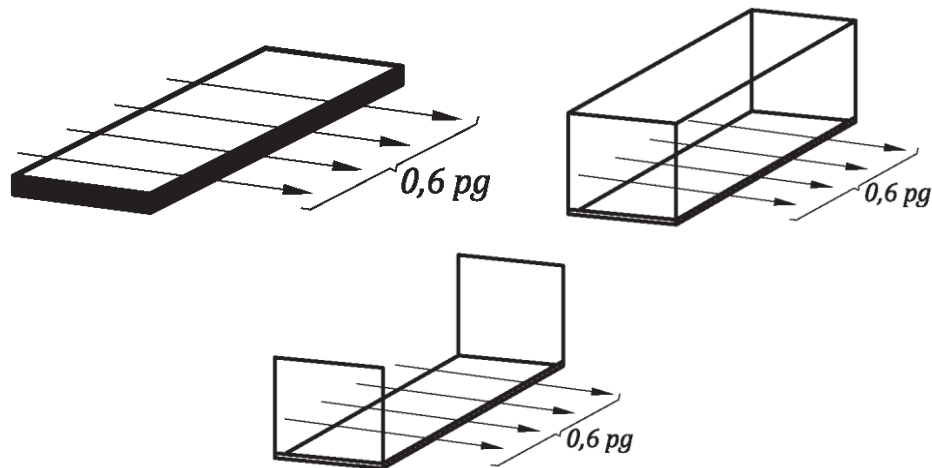


Fig. 2.3.2-2

2.3.3 Camber may be provided with respect to the end transverse members.

When a container with camber is loaded to its gross mass R , its base on the transport facility shall be approximately horizontal.

2.4 END STRUCTURE (PLATFORM-BASED CONTAINERS ONLY)

2.4.1 The ends of platform-based containers with fixed or folding ends may be interconnected by top rails or be constructed with no top rails as freestanding posts. The ends designed with a top rail between them may be constructed as end walls.

2.4.2 For all platform-based containers, the sideways deflection of the top of the container with respect to the bottom of the container, at the time it is under full transverse rigidity test conditions, shall not cause the sum of the changes in length of the two diagonals to exceed 60 mm.

2.4.3 Any extending parts of the platform-based containers which in service may cause a dangerous situation to occur shall be equipped with fixing devices with external indication of the fixed position.

2.5 SIDE STRUCTURE (PLATFORM-BASED CONTAINERS ONLY)

2.5.1 For all platform-based containers, the longitudinal deflection of the top of the container with respect to the bottom of the container, at the time it is under full longitudinal rigidity test conditions, shall not exceed 42 mm.

2.6 WALLS

2.6.1 Where containers are provided with end walls, these shall be able to withstand the effects of strength test in 3.6, except for the case implied in 2.6.3.

2.6.2 Where openings are provided in end walls, the ability of these walls to withstand strength test in 3.6 shall not be impaired.

2.6.3 Where containers are provided with ends which are not able to withstand test in 3.6, means shall be provided for securing the cargo to the base structure in such a manner that the cargo does not transmit longitudinal forces to the end walls.

2.6.4 Since the containers do not have side walls, adequate means shall be provided to permit the securing of the cargo against lateral movement.

2.7 CARGO-SECURING SYSTEM

2.7.1 Cargo-securing system shall comply with the requirements specified in 2.6.4, Part I "Basic Requirements" and ISO 1496-5.

2.7.2 The anchor points shall be designed and installed along the perimeter of the container base structure in such a way as to provide securing capability at least equivalent to:

load $0,6P$, transversally;

load $0,4P$, longitudinally (for those containers having no end walls or end walls not capable of withstanding test, refer to 3.6).

Such securing capability can be reached either:

by a combination of a minimum number of anchor points rated to an appropriate load; or

a combination of a higher number of anchor points having a lower individual rate load.

2.7.3 Anchor points and lashing points shall be designed and fitted in such a way that: the ropes or other means of lashing the cargo shall not protrude beyond the overall dimensions given in 2.1;

no part of the securing devices shall protrude above the plane located 6 mm below the upper face of the top corner fittings or their equivalent features specified in 2.2.2;

as far as practicable, they shall not infringe the cargo-loading area and shall therefore be located less than 0,25 m from the edge of the platform.

