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SPECIFICATION FOR
TRUNKS, STEEL, DOMESTIC

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BUREAU OF INDIAN STANDARDS
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Indian Standard

SPECIFICATION FOR TRUNKS, STEEL, DOMESTIC

Domestic Hardware Sectional Committee, CPDC 17

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(Continued on page 2)

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Indian Standard

SPECIFICATION FOR TRUNKS, STEEL, DOMESTIC

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 26 November 1973, after the draft finalized by the Domestic Hardware Sectional Committee had been approved by the Consumer Products and Medical Instruments Division Council.

0.2 In the preparation of this standard, assistance has been derived from Export Inspection Council specification for 'Steel Trunk' (Notification SO : 4454 Gazette of India Extraordinary 14 December 1967, Part II — Section 3).

0.3 In this standard, emphasis has been laid on the proper type of material to be used and good workmanship keeping in view the users acceptability as well as implementability of the standard. Though the users are free to have the sizes and dimensions of their choice, a few sizes have been given for the purpose of their guidance.

0.4 This standard is one of a series of Indian Standard specifications on domestic hardware.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard lays down the requirements for domestic steel trunks.

2. TERMINOLOGY

2.0 For the purpose of this standard, following definition shall apply.

*Rules for rounding off numerical values (*revised*).

IS : 7257 - 1973

2.1 Steel Trunk — Any box made of galvanized steel or black steel sheets and provided with a lid and handles.

3. CLASSIFICATION

3.1 The steel trunks shall be classified in three sizes as given below:

Size	
I	Large (big steel trunks)
II	Medium (trunks)
III	Small (suitcases)

4. MATERIALS

4.1 The various components of steel trunk shall be made from the following materials:

Component	Material	Conforming to
Body and lid	Galvanized steel sheet (plain) or Cold rolled carbon steel (black steel) sheet	Class 3 of IS : 277- 1969* Type D of IS : 513- 1973†
Hinges (cranked)	Mild steel	IS : 1341-1970‡ or IS : 206-1962§
Hasps and staples	Mild steel or brass	IS : 363-1970
Handles	Cold rolled steel sheet or M. S. bar of minimum 8 mm diameter	Shall satisfy the re- quirements given in 8.1 and 8.2
Stiffeners, strips and wires	Mild steel	Shall satisfy the re- quirements given in 8.1
Rivets	Mild steel wire	IS : 866-1957¶

5. DIMENSIONS

5.1 Nominal dimensions of trunks shall be according to Table 1.

*Specification for galvanized steel sheets (plain and corrugated) (second revision).

†Specification for cold rolled carbon steel sheets (second revision).

‡Specification for steel butt hinges (second revision).

§Specification for tee and strap hinges (revised).

||Specification for hasps and staples (second revision).

¶Specification for tinmen's rivets.

TABLE 1 DIMENSIONS OF STEEL TRUNKS

(Clause 5.1)

All dimensions in millimetres

TRUNK SIZE	NOMINAL DIMENSIONS			SHEET THICKNESS, <i>Min</i>	
	Length	Width	Height	Cold-Rolled Carbon Steel Sheet	Galvanized Steel Sheet
(1)	(2)	(3)	(4)	(5)	(6)
I Large (big steel trunks)	1 200	710	710	0·80	0·80
	1 000	650	600	0·80	0·80
II Medium (trunks)	800	500	310	0·63	0·63
III Small (suitcases)	600	400	300	0·50	0·63
	500	300	200	0·50	0·63
	450	300	200	0·50	0·63

5.2 The trunks may have dimensions other than those given in this standard subject to agreement between the manufacturer and the purchaser.

6. MANUFACTURE

6.1 Suitable stiffeners shall be provided wherever required to make the body strong and rigid. The rim of the lid shall be uniformly beaded and suitably stiffened with mild steel wire. The lid shall be flush and fit free on the joggled top end of the body.

6.2 The lid of steel trunk shall be so fixed that when fully-opened it shall not fall of its own weight, unless pulled and closed in position.

6.3 The handle with its fittings and attachments shall be strong and shall not yield under normal usage. Large trunks shall be provided with two handles on each side. They shall be symmetrically located from the vertical edge. Medium trunks and small trunks shall have one handle at each of the two sides and the front and they shall have only formed handle in the front. The handles shall be centrally located. The front handle shall be fixed in such a manner that it shall not interfere with the lock while lifting or pulling the trunk. The side handles shall be fixed such that they shall open for not more than 100° in order to avoid pinching of the fingers between handle and side while lifting the loaded trunk. The clearance between body of trunk and inner face of handle shall be ample enough to facilitate gripping.

6.4 Hinges, hasps and staples may have designs different than those given in their specifications mentioned in **4.1** but for all other requirements they shall adhere to their respective specifications.

6.5 Large trunks shall be provided with two sets of hasps and staples in the front, while medium and small trunks may have one or two sets of hasps and staples depending upon choice of the purchaser. Minimum number of hinges for large trunks shall be three while for all other types two hinges shall be provided.

6.6 In order to avoid full ground contact, large trunks shall be provided with stiffeners at the bottom (outside), while medium and small trunks shall have one protrusion near each of the four bottom corners. The lid of the trunks may also have formed ribs, if desired by the purchaser.

6.7 Certain other provisions such as inside pockets or locks in the trunks and suitcases, and alternative arrangements other than those specified in **6.5** and **6.6** may also be made as per agreement between the manufacturer and the purchaser.

