



RUSSIAN MARITIME REGISTER OF SHIPPING

CIRCULAR LETTER

No. 382-04-1772c

dated 24.05.2022

Re:

amendments to the Collection of the Rules for Containers, 2021, ND 2-090201-012-E

Item(s) of supervision:

containers, materials and products for containers

Entry-into-force date:

15.06.2022

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

~~dated~~

Number of pages:

1 + 19

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; Parts I "Basic Requirements", III "Thermal Containers", IV "Tank Containers" and VII "Offshore Containers" of Rules for the Manufacture of Containers; Rules for Technical Supervision During Manufacture of Containers, Materials and Products for Containers and 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 Technical Supervision During Manufacture of Containers, Materials and Products for Containers and 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 RS practical activity from the entry-into-force date of amendments.
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List of the amended and/or introduced paras/chapters/sections:

General Regulations for the Technical Supervision of Containers:

para 1.4.3 and Table 2.1.3

Rules for the Manufacture of Containers:

Part I: paras 1.5.1.1, 1.5.1.4, 1.5.1.5, 1.5.2.2.1, 1.5.2.4.1.6, 1.5.2.4.1.8, 1.6.3, Chapter 2.2 and Section 5

Part III: para 3.1.6

Part IV: paras 2.2.1 and 2.2.14

Part VII: para 8.1.8

Rules for Technical Supervision During Manufacture of Containers, Materials and Products for Containers:

Paras: 3.9.5.3, 5.6.3, 5.7.2.1, 5.10.1.2 and Appendix 1

Rules for Technical Supervision of Containers in Service:

para 3.5.3

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

Nos.	Amended paras/chapters/ sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
1	General Regulations for the Technical Supervision of Containers, para 1.4.3	Reference has been specified	382-04-1772c of 24.05.2022	15.06.2022
2	General Regulations for the Technical Supervision of Containers, Table 2.1.3	Technical supervision groups for codes 50020200 and 50020900 have been specified	382-04-1772c of 24.05.2022	15.06.2022
3	Rules for the Manufacture of Containers, Part I, Chapter 1.5 (paras 1.5.1.1, 1.5.1.4, 1.5.1.5, 1.5.2.2.1, 1.5.2.4.1.6 and 1.5.2.4.1.8)	Requirements for firms (manufacturers) have been specified	382-04-1772c of 24.05.2022	15.06.2022
4	Rules for the Manufacture of Containers, Part I, para 1.6.3	Para has been deleted	382-04-1772c of 24.05.2022	15.06.2022
5	Rules for the Manufacture of Containers, Part I, Chapter 2.2	Chapter has been revised; requirements for fittings have been specified	382-04-1772c of 24.05.2022	15.06.2022
6	Rules for the Manufacture of Containers, Part I, paras 3.2.1 — 3.2.10	Paras 3.2.1 — 3.2.4 have been deleted; existing paras 3.2.5 — 3.2.10 have been renumbered 3.2.1 — 3.2.6 accordingly	382-04-1772c of 24.05.2022	15.06.2022
7	Rules for the Manufacture of Containers, Part I, Section 5	A new section with the requirements for design and manufacture of fittings has been introduced	382-04-1772c of 24.05.2022	15.06.2022
8	Rules for the Manufacture of Containers, Part III, para 3.1.6	Reference has been specified	382-04-1772c of 24.05.2022	15.06.2022
9	Rules for the Manufacture of Containers, Part IV, para 2.2.1	Requirements for standards have been specified	382-04-1772c of 24.05.2022	15.06.2022
10	Rules for the Manufacture of Containers, Part IV, para 2.2.14	Requirements for transportation of non-refrigerated liquefied gases have been specified	382-04-1772c of 24.05.2022	15.06.2022

Nos.	Amended paras/chapters/ sections	Information on amendments	Number and date of the Circular Letter	Entry-into-force date
11	Rules for the Manufacture of Containers, Part VII, para 8.1.8	Requirements for serial testing of offshore containers have been specified	382-04-1772c of 24.05.2022	15.06.2022
12	Rules for Technical Supervision During Manufacture of Containers, Materials and Products for Containers, para 3.9.5.3	Requirements for the minimum scope of testing have been specified	382-04-1772c of 24.05.2022	15.06.2022
13	Rules for Technical Supervision During Manufacture of Containers, Materials and Products for Containers, para 5.6.3	Reference has been specified	382-04-1772c of 24.05.2022	15.06.2022
14	Rules for Technical Supervision During Manufacture of Containers, Materials and Products for Containers, para 5.7.2.1	Requirements for the form of the certificate have been specified	382-04-1772c of 24.05.2022	15.06.2022
15	Rules for Technical Supervision During Manufacture of Containers, Materials and Products for Containers, para 5.10.1.2	Reference has been specified	382-04-1772c of 24.05.2022	15.06.2022
16	Rules for Technical Supervision During Manufacture of Containers, Materials and Products for Containers, Appendix 1	Throughout the text of the Appendix requirements for fittings have been specified	382-04-1772c of 24.05.2022	15.06.2022
17	Rules for Technical Supervision of Containers in Service, para 3.5.3	Reference has been specified	382-04-1772c of 24.05.2022	15.06.2022

**COLLECTION OF THE RULES FOR CONTAINERS, 2021,
ND No. 2-090201-012-E**

GENERAL REGULATIONS FOR THE TECHNICAL SUPERVISION OF CONTAINERS

1 GENERAL

1 **Para 1.4.3** is replaced by the following text:

"**1.4.3** The validity period of СОД, listed in 1.4.2.1.1 — 1.4.2.1.4, is not specified. СОД are not valid for newly manufactured containers in case of expiration of the technical documentation validity period."

2 TECHNICAL SUPERVISION

2 **Table 2.1.3.** Columns (code 50020200 and code 50020900) are replaced by the following text

"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
50020200	Corner and intermediate fittings	4M	K ²
50020900	Refrigerating and/or heating appliances of a container	1 ⁵	—

New Footnote 5 is introduced reading as follows:

"⁵ A document drawn up by the manufacturer in accordance with the standards of the firm, containing information sufficient for RS."

RULES FOR THE MANUFACTURE OF CONTAINERS

PART I. BASIC REQUIREMENTS

2 GENERAL

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

"**1.5.1.1** The requirements of this Chapter cover firms (manufacturers) of containers, materials and products for containers listed in the register nomenclature."

4 **Para 1.5.1.4** is replaced by the following text:

"**1.5.1.4** The firm shall inform the Register of the existing experience required for manufacture and shall also submit for review:

- .1 particulars of tests which may be carried out at the firm;
- .2 document (route map) describing the technological process of manufacturing;
- .3 production processes of welding for approval or copies of approved production processes of welding (if applicable);
- .4 Welder Certification Program if welders approved by the Register are unavailable or copies of Welders Approval Test Certificates (if applicable);
- .5 copies of certificates and licenses issued previously (if any).