2.7.4 Each anchor point shall be designed and installed (regardless of their actual number) to provide a minimum rated load of 3000 kg in any direction.

2.7.5 Each lashing point shall be designed and installed to provide a minimum rated load of 1000 kg in any direction.

2.8 OPTIONAL STRUCTURES

2.8.1 Fork-lift pockets for handling containers in the loaded or unloaded condition may be provided as optional features.

2.8.2 Fork-lift pockets may be provided on 1AAA, 1AA, 1A, 1AX, 1BBB, 1BB, 1B, 1BX containers for empty handling only. Appropriate marking shall be applied near the pockets.

2.8.3 The fork-lift pockets, where provided, shall meet the dimensional requirements specified in 2.6.1, Part I "Basic Requirements" and ISO 1496-5.

3 TESTING

3.1 GENERAL

3.1.1 The requirements of this Section apply to containers specified in 1.1.

3.1.2 Containers shall be tested in the condition for which they are designed to be operated. A platform-based container with incomplete superstructure and folding ends shall have the ends in erected (service) condition during the test.

Platform-based containers equipped with removable structural items shall be tested with these items in position.

3.1.3 Although the tests are numbered in a certain order, they may be carried out in a different order if more appropriate to optimize utilization of the testing facilities or interpretation of the test results. However, the weatherproofness test, where appropriate, shall always be performed after all structural tests have been completed.

3.1.4 The test load or loading inside the container shall be uniformly distributed.

3.1.5 The test loads and loadings specified in all of the following tests are minimum requirements.

3.1.6 Upon completion of each test, the platform containers shall show neither permanent deformations nor abnormalities which may render them unsuitable for the designed purpose. The dimensional requirements specifying its serviceability for reloading, securing and transportation shall be met.

3.2 STACKING

3.2.1 This test shall be carried out to prove the ability of a fully loaded container to support a superimposed mass of containers.

3.2.2 The test load and the procedure of testing are specified in 3.7, Part II "General Freight Containers" and 6.2 of ISO 1496-5.

3.2.3 Empty platform container shall be subjected to vertical forces applied either to all four corner fittings simultaneously or to each pair.

3.2.4 The platform-based container loaded up to $1,8R$ shall be subjected to vertical forces applied either to all four corner fittings simultaneously or to each pair.

3.3 LIFTING FROM THE TOP CORNER FITTINGS

3.3.1 This test shall be carried out to prove the ability of a container to withstand being lifted from the four top corner fittings with the lifting forces applied vertically. These are the only recognized ways of lifting these platform containers by the four top corner fittings.

This test shall also be regarded as proving the ability of the floor and base structure to withstand the forces arising from acceleration of the payload in lifting operations.

3.3.2 The test load and the procedure of testing are specified in 3.2, Part II "General Freight Containers" and 6.3 of ISO 1496-5.

3.4 LIFTING FROM THE BOTTOM CORNER FITTINGS

3.4.1 This test shall be carried out to prove the ability of a container to withstand being lifted from its four bottom corner fittings by means of lifting devices bearing on the bottom corner fittings only and attached to a single transverse central spreader beam above the container.

3.4.2 The test load and the procedure of testing are specified in 3.3, Part II "General Freight Containers" and 6.4 of ISO 1496-5.

3.5 LONGITUDINAL RESTRAINT (STATIC TEST)

3.5.1 This test shall be carried out to prove the ability of a container to withstand longitudinal external restraint under dynamic conditions of railway operations, which implies acceleration of $2g$.

3.5.2 The test load and the procedure of testing are specified in 3.12, Part II "General Freight Containers" and 6.5 of ISO 1496-5.

3.6 STRENGTH OF END WALLS (WHERE PROVIDED)

3.6.1 This test shall be carried out to prove the ability of a platform-based container to withstand forces under the dynamic conditions referred to 3.5.1.

3.6.2 The test load and the procedure of testing are specified in 3.13, Part II "General Freight Containers" and 6.6 of ISO 1496-5.