7. WORKMANSHIP AND FINISH

7.1 Steel trunks shall be finished smooth, without any sharp edges, burrs, dents or other constructional defects. They shall be sufficiently strong and rigid so as not to buckle or yield under normal usage.

7.2 Except galvanized steel trunks, all other steel trunks shall be painted inside as well as outside according to IS : 2074-1962* and IS : 2933-1964† in various colours as required by the purchaser. Prior to painting, they shall be properly cleaned and degreased, then one coating of primer, one coating of undercoat and two finish coatings shall be given by brushing or spraying with subsequent air drying with every coat. The resulting finish shall be able to satisfy the test requirements laid down in the specifications mentioned above.

8. TESTS

8.1 Mild steel wires, bars and strips used in the manufacture of trunks shall satisfy the following bend test.

8.1.1 The material when cold shall withstand without developing cracks, being doubled over either by pressure or by blows from hammer, until the internal radius is equal to the diameter or thickness of the material and the sides are parallel.

*Specification for ready mixed paint, red oxide-zinc chrome, priming.

†Specification for enamel, exterior, Type 2, (a) undercoating, (b) finishing, colour as required.

8.2 Handle Test — The handles shall be tested to withstand a total load to be calculated at the rate of 0.53 kg/dm^3 of the outside volume of trunk.

8.3 Test for Soundness of the Joints

8.3.1 Drop Test for Medium and Small Trunks — The trunk shall be dropped from a height of 120 cm, once on the largest flat surface, once on longest edge and once on any corner of its own. The trunk shall not be damaged after the test.

8.3.2 Rolling Test for Large Trunks — The trunk shall be subjected to rolling on its sides either 6 metres forward and 6 metres backward or 12 metres in one direction only. The trunk shall not be damaged after the test.

9. SAMPLING

9.1 Sampling procedure and acceptance criteria for steel trunks shall be as agreed to between the purchaser and the supplier. A recommended scheme for the same is given in Appendix A.

10. MARKING

10.1 Each trunk shall be legibly stamped on the vertical side with the manufacturer's name, recognized trade-mark and any other information desired by the purchaser.

10.1.1 The product may also be marked with Standard mark.

10.2 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

11. PACKING

11.1 Packing shall be done as per agreement between the purchaser and the supplier.

APPENDIX A

(Clause 9.1)

SAMPLING SCHEME AND CRITERIA FOR CONFORMITY FOR DOMESTIC STEEL TRUNKS

A-1. SAMPLING

A-1.1 Lot — In any consignment all the trunks of the same type, size and manufactured from the same material under essentially similar conditions of manufacture shall be grouped together to constitute a lot.

IS: 7257 - 1973

A-1.1.1 For ascertaining the conformity of a lot to the requirements of this standard, the sample of trunks shall be selected and tested separately for each lot.

A-1.2 The number of trunks to be selected at random from a lot shall depend upon the size of the lot and shall be in accordance with col 1 and 2 of Table 2.

TABLE 2 SAMPLE SIZE AND CRITERIA FOR CONFORMITY

Lot Size (No. of Trunks in the Lot)	For Dimensions, Materials and Workmanship		For Handle Test and the Test for Soundness of Joints	
	Sample Size	Permissible No. of Defectives	Sub-sample Size	Permissible No. of Defectives
(1)	(2)	(3)	(4)	(5)
Up to 100	8	0	2	0
101 to 150	13	1	2	0
151 „ 300	20	2	3	0
301 „ 500	32	3	5	0
501 „ 1 000	50	5	8	0
1 001 and above	80	7	13	1

A-1.2.1 The trunks in the sample shall be selected at random from the lot and in order to ensure the randomness of selection, procedures laid down in IS : 4905-1968* may be followed.

A-1.3 Number of Tests and Criteria for Conformity

A-1.3.1 *For Dimensions, Material and Workmanship* — The trunks selected according to **A-1.2** and **A-1.2.1** shall be inspected for dimensions, material and workmanship. The lot shall be considered as conforming to these requirements if the number of trunks failing in any one or more of the requirements does not exceed the permissible number of defective trunks given in col 3 of Table 2.

A-1.3.2 *For Handle Test and Soundness of Joints Test* — The lot having been found conforming under **A-1.3.1** shall be inspected for handle test and soundness of joint test. For this purpose a number of trunks in accordance with col 4 of Table 2 shall be selected at random from those inspected and found conforming under **A-1.3.1**, and subjected to the handle test and the soundness of joints test. The lot shall be considered as conforming to the requirements of these tests if the number of trunks failing in any one or more of the tests does not exceed the permissible number given in col 5 of Table 2.

*Methods for random sampling.

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TO
IS 7257 : 1973 SPECIFICATION FOR TRUNKS, STEEL,
DOMESTIC

(Page 5, Table 1, col 5 and 6) — Substitute 'Nominal' for 'Min'.

(Page 5, clause 5.1) — Insert the following new clause after 5.1:

'5.1.1 The following tolerances shall apply to the dimensions given in Table 1:

	<u>Tolerance</u>
i) Length and width for all sizes	± 5 mm
ii) Height { Size I	± 2 percent
Size II	± 3 percent
Size III	± 3 percent
iii) Sheet thickness	± 10 percent

(MTD 31)

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