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

5 **Para 1.5.1.5** is replaced by the following text:

"**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."

6 **Para 1.5.2.2.1** is replaced by the following text:

"**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."

7 **Para 1.5.2.4.1.6** is replaced by the following text:

".6 the description of the operation checking system of the manufacture;".

8 **Para 1.5.2.4.1.8** is replaced by the following text:

".8 approved welding production processes (if applicable).".

9 **Para 1.6.3** is deleted.

2 GENERAL TECHNICAL DATA

10 **Chapter 2.2** is replaced by the following text:

"2.2 POSITIONAL RELATIONSHIP OF FITTINGS

2.2.1 Positional relationship of the container fittings shall comply with the valid ISO 668. These parameters are given in Figs. 2.2.1-1 and 2.2.1-2 and in Table 2.1.2.

2.2.2 The upper faces of top corner fittings shall protrude above the top of the container by a minimum of 6 mm. By the top of the container the highest point of the container roof is meant with no allowance made for thickness of doubler plates of top rails and the roof.

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.

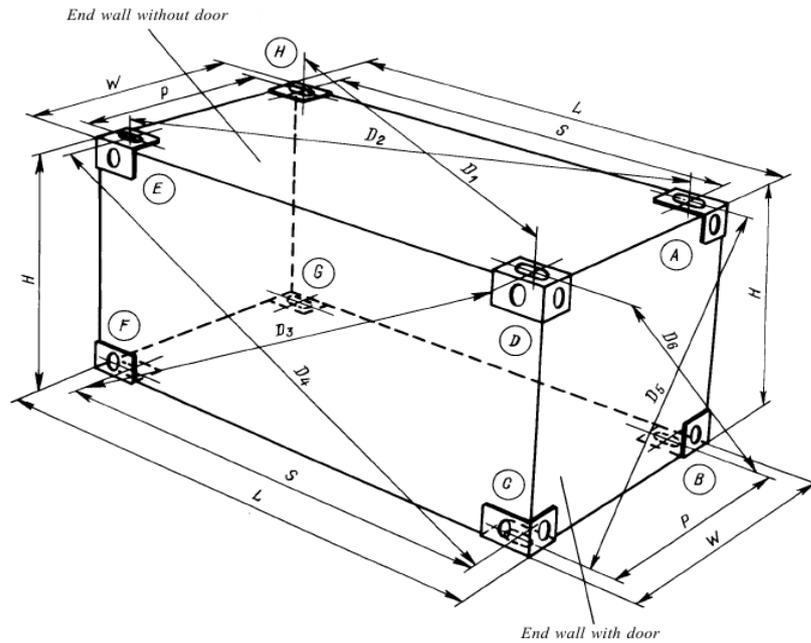


Fig. 2.2.1-1
Assembled corner fittings position:

L — external length of the container; W — external width of the container; H — overall height; S — length between centres of apertures in corner fittings; P — width between centres of apertures in corner fittings; D — distance between centres of apertures (or projected reference points therefrom) of diagonally opposite corner fittings resulting in six measurements: D_1 , D_2 , D_3 , D_4 , D_5 , D_6 , K_1 — difference between D_1 and D_2 or between D_3 and D_4 (i.e. $K_1 = D_1 - D_2$ or $K = D_3 - D_4$); K_2 — difference between D_5 and D_6 (i.e. $K_2 = D_5 - D_6$).
Letters shown in circles serve for reference when dealing with documentation

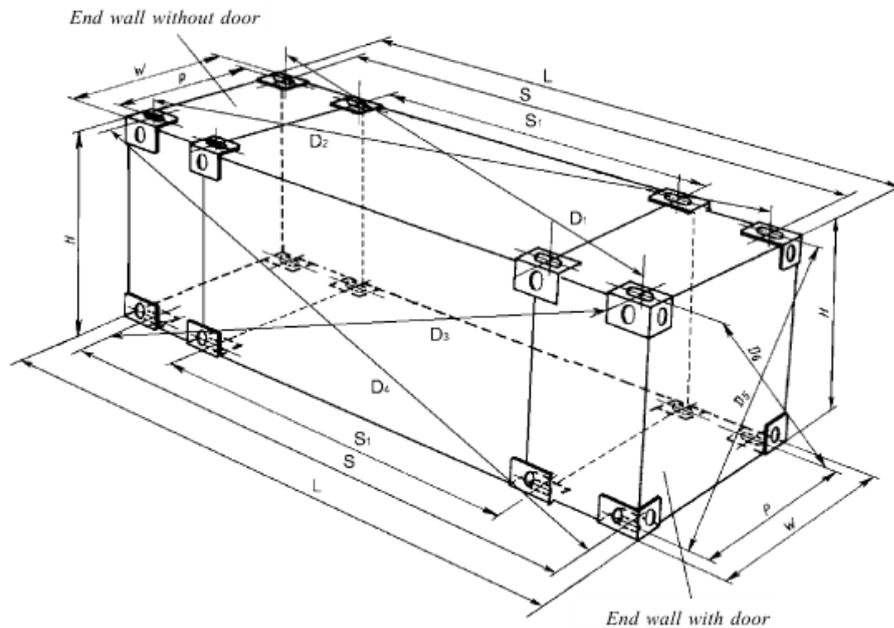


Fig. 2.2.1-2
Positional relationship of 1EEE and 1EE container fittings

Refer to symbols in Fig. 2.2.1-1. S_1 = length between centres of apertures in intermediate fittings".

3 MATERIALS AND WELDING

11 **Paras 3.2.1 — 3.2.4** are deleted. **Existing paras 3.2.5 — 3.2.10** (and references thereto) are replaced by **3.2.1 — 3.2.6** accordingly.

12 A new **Section 5** is introduced reading as follows:

"5 FITTINGS

5.1 GENERAL

5.1.1 Application.

5.1.1.1 The requirements of this Section apply to corner and intermediate fittings used on containers, as well as items subject to RS technical supervision.

5.1.1.2 Fittings other than those specified in this section are subject to separate consideration by RS.

5.1.2 Technical documentation.

5.1.2.1 The volume of technical documentation to be submitted for approval shall contain the following:

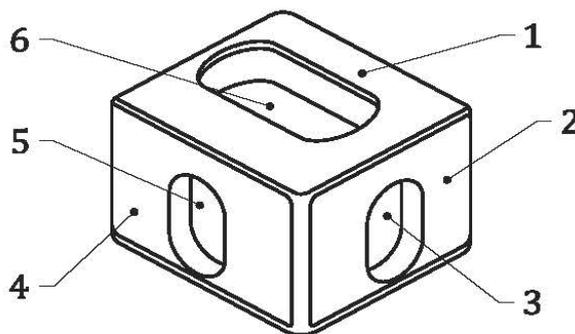
- .1 technical conditions or specification (for firms for which the development of technical conditions is not provided according to the applied normative documents) (*);
- .2 a test program for a prototype and serial fittings (*);
- .3 an assembly drawings (*);
- .4 a marking drawing, if there is no marking on the assembly drawing (*).