3.6.3 In the case of non-symmetrical construction, the platform-based container shall have both end wall tested.

3.6.4 The platform-based container shall be subjected to an internal loading of $0,4P_g$. The internal loading shall be uniformly distributed over the wall under test providing its free deflection.

3.6.5 Strength tests of end walls are not applied for platform-based containers:

with freestanding fixed posts or with removable top feature (type code P2)

with freestanding folding posts or with removable top feature (type code P4).

3.7 ROOF STRENGTH (WHERE PROVIDED)

3.7.1 This test shall be carried out to prove the ability of the rigid roof of a container, where fitted, to withstand the loads imposed by persons working on the roof.

3.7.2 The test load and the procedure of testing are specified in 3.8, Part II "General Freight Containers" and 6.7 of ISO 1496-5.

3.7.3 Roof strength test is only applicable for platform-based containers with complete superstructure and with open end walls (type code P5).

3.8 FLOOR STRENGTH

3.8.1 This test shall be carried out to prove the ability of a container floor to withstand the concentrated dynamic loading during cargo operations involving trucks or similar devices.

3.8.2 The test load and the procedure of testing are specified in 3.9, Part II "General Freight Containers" and 6.8 of ISO 1496-5.

3.9 TRANSVERSE RACKING (NOT APPLICABLE TO PLATFORM CONTAINERS)

3.9.1 This test shall be carried out to prove the ability of a container, other than a platform container, to withstand the transversal racking forces resulting from ship movement.

3.9.2 The test load and the procedure of testing are specified in 3.10, Part II "General Freight Containers" and 6.9 of ISO 1496-5.

3.9.3 In the case of containers of type code P2 or P4, in order to represent typical service conditions as closely as practicable, the top corner fittings at the end or ends of the container under test should be connected transversally by means of a member or members representing the lower transverse member(s) in the end frame(s) of a superimposed container. The representative member(s) shall be securely attached to the corner fittings so that the loads will be equally applied to the two posts.

Note. The satisfactory completion of this test by a platform-based container of type code P2 or P4 implies that each post can be subjected to a maximum transverse racking loading of 75 kN in service.

3.9.4 In the case of a container with identical ends, only one end need be tested. Where an end is not essentially symmetrical about its own vertical centreline, both sides of that end shall be tested.

3.9.5 Allowable deflections under full test loading are given in 2.4.

3.10 LONGITUDINAL RACKING (NOT APPLICABLE TO PLATFORM CONTAINERS)

3.10.1 This test shall be carried out to prove the ability of a platform-based container to withstand the longitudinal racking forces resulting from ship movement.

3.10.2 The test load and the procedure of testing are specified in 3.11, Part II "General Freight Containers" and 6.10 of ISO 1496-5.

3.10.3 For containers with incomplete superstructure total force of 150 kN shall be relatively distributed in the ratio 2:1 between two end walls.

3.10.4 For containers with incomplete superstructure (types P1, P2, P3 and P4), forces of 50 kN shall be applied either separately or simultaneously to each of the top corner fittings on one end of the container in lines parallel both to the base of the container and to the planes of the sides of the container. The forces shall be applied first towards and then away from the top corner fitting.

3.10.5 For containers with complete superstructure (type P5), forces of 75 kN shall be applied either separately or simultaneously to each of the top corner fittings on one end of the container in lines parallel both to the base of the container and to the planes of the sides of the container. The forces shall be applied first towards and then away from the top corner fitting.

3.10.6 In the case of a container with identical ends, only one end need be tested. Where a side is not essentially symmetrical about its own vertical centreline, both ends of that side shall be tested.

3.10.7 Allowable deflections under full test loading are given in 2.5.

3.11 LIFTING BY FORK LIFT POCKETS (WHERE PROVIDED)

3.11.1 All types of containers fitted with fork lift pockets shall be tested.

3.11.2 The test load and the procedure of testing for lifting by fork lift pockets are specified in 3.4, Part II "General Freight Containers" and 6.11 of ISO 1496-5.

3.12 WEATHERTIGHTNESS (WHERE PROVIDED)

3.12.1 The test load and the procedure of testing are specified in 3.16, Part II "General Freight Containers" and 6.12 of ISO 1496-5.

3.13 ADDITIONAL TESTS FOR PLATFORM-BASED CONTAINERS WITH INCOMPLETE SUPERSTRUCTURE AND FOLDING END WALLS (TYPE CODES P3 AND P4), AND OF AN INTERLOCKED PILE OF SUCH CONTAINERS

3.13.1 Stacking of platform-based containers.

3.13.1.1 The test shall be carried out to prove the ability of a folding platform-based container, in the folded condition, to support a superimposed mass of fully loaded stacked containers, taking into account acceleration resulted from ship movement.

3.13.1.2 The test load and the procedure of testing are specified in 3.7, Part II "General Freight Containers" and 7.2 of ISO 1496-5.

3.13.1.3 The container shall be subjected to vertical forces applied either to all four features (refer to 2.2.2) provided for stacking.

3.13.2 Lifting of an interlocked pile by the top (refer to 7.3 of ISO 1496-5).

3.13.2.1 The test shall be carried out to prove the ability of the platform-based container connected to an interlocked pile to withstand the action of vertically forces applied to designated features (refer to 2.2.3).

3.13.2.2 The platform-based container shall be connected by means of interlocking devices or by its integral interlocking devices (where fitted) to another platform-based container or to a test fixture which simulates a second container, so that the gross mass lifted by the container under test is $(2N - 1)T$, where N is the largest number of interlocked units having a combined height of less than 2 896 mm and T is tare mass, kg. The combined units shall be carefully lifted from all four top corners in such a way that no significant acceleration or deceleration forces are applied.

3.13.3 Lifting of a flush folded platform-based container by the top (refer to 7.4 of ISO 1496-5).

3.13.3.1 This test shall be carried out to prove the ability of a flush folded platform-based container (type P3 and type P4) to withstand lifting forces applied vertically.

The container shall be folded until the top surface is substantially flush to form a platform and shall have a load uniformly distributed over the floor in such a way that the total own mass of the container and test load is equal to $2R$.

3.14 CARGO-SECURING DEVICES

3.14.1 For proof testing of cargo-securing devices, a tensile force equal to 1,5 times the rated load shall be applied, using a hook or shackle having a minimum diameter of 10 mm, the base frame of the container being approximately horizontal.

3.14.2 For cargo-securing devices positioned along the length of the container, this test force shall be applied in a transverse plane and at an angle of 45° to the horizontal (refer to Fig. 3.14).

3.14.3 For cargo-securing devices positioned across the width of the container, this test force shall be applied in a longitudinal plane and at an angle of 45° to the horizontal (refer to Fig. 3.14).

3.14.4 For cargo-securing devices installed at positions above the floor plane, the test force shall wherever possible be applied at 45° upwards and downwards from the horizontal plane. For devices installed close to the top of the container the test angle shall be 45° downwards (refer to Fig. 3.14).

The tensile force shall be continuously applied at the specified angle for 5 min.

3.14.5 When containers are fitted with cargo-securing devices of different types, at least one device of each type shall be tested.

3.14.6 On completion of the test, the cargo-securing devices, or their attachment to the container structure, or the container structure itself shall not show any permanent deformation or abnormality which will render them unsuitable for continuous service at full rated load.