Note. The extent of the above documentation is the minimum required.

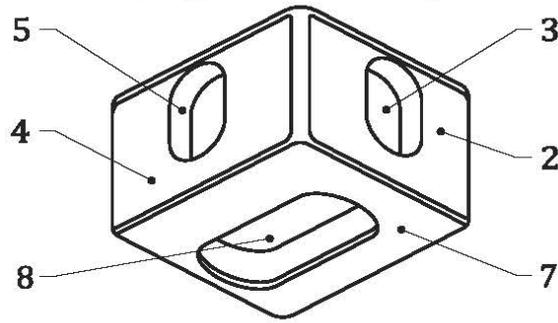
5.1.2.2 The documents specified in 5.1.2.1 and marked with a (*), based on the results of a positive review, are drawn up by stamping 8.2-1 or 8.2-2 in accordance with the requirements of Part II "Technical Documentation" of the Rules for Technical Supervision during the Construction of Ships and Manufacture of Materials and Products for Ships.

5.1.3 Explanations.

Fitting design elements are indicated in Fig. 5.1.3.



Upper corner fitting



Bottom corner fitting

Fig. 5.1.3 Corner fittings

(1 — top wall; 2 — outer end wall; 3 — end aperture; 4 — outer side wall; 5 — side aperture; 6, 8 — base aperture; 7 — bottom wall)

5.2 GENERAL

5.2.1 The dimensions and tolerances of fittings for ISO series 1 containers shall comply applicable requirements of ISO 1161. These parameters are given in Figs. 5.2.1-1 — 5.2.1-4.

Note. The value of the thickness of the lower face of the upper fitting, as well as the upper face of the lower fitting, may be reduced from 11 mm to 9 mm, provided that such fittings pass the tests specified in 5.6 with satisfactory results.