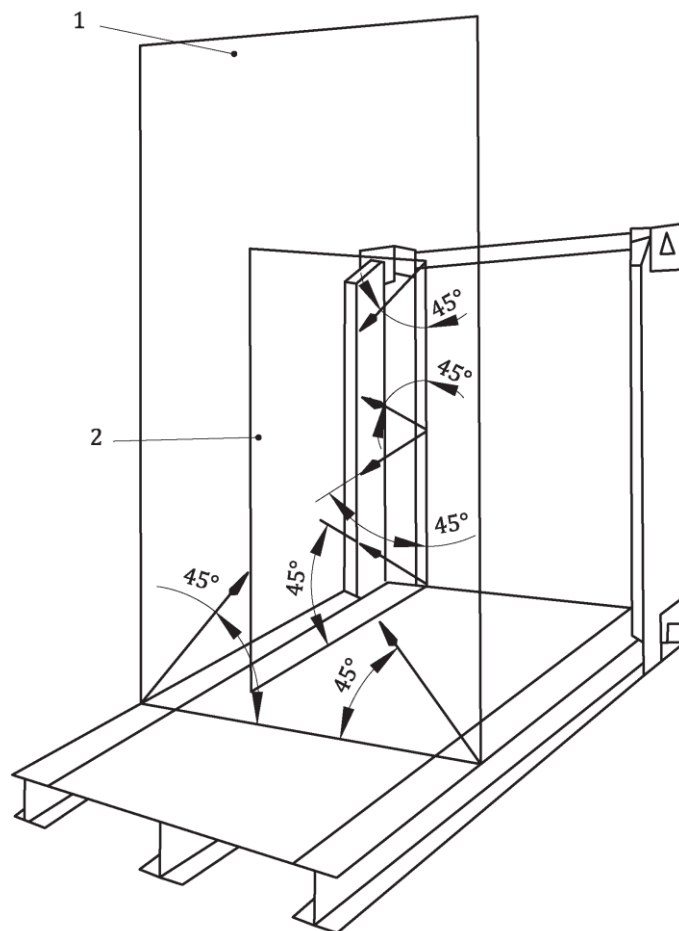


Fig. 3.14
1 – transverse plane; 2 – longitudinal plane

3.15 INSPECTIONS

3.15.1 The platform containers and platform-based containers shall undergo the inspections stated in 3.17, Part II "General Freight Containers" insofar as these inspections are applicable."

PART VI. NON-PRESSURIZED BULK CONTAINERS

23 Heading of **Part VI** is replaced by the following text:

"PART VI. NON-PRESSURIZED DRY BULK CONTAINERS".

1 GENERAL

24 **Chapter 1.1** is replaced by the following text:

"1.1 APPLICATION

1.1.1 The provisions of this Part apply to containers for the non-pressurized dry bulk cargoes.

1.1.2 Non-pressurized dry bulk containers shall comply with requirements of Part I "Basic Requirements" and with requirements of this Part.

1.1.3 Containers intended for the transportation of dangerous dry bulk cargoes are subject to special consideration by the Register in each case."

25 **Para 1.2.1.** The definition «Non-pressurized bulk containers» is replaced by the following text:

"Non-pressurized dry bulk container means a container used for the transportation and storage of unpackaged dry bulk cargoes, equipped with devices for gravity loading and discharge."

26 **Para 1.4.1.** The first sentence is replaced by the following text:

"For dry bulk containers, the technical documentation specified in 1.3.3, Part I "Basic Requirements", shall comprise:".

2 TECHNICAL REQUIREMENTS

27 **Para 2.3.1** is replaced by the following text:

"2.3.1 The dry bulk containers may be provided with fork lift pockets, grapple arm lifting areas, "gooseneck" tunnel, as well as with ladders and walkways."

28 **Para 2.3.4** is replaced by the following text:

"2.3.4 The dry bulk containers shall have one or more loading openings, the number, construction and arrangement of which shall be such as to permit even distribution of cargo in the cargo body. Recommended arrangement of loading openings is shown in Fig. 2.3.4."

29 **Para 2.3.5** is replaced by the following text:

"2.3.5 The dry bulk containers shall have one or more discharge openings, the number, structure and arrangement of which shall be such as to permit complete discharge of cargo by gravity or with the use of discharge devices that produce no vacuum within the cargo body."

3 TESTING

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

"**3.1.1** The requirements of this Section apply to dry bulk containers of all dimensions, irrespective of their construction and materials involved.".

31 **Para 3.1.6.** Reference "3.8" is replaced by "3.7".

32 **Para 3.3.1** is replaced by the following text:

"**3.3.1** A dry bulk container shall be subjected to inspections according to 3.17, Part II "General Freight Containers".".

PART VII. OFFSHORE CONTAINERS

1 GENERAL

33 **Para 1.2.1.** The definition "Offshore tank bulk container" is replaced by the following text:

"Offshore tank dry bulk container means a container designed to transport dry bulk cargoes.".

34 **Para 1.3.1.7** is replaced by the following text:

".7 floor, loading and discharge devices (for dry bulk containers);".

35 **Para 1.4.1.1** is replaced by the following text:

"**1.4.1.1** technical conditions or technical specification (for firms for which the container technical conditions are not provided according to the applied normative documents);".

4 TANK CONTAINERS, BULK CONTAINERS AND THERMAL CONTAINERS

36 Heading of **Section 4** is replaced by the following text:

"**4 TANK CONTAINERS, DRY BULK CONTAINERS AND THERMAL CONTAINERS**".

37 **Para 4.1.3** is replaced by the following text:

"**4.1.3** Pressurized dry bulk tank containers shall also comply with the applicable requirements of Part IV "Tank Containers".".

38 **Para 4.1.4** is replaced by the following text:

"**4.1.4** Non-pressurized dry bulk containers shall comply with the applicable requirements of Part VI "Non-Pressurized Dry Bulk Containers".".

7 MARKING

39 **Para 7.2.3** is deleted.

40 **Para 7.4.7** is replaced by the following text:

"7.4.7 Non-pressurized dry bulk containers shall be marked in compliance with the requirements of Section 4, Part VI "Non-Pressurized Dry Bulk Containers".

41 **Para 7.5.2.** The first paragraph is replaced by the following text:

"The format of a plate is shown in Fig. 7.5.2."

42 **Para 7.5.3.** The first paragraph is replaced by the following text:

"The format of a plate is shown in Fig. 7.5.3."

8 TESTING

43 **Пункт 8.2.3.** Formula " $1,5/R$ " is replaced by " $1,5R$ ".

9 LIFTING SET

44 **New para 9.2.7** is introduced reading as follows:

"9.2.7 Where two 2-leg slings are selected to function as a 4-leg sling, they shall be calculated as for a 4-leg sling."

45 **Para 9.6.5** is replaced by the following text:

"9.6.5 Rope lifting sets shall be tested in operation for a load equal to $2 \times WLL_{min}$ ".

46 Legend to **Fig. 9.7.6** is replaced by the following text:

"1 – RS abbreviation; 2 – the number and thickness of slings (13 mm for main slings and 19 mm for additional one);
3 – manufacturer's mark; 4 – maximum sling angle to the vertical; 5 – working load limit of shackles, in tonnes;
6 – working load limit of the lifting set (WLL_{off}); 7 – mass of the lifting set, in kg; 8 – number of the Register certificate;
9 – the serial number of the lifting set; 10 – mark of the survey type, the mark of the survey body that conducted the survey and the survey date in YYYY-MM-DD format; 11 – identification numbers of shackles;
12 – lifting set owner's name".

47 **Para 9.7.6.2** is supplemented with the following text:

"Note. Where two 2-leg slings are selected to function as a 4-leg sling, both shall be marked as a 4-leg sling."

PART VIII. TANK CONTAINERS WITH FIBER-REINFORCED PLASTICS (FRP) SHELL

2 TECHNICAL REQUIREMENTS

48 Heading of **Chapter 2.2** is replaced by the following text:

"2.2 TANKS, SUPPORTS AND ATTACHMENTS".

49 **Para 2.2.8** is replaced by the following text:

"2.2.8 When loaded up to the maximum permissible gross mass R , a tank with a FRP shell, its supports and fasteners shall withstand the following separately acting statically applied forces:

.1 in the moving direction: doubled gross mass R multiplied by the acceleration of gravity g ($2Rg$).

In design of tank containers for dangerous goods, strength of the tank, supports and attachments shall be additionally tested by the static forces in the longitudinal direction equal to $4Rg$;

.2 horizontally at a right angle to the moving direction: gross mass R multiplied by the acceleration of gravity g (Rg). If the direction of movement is not exactly determined, then the loads shall be taken equal to $2Rg$;

.3 vertically upwards: gross mass R multiplied by the acceleration of gravity g (Rg);

.4 vertically downwards: doubled gross mass R multiplied by the acceleration of gravity g ($2Rg$).

Allowable loads of container components manufactured from metal materials shall be defined in accordance with 2.2.4, Part IV "Tank Containers".

3 TESTING

50 **Para 3.1.1.** Reference "3.8.7" is replaced by "3.7.7", reference "3.9" is replaced by "3.8".

51 **Para 3.3.2.2.** Reference "3.7" is replaced by "3.6".

52 **Para 3.3.2.3.** Reference "3.8" is replaced "3.7", reference "3.8.7" is replaced "3.7.7".