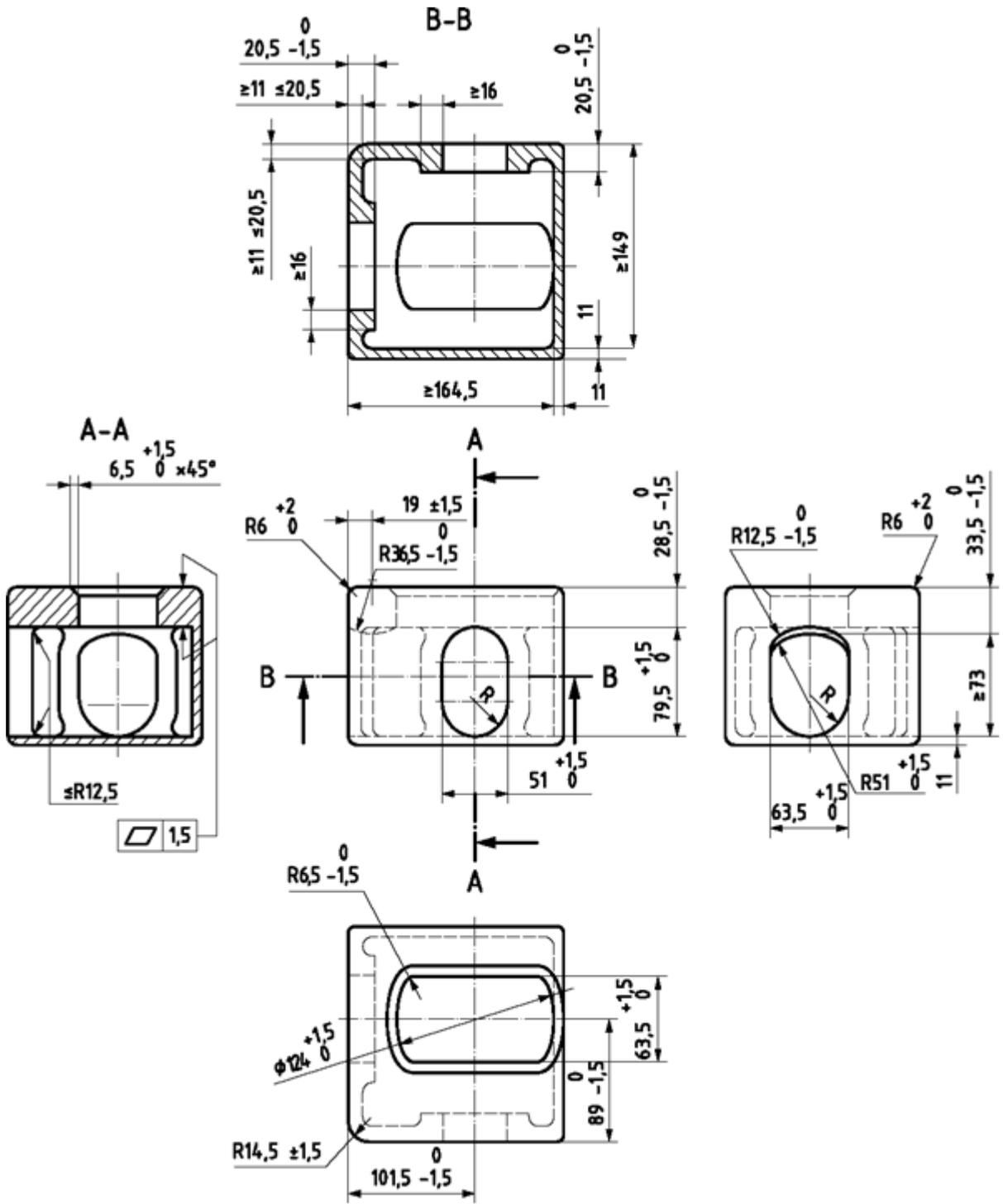


Fig. 5.2.1-1
Top corner fitting, in mm

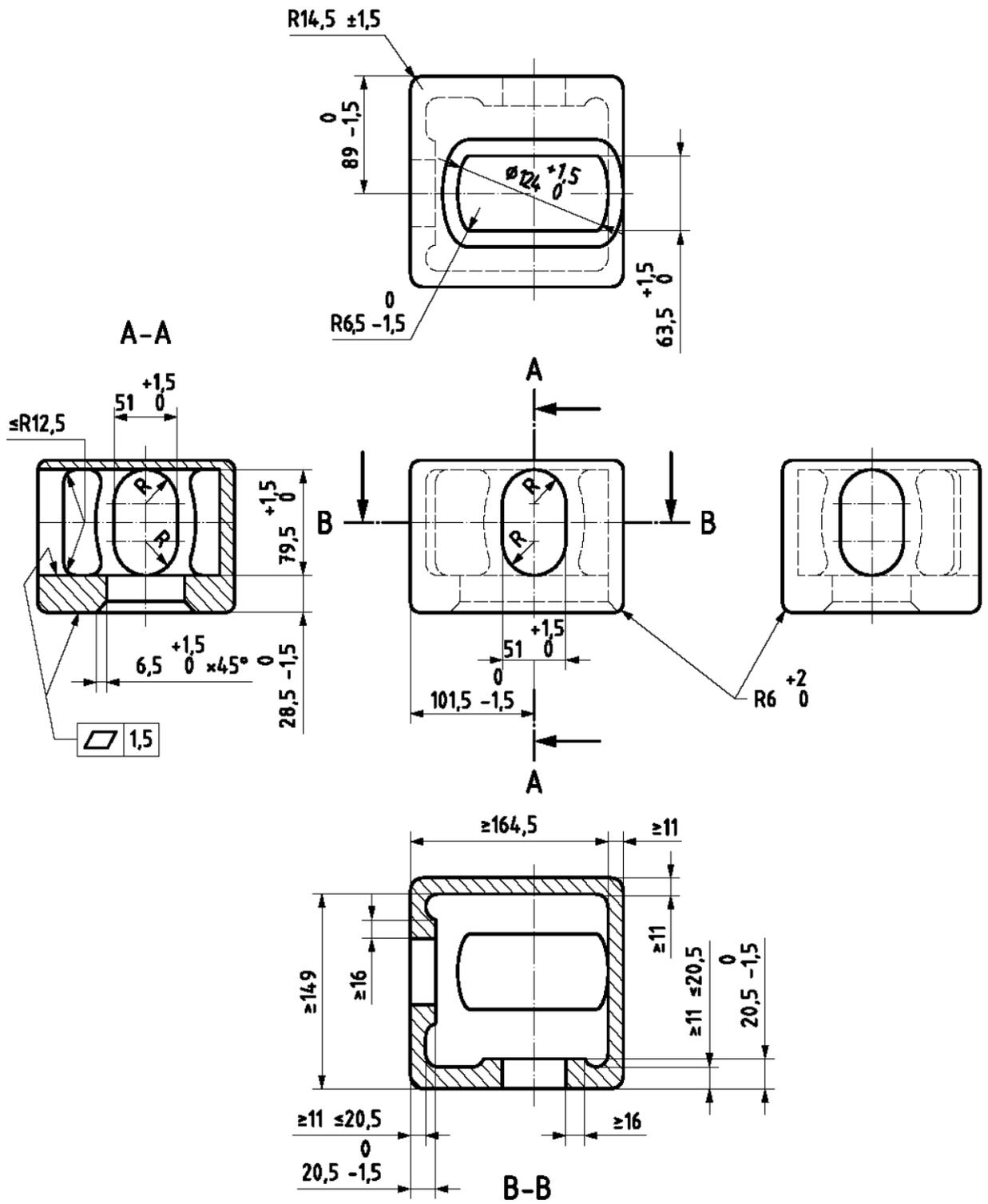


Fig. 5.2.1-2
Bottom corner fitting, in mm

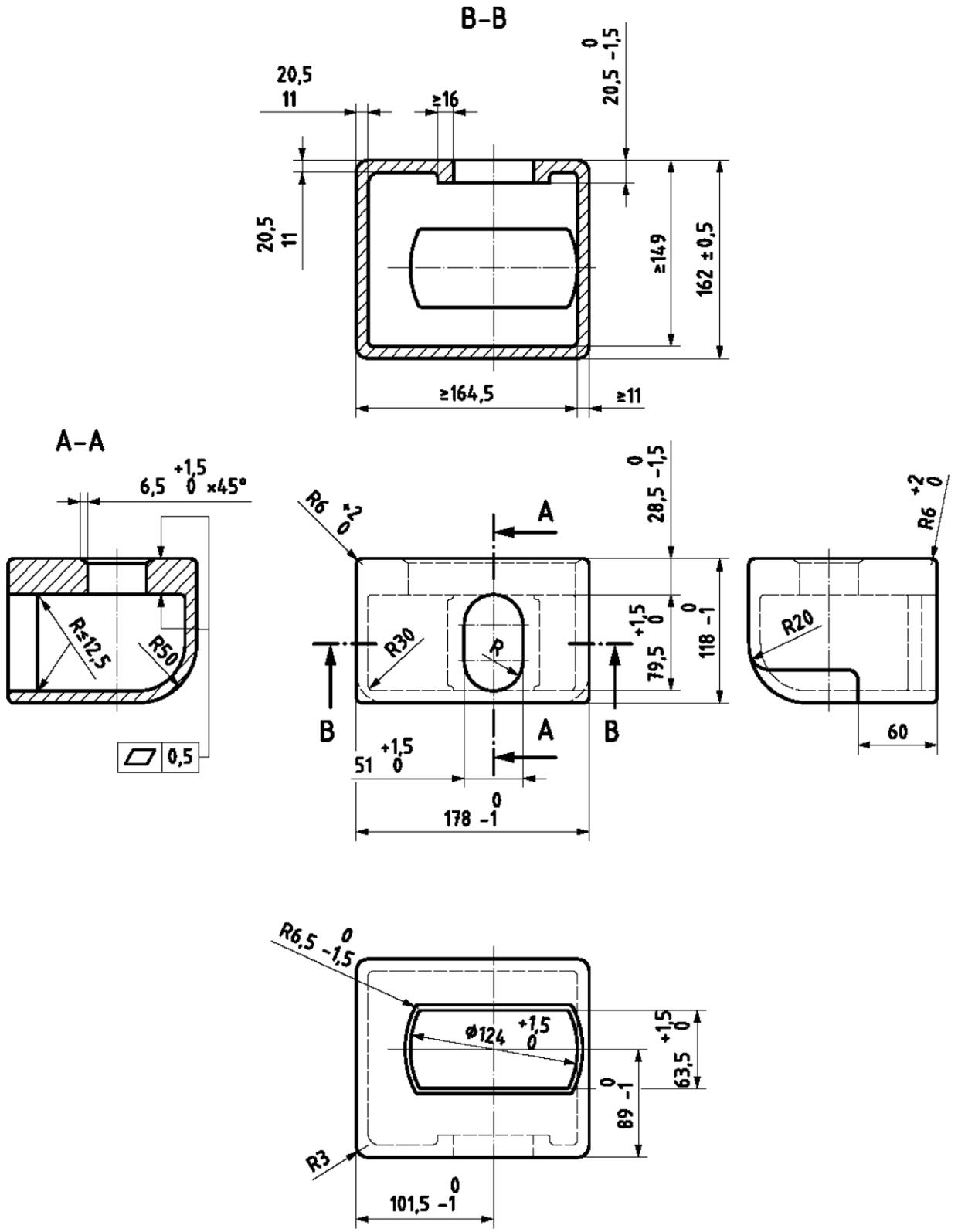


Fig. 5.2.1-3
Top intermediate fitting, in mm

(Required surfaces: top surface, outer side surface, outer surface directed to the nearest container end)

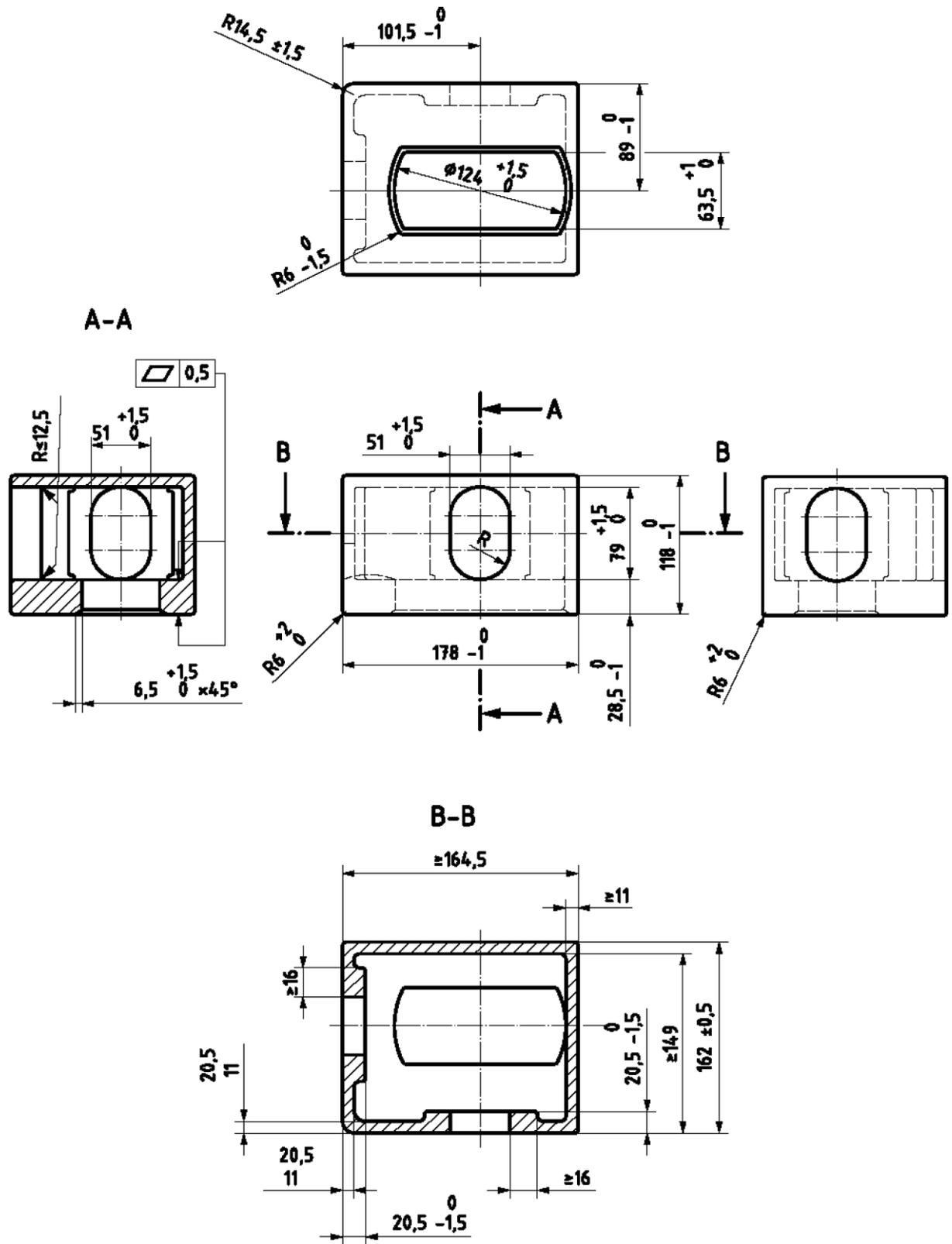


Fig. 5.2.1-4
Bottom intermediate fitting, mm

(Required surfaces: bottom surface, outer side surface, outer surface directed to the nearest container end)

5.2.2 Where the dimensions are not specified for inner and outer edges of apertures, these edges shall be given a radius of: $3 \begin{smallmatrix} 0 \\ -1,5 \end{smallmatrix}$ mm.

5.2.3 At the junction of the two 6 mm outside edge radii with the 14,5 mm edge radius, the corner shall be rounded by blending the radiused edges, removing minimum amounts of material from the flat outer faces and walls.

5.2.4 Where a corner or intermediate fitting has an optional inner side wall and is made to the minimum dimension of 149 mm, the junction of the mandatory horizontal face to the optional inner side wall may be provided with a radius not exceeding 5,5 mm.

If a greater radius is required, the 149 mm dimension shall be increased accordingly.

5.3 MATERIALS

5.3.1 When selecting a fitting material for chemical composition, it is required to take into account a range of working temperatures (ambient temperatures) likely to be encountered on the operational routes with the most unfavourable conditions. In any case, the resistance of the material to brittle and corrosion failures within the temperature range from – 40 °C to 50 °C shall be assured.

Other ranges of the operating temperatures, may be adopted subject to agreement with the RS.

5.3.2 The chemical composition of the resulting material shall be such as to ensure guaranteed weldability.

5.3.3 The mechanical properties of the castings material after thermal treatment according to procedures shall comply with the requirements of Table 5.3.3.

When manufactured by casting, test specimens shall be taken either from the cast corner fitting or from a separately cast sample (ladle sample) that has undergone the same heat treatment.

Table 5.3.3

Mechanical properties

Yield stress 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, with this significant impact value at lower temperatures shall not be less than 21 J.					

5.4 MANUFACTURING

5.4.1 Fittings shall be designed and manufactured in accordance with the applicable requirements of valid ISO 1161 and ISO 1496 series standards so that they can withstand the loads that occur when operating within a given temperature range.

5.4.2 Fittings may be manufactured by casting or other technique. The same technique may be applied for manufacture of built-up fittings with the use of welding, namely:

- .1 fittings completely welded from individual elements —for side and end faces;
- .2 cast or stamped fittings with weldable plate (additional wall which develops box-shaped fitting as per ISO 1161).

5.4.3 Casting fittings shall be manufactured in electric furnaces or oxygen-converter or other process and steel shall be killed.