RULES FOR THE APPROVAL OF CONTAINERS FOR THE TRANSPORT OF GOODS UNDER CUSTOMS SEAL

2 TECHNICAL REQUIREMENTS

53 **Para 2.3.1** is replaced by the following text:

"2.3.1 The containers capable of being folded or dismantled shall comply with requirements stated in 2.1 and 2.2.

In addition, such containers shall be fitted with fasteners which locks the various parts together once the container has been erected. Fasteners shall be so designed as to enable sealing by Customs seals, if it is fitted on the outside of the container after assembly."

3 MARKING

54 **Para 3.1.3** is replaced by the following text:

"3.1.3 The CCC Plate shall be permanently affixed to the container at a clearly visible place where it cannot be easily damaged or unauthorizedly removed."

RULES FOR TECHNICAL SUPERVISION DURING MANUFACTURE OF CONTAINERS

1 ORGANIZATIONAL REGULATIONS FOR THE TECHNICAL SUPERVISION

55 **Para 1.1.3.** Reference "Table 2.1.2" is replaced by "Table 2.1.3".

56 **Para 1.4.2.** Reference "Table 2.1.2" is replaced by "2.1".

57 **Para 1.5.1.1** is replaced by the following text:

"1.5.1.1 If the firm is not the manufacturer of the products, the firm shall, in addition to the provisions of 1.5.1, 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."

58 **Para 1.5.5.** Reference "Table 2.1.2" is replaced by "Table 2.1.3".

2 TECHNICAL SUPERVISION AT THE FIRMS INVOLVED IN THE MANUFACTURE OF PRODUCTS FOR CONTAINERS

59 **Para 2.2.1.** Reference "Table 2.1.2" is replaced by "Table 2.1.3".

60 **Para 2.3.3.** Reference "Table 2.1.2" is replaced by "Table 2.1.3".

61 **Paras 2.3.9.7 and 2.3.9.8.** Reference "3.8" is replaced by "3.7".

62 **Para 2.3.13** is replaced by the following text:

"**2.3.13** Prototype and type-series lifting sets for offshore containers or their components (when approved separately) shall be tested in compliance with the requirements of standards listed in 9.6, Part VII "Offshore Containers" of the Rules for the Manufacture of Containers, as well as in accordance with the approved technical documentation."

63 **Para 2.4.1.** Reference "Table 2.1.2" is replaced by "Table 2.1.3".

64 **Para 2.6.1.** Reference "Table 2.1.2" is replaced by "Table 2.1.3".

3 TECHNICAL SUPERVISION DURING MANUFACTURE OF CONTAINERS

65 **Para 3.4.1** is replaced by the following text:

"**3.4.1** During technical supervision at the firms' (manufacturers'), the welders' qualification shall be checked for conformity with the requirements of 3.7.3, Part I "Basic Requirements" of the Rules for Manufacture of Containers and the technical documentation approved by the Register."

66 **Para 3.5.2.** Reference "Table 2.1.2" is replaced by "Table 2.1.3".

67 **Para 3.7.2** is replaced by the following text:

"**3.7.2** During technical supervision at the firms' (manufacturers'), the welding procedure shall be checked for conformity with the requirements of 3.7.2, Part I "Basic Requirements" of the Rules for Manufacture of Containers and the technical documentation approved by the Register."

APPENDIX 1

TECHNICAL SUPERVISION DURING MANUFACTURE OF FITTINGS

2 STEEL FITTINGS MANUFACTURED BY CASTINGS

68 **Para 2.1.1** is replaced by the following text:

"2.1.1 Manufacturing method.

Fittings shall be manufactured in electric furnaces or oxygen-converter or other process on agreement with the Register and steel shall be killed."

69 **Paras 2.1.2 – 2.1.4** are deleted. **Paras 2.1.5 – 2.1.8** are renumbered **2.1.2 – 2.1.5**, accordingly.

70 **Para 2.2.2** is deleted. **Para 2.2.3 – 2.2.6** are renumbered **2.2.2 – 2.2.5**, accordingly.

71 **Para 2.4.1** is replaced by the following text:

"2.4.1 For each batch the manufacturer shall submit to the RS surveyor a Certificate or specification containing, as a minimum, the following information:

customer and number of contract (order);
type of fitting and casting material category;
number of drawing and/or specification;
method of manufacture;
number of heat;
thermal treatment procedures;
quantity and mass of fittings;
results of non-destructive testing and mechanical tests;
results of fittings measurements."

3 FITTINGS MANUFACTURED WITH THE USE OF WELDING

72 **Section 3** is deleted.

APPENDIX 2

LIST OF ITEMS TO BE SUBMITTED TO THE REGISTER FOR TECHNICAL SUPERVISION^{1, 2}

73 The heading of **Section 1** is replaced by the following text:

"1 MANUFACTURE OF CONTAINER PROTOTYPES^{1, 2}".

RULES FOR TECHNICAL SUPERVISION OF CONTAINERS IN SERVICE

3 SURVEYS

74 **Para 3.4.5.1.4.** Reference "3.8" is replaced by "3.7".

4 TECHNICAL SUPERVISION OF CONTAINERS UNDER REPAIR

75 **Para 4.3.1** is replaced by the following text:

"4.3.1 Recognition of repair firms

4.3.1.1 The firm where the repair and modernization of containers including repair of tank containers may be performed shall be surveyed by the Register with satisfactory results and shall have CCП or CП with codes 40000001 "Repair and modernization of tank containers" or 40000002 "Repair and modernization of containers except for tank containers".

4.3.1.2 To obtain CCП or CП the repair firm shall submit a written application to RHO for recognition of the firm guarantee of payment for the Register services and the expenses as well

as with confirmation of familiarization and compliance with the General Terms for service rendering.

The application shall contain the name of the organization, its legal and correspondence address, as well as production facility address, bank details, types and dimensions of containers which may be repaired, list of normative documents used in the inspection for defects and in repairs, specified in 4.2.2.

The application shall be accompanied by the following documents:

- .1 legal documents (Charter, Unified State Register of Legal Entities, Principle State Registration Number, taxpayer ID number);
- .2 company's organizational chart including its subsidiaries;
- .3 list of experts with their functional duties performing the examination, inspection for defects, acceptance of containers, welding, adjustment (if any) and tests (if any), and their qualification;
- .4 document stating the company's experience in repairing containers;
- .5 description of testing equipment (if any);
- .6 copies of certificates and/or licenses issued previously (if any) or issued by other competent bodies;
- .7 list of equipment applied for container repairs, availability of facilities for containers storage and examination, methods of containers transportation;
- .8 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.;
- .9 information on the quality control system implemented at the repair firm;
- .10 welders' certification program complying with the general provisions set forth in Appendix 3 of the Rules for Technical Supervision during Manufacture of Containers (for welders' certification by the Register);
- .11 welding procedures for their approval by the Register;
- .12 documents for welding consumables;
- .13 documents in accordance with 4.2.

Note. For CCP the firm shall submit to RHO documents in accordance with 4.3.1.2.1 – 4.3.1.2.3, 4.3.1.2.5, 4.3.1.2.7, 4.3.1.2.8 and 4.3.1.2.10 – 4.3.1.2.13.

4.3.1.3 The repair firm shall state that it undertakes to:

- .1 submit to the Register for inspection the containers under repair at various stages of repairing;
- .2 agree with the Register any alterations in the technical documentation on repairs and in repairing procedures;
- .3 fulfill the Customs requirements for containers design;
- .4 keep records in compliance with the applicable provisions of 1.4.2.6, Part I "Basic Requirements" of the Rules for the Manufacture of Containers;
- .5 submit certificates and relevant documents for accessories and materials used in repairing containers.

4.3.1.4 Upon receiving positive results after verification of requirements in 4.3.1.2 as well as survey results of the repair firm the Register issues CCP.

4.3.1.5 Upon receiving positive results after verification of requirements in 4.3.1.2 as well as survey results of the repair firm examination and upon completion of technical supervision of at least 30 containers or 10 tank containers repair, the Register may issue Recognition Certificate (RC).

4.3.1.6 Maintenance of the conditions for issuing the CCP or Recognition Certificate (RC) is subject to periodical checks by the Register. "