5.4.4 Fittings shall be treated according to conditions given in the agreed specification taking into consideration requirements of 3.8.4, Part XIII "Materials" of the Rules for the Classification and Construction of Sea-Going Ships.

5.5 DEFECT CHECKS

5.5.1 A visual check for defects shall be done on the exterior and interior surfaces of each fitting.

5.5.2 A non-destructive test (e.g. RT or UT) shall be performed on one fitting from each casting batch in accordance with international and/or national standards. If defects are found, all fittings in the batch shall be tested. All defective fittings shall be destroyed.

5.6 TESTING

5.6.1 General.

5.6.1.1 Head samples of fittings shall be tested in accordance with 5.6.2 — 5.6.13.

5.6.1.2 For series production, 2 % of each batch shall be tested in accordance with 5.6.3 — 5.6.13, and the test specified in 5.6.2 shall be carried out.

If the manufacture has a functioning quality control system, then during serial production, the scope of tests, in agreement with RS, can be reduced to that specified in 5.6.2.

5.6.1.3 Tests shall be carried out on samples that have undergone heat treatment.

5.6.1.4 A dimensional check shall be carried out on each fitting tested.

5.6.2 Mechanical tests.

5.6.2.1 For each heat, the mechanical characteristics indicated in Table 5.3.3 shall be confirmed.

For welded fittings, each sheet of material used shall be tested and conformance confirmed.

5.6.3 Top fitting stacking test.

5.6.3.1 The test load (942 kN + 10%) shall be applied to the top wall of the fitting (refer to Fig. 5.6.3.1).

The load shall be applied through the pad, the bearing surface of which shall correspond in area to the bottom edge of the fitting. The liner shall be offset 38 mm from the outer end face and 25,4 mm from the outer side face of the fitting. The line of action of the test load shall be parallel to the sides and ends of the fitting.

The load shall be applied for a minimum of 2 min.

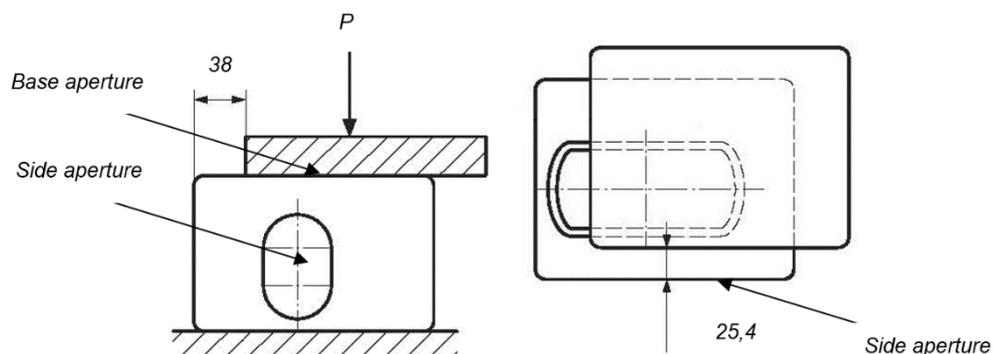


Fig. 5.6.3.1
Top fitting stacking test, mm

5.6.4 Top intermediate fitting stacking test

5.6.4.1 The test load (423 kN + 10%) shall be applied to the top wall of the fitting (refer to Fig. 5.6.3.1).

The load shall be applied through the pad, the bearing surface of which shall correspond in area to the bottom edge of the fitting. The pad shall be offset 38 mm from the outer end face and 25,4 mm from the outer side face of the fitting, and the line of application of the test load shall be parallel to the sides and ends of the fitting.

The load shall be applied for a minimum of 2 min.

5.6.5 Bottom fitting stacking test

5.6.5.1 The test load (1200 kN + 10%) shall be applied to the bottom wall of the fitting (refer to Fig. 5.6.5.1).

The load shall be applied through the pad, the bearing surface of which shall correspond in area to the bottom surface of the fitting. The line of action of the test load shall be parallel to the sides and ends of the fitting.

The load shall be applied for a minimum of 2 min.

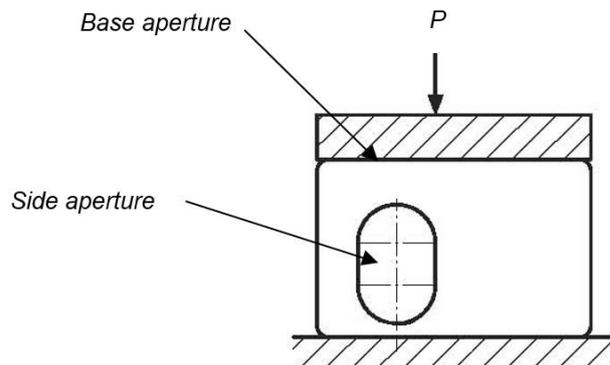


Fig. 5.6.5.1
Bottom fitting stacking test (no offset)

5.6.5.2 The test load (942 kN + 10%) shall be applied to the bottom wall of the fitting (refer to Fig. 5.6.3.1).

The load shall be applied through the pad, the bearing surface of which shall correspond in area to the bottom edge of the fitting. The pad shall be offset 38 mm from the outer end face and 25,4 mm from the outer side face of the fitting, and the line of application of the test load shall be parallel to the sides and ends of the fitting.

The load shall be applied for a minimum of 2 min.

Note. Fittings not marked so as to differentiate them as being either top or bottom fittings shall be subjected to the bottom fitting stacking test.

5.6.6 Bottom intermediate fitting stacking test

5.6.6.1 The test load (560 kN + 10 %) shall be applied to the bottom wall of the fitting (refer to Fig. 5.6.5.1).

The load shall be applied through the pad, the bearing surface of which shall correspond in area to the bottom surface of the fitting. The line of action of the test load shall be parallel to the sides and ends of the fitting.

The load shall be applied for a minimum of 2 min.

Note. Fittings not marked so as to differentiate them as being either top or bottom intermediate fittings shall be subjected to the bottom intermediate fitting stacking test.

5.6.7 Twistlock lifting test

5.6.7.1 The top and bottom fittings shall be tested.

A test load (not less than 250 kN) shall be applied to the base aperture through a test tool, corresponding in terms of seats to the twistlocks for containers (refer to Fig. 5.6.7.1).

The line of action of the test load shall be parallel to the sides and ends of the fitting. The force shall be distributed over at least 800 mm².

The load shall be applied for a minimum of 2 min.

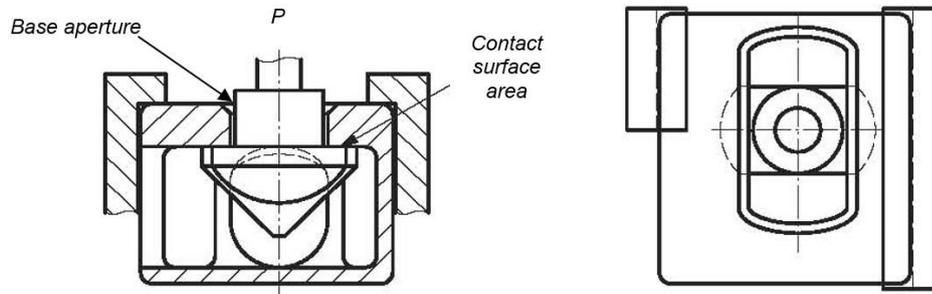


Fig. 5.6.7.1
Twistlock lifting test

5.6.8 Cargo hook lifting test.

5.6.8.1 The top fittings shall be tested.

A test load (not less than 194 kN) shall be applied through the end aperture in the direction of the base aperture.

The line of action of the test load shall be parallel to the sides and ends of the fitting.

The load shall be applied for a minimum of 2 min.

5.6.9 Cargo hook lifting test 2.

5.6.9.1 The bottom fittings shall be tested (refer to Fig. 5.6.9.1).

The test load (300 kN) shall be applied through the side aperture at an angle of 30° to the horizontal.

The line of action of the test load shall be parallel to the sides and ends of the fitting and be no more than 38 mm away from it.

The load shall be applied for a minimum of 2 min.

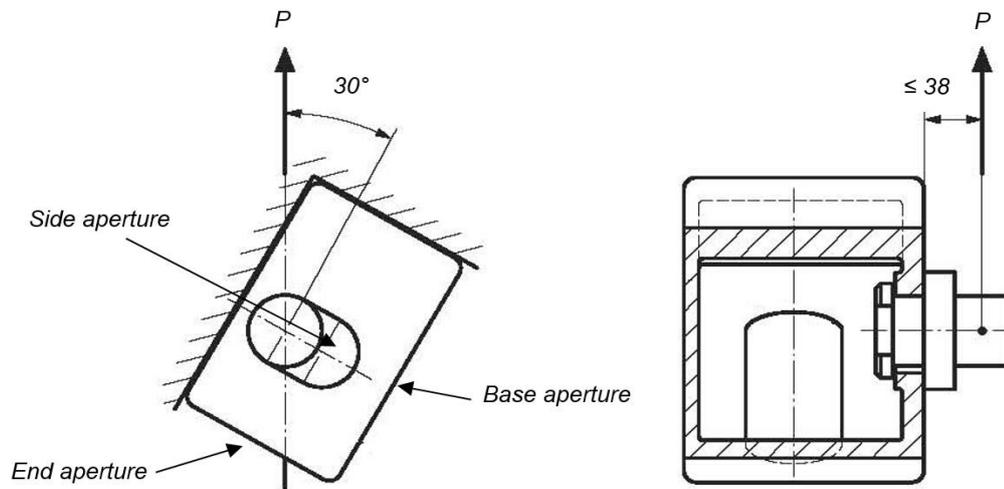


Fig. 5.6.9.1
Cargo hook lifting test 2, in mm

5.6.10 Impact test.

5.6.10.1 The top and bottom fittings shall be tested.

The test load (150 kN) shall be applied to the top and bottom walls of the fitting through a 25 mm x 6 mm test pad (with a 150 mm² bearing surface) which shall be centered between the base aperture and the blank side wall of the fitting (refer to Fig. 5.6.10.1). The depth of the indentation on the surface to be tested shall not exceed 0,3 mm.

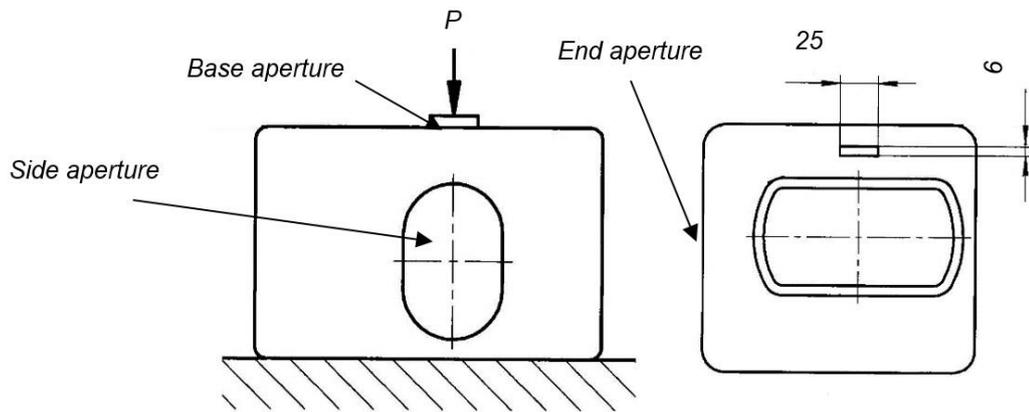


Fig. 5.6.10.1
Impact test, in mm

5.6.11 Lashing bar test.

5.6.11.1 The lower corner fittings shall be tested.

The test load (300 kN) shall be applied through the end aperture vertically towards the base aperture through a test tool similar in design to lashing (refer to Fig. 5.6.11.1).

The line of action of the load shall be parallel to the side and end sides of the fitting and be at a distance of no more than 38 mm from it.

The load shall be applied for a minimum of 2 min.

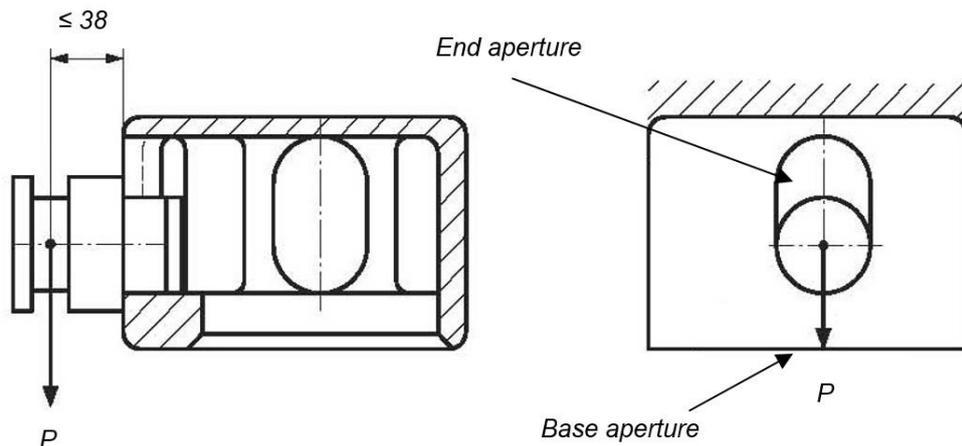


Fig. 5.6.11.1
Lashing bar test, in mm

5.6.12 Misgather test.

5.6.12.1 The top and bottom fittings shall be tested.

The test load (150 kN) shall be applied to the top and bottom walls of the fittings through a 25 mm x 6 mm test pad, which shall be placed on the edge of the base aperture, from the side closest to the side surface of the fitting (refer to Fig. 5.6.12.1).

The load shall be applied for a minimum of 2 min.

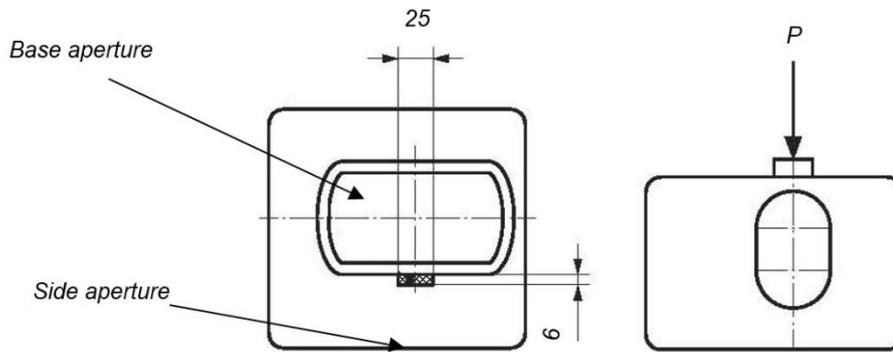


Рис. 5.6.12.1
Misgather test, mm

5.6.13 Rail securing test

5.6.13.1 The bottom fittings shall be tested.

The test load (360 kN) shall be applied longitudinally to the base aperture of the fitting, first in the direction of the end aperture, then in the direction opposite to the end aperture, through a test tool corresponding to the standard container attachment point on the railway platform.

The load shall be applied for a minimum of 2 min.

5.7 MARKING

5.7.1 Markings shall be located at positions where they are clearly visible after assembly of the fittings to containers and cannot be damaged when handling and securing the container.

5.7.2 Markings shall include, at a minimum, the following:

- .1 trade mark or stamp or sign or number of manufacturer;
- .2 heat number or symbol identifying the cast;
- .3 abbreviation for placement of the fitting on the container;
- .4 abbreviated name of "Russian Maritime Register of Shipping" — RS (optional)."

PART III. THERMAL CONTAINERS

3 TESTING

13 **Para 3.1.6.** Reference to 4.2.3 of the Rules for Technical Supervision during Manufacture of Containers is replaced by a reference to 5.11.1.4 of the Rules for Technical Supervision during Manufacture of Containers, Materials and Products for Containers.

PART IV. TANK CONTAINERS

2 TECHNICAL REQUIREMENTS

14 **Para 2.2.1** is replaced by the following text:

"2.2.1 The tanks shall be designed and constructed in accordance with the extending to pressure vessels national and/or international standards and these Rules. The tank strength shall be calculated in compliance with the requirements of national and/or international standards and rules."

15 **Para 2.2.14.** The third paragraph is replaced by the following text:

"Initial filling rate of tank containers intended for transportation of non-refrigerated liquefied gases (excluding helium), shall be so that if a temperature increases to the level at which a saturated vapour pressure is equal to the maximum allowable working pressure, then the volume occupied by the liquid does not exceed 98 %."

PART VII. OFFSHORE CONTAINERS

8 TESTING

16 **Para 8.1.8.** The first sentence is replaced by the following text:

"The minimum number of containers from the batch subject to the all points lifting testing in case of series manufacture is specified in Table 8.1.8."

RULES FOR TECHNICAL SUPERVISION DURING MANUFACTURE OF CONTAINERS, MATERIALS AND PRODUCTS FOR CONTAINERS

3 TECHNICAL SUPERVISION DURING MANUFACTURE OF PRODUCTS

17 **Para 3.9.5.3** is replaced by the following text:

"**3.9.5.3** Number of serial products for testing is established by the Register upon agreement with the firm depending on stability of workmanship but not less than 10 % of the presented batch. If nonconformities are identified, each product is subject to testing."

5 TECHNICAL SUPERVISION DURING MANUFACTURE OF CONTAINERS

18 **Para 5.6.3.** Reference "3.6, Part IX "Materials and Welding" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk" is replaced by a reference to "3.3, Part IX "Materials and Welding" of the Rules for the Classification and Construction of Ships Carrying Liquefied Gases in Bulk".

19 **Para 5.7.2.1.** The first paragraph of **Note 2** is replaced by the following text:

"The decision on application of material for manufacture of vessel parts as well as vessels of tank containers manufactured in accordance with the requirements of acting national and/or international standards covering rolled metal for pressure vessels and supplied with the certificates as per form 3.1 and 3.2 of EN 10204 or ISO 10474 standards shall be made by the Register in each particular case on the basis of sufficiency of information, its compliance with the requirements of 3.3, Part I "Basic Requirements" of the Rules for the Manufacture of Containers and the RS-approved documentation as well as availability of certified QMS of the firm (manufacturer) of the welding consumables."

20 **Para 5.10.1.2.** The third paragraph is replaced by the following text:

"Requirements for testing laboratories and procedure of their acceptance by RS are given in Section 10, 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."

TECHNICAL SUPERVISION DURING MANUFACTURE OF FITTINGS

1 ADDITIONAL REQUIREMENTS

1.1 Workmanship.

1.1.1 All fittings shall have clean surface.

1.2 External examination and checking of dimensions.

1.2.1 The manufacturer shall carry out external examination of 100 % fittings and by measuring of at least 10 % fittings from a batch. Fittings shall be submitted to the RS surveyor for random inspection to check their compliance with the requirements of 5.2, Part I "Basic Requirements" of the Rules for the Manufacture of Containers.

1.3 Strength tests.

1.3.1 Tests are carried out according to the program approved by RS at the manufacturer or in testing laboratories whose competence and status meet the requirements for accreditation in accordance with national or international standards.

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

1.3.2 Test loads are established taking into account the requirements of 5.6, Part I "Basic Requirements" of the Rules for the manufacture of containers.

1.4 Stamping.

1.4.1 The RS surveyor puts the RS stamp on each fitting tested under RS technical supervision.

1.5 Certificates.

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

- .1** customer and number of contract (order);
- .2** type of fitting and casting material category;
- .3** number of drawing and/or specification;
- .4** method of manufacture;
- .5** number of heat;
- .6** thermal treatment procedures;
- .7** quantity and mass of fittings;
- .8** results of non-destructive testing and mechanical tests;
- .9** results of fittings measurements."

RULES FOR TECHNICAL SUPERVISION OF CONTAINERS IN SERVICE

3 SURVEYS

22 **Para 3.5.3.** The second paragraph is replaced by the following text:

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