

SPECIFICATION FOR PLYWOOD TEA CHESTS

SLS 378:1976
(Incorporating AMD 49)

(Attached AMD 135 and AMD 191)

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BUREAU OF CEYLON STANDARDS

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Sri Lanka.

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This Standard does not purport to include all the necessary provisions of a contract.

SRI LANKA STANDARD SPECIFICATION FOR PLYWOOD TEA CHESTS

FOREWORD

This Sri Lanka Standard has been prepared by the Drafting Committee of the Bureau on Tea Chests. It was approved by the Civil Engineering Divisional Committee of the Bureau of Ceylon Standards and was authorized for adoption and publication by the Council of the Bureau on 18th March 1976.

The purpose of this standard is to rationalize the sizes of tea chests in metric units and to ensure the quality of assembly and controlled packing of tea. A test to determine the optimum quantity of tea that could be packed in a chest is given in Appendix D. (Assistance given by the Sri Lanka Tea Research Institute in devising this test method is gratefully acknowledged). Requirements for 12-batten type tea chests and 8-batten type tea chests are specified in Parts 1 and 2 respectively of this standard.

It is expected that the industry would change over to the metric dimensions specified in this standard at an appropriate date to be notified by the authorities. Until such time the dimensions given in Appendix E shall apply.

Reference is made herein to the following standards:

- a) CS 102 Presentation of numerical values
- b) CS 108 Components for plywood tea chests (Metric units)
- c) CS 109 Metal fittings for plywood tea chests (Metric units)
- d) CS 116 Principles of conversion
- e) CS 120 Aluminium foils and linings

The International System of Units has been used to specify all standard values. Where necessary equivalent imperial values are given within parenthesis. These equivalent values have been calculated in accordance with CS 116:1971.

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 observation shall be rounded off in accordance with CS 102. The number of figures to be retained in the rounded off value shall be the same as that of the specified value in this standard.

PART 1 - 12-BATTEN TYPE TEA CHESTS

1.1 SCOPE

This part of the standard covers the requirements of components and assembly of 12-batten type plywood tea chests. Requirements of packing tea in tea chests are also covered in this specification.

1.2 TERMINOLOGY

For the purpose of this part of the standard, definitions given in CS 108 shall apply.

1.3 SIZES

Tea chests shall be of two sizes having the following outside dimensions:

- a) 600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in)
- b) 600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)

1.4 COMPONENTS AND FITTINGS

1.4.1 Plywood and battens

Plywood and battens used for the assembly of tea chests shall comply with the requirements given in CS 108.

1.4.2 Metal fittings

Metal fittings used in the assembly of tea chests shall conform to the requirements given in SIS 109.

1.4.3 Aluminium foils

Aluminium foils of 0.020 mm (0.0008 in) minimum thickness conforming to the requirements given in CS 120 backed with tissue paper shall be used as a lining.

1.5 ASSEMBLY

Tea chests of the 12-batten type shall be constructed as in Figures 1 and 2 (See page 8) using the components and accessories specified in Table 1. Guide lines for assembly are given in Appendix A.

Fig. 1 a

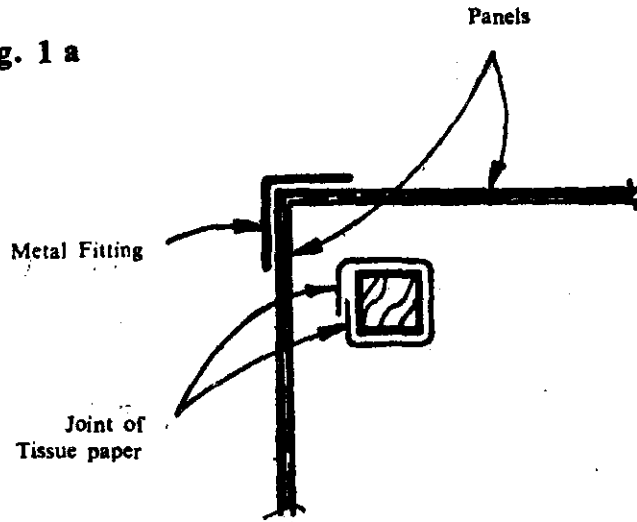


Fig. 1 b

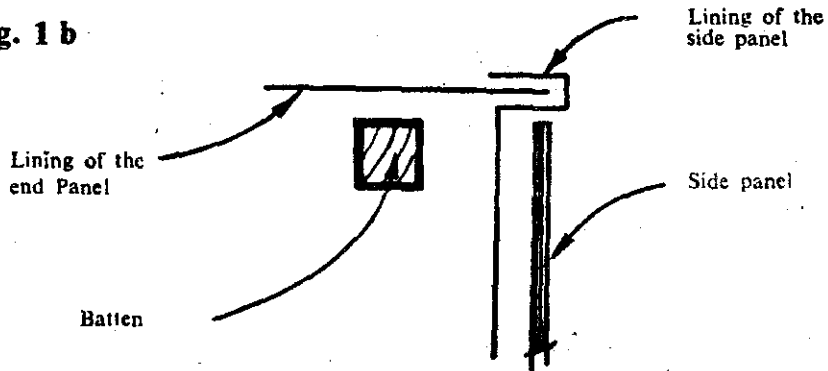


Fig. 1 c

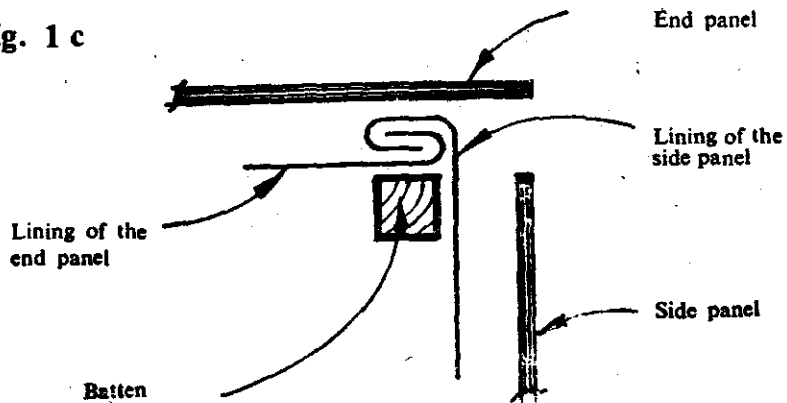


FIGURE 1 - Preliminary stages of assembly of a tea chest (12-batten or 8-batten types)

TABLE 1 - Components of tea chests 12-batten type

Parts	Location	Chest size 600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)	Chest size 600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in)
1 Plyboards	Side	4 panels 590 mm x 395 mm (23.2 in x 15.6 in)	2 panels 590 mm x 495 mm (23.2 in x 19.5 in) 2 panels 590 mm x 395 mm (23.2 in x 15.6 in)
	Top and bottom	2 panels 400 mm x 400 mm (15.7 in x 15.7 in)	2 panels 500 mm x 400 mm (19.7 in x 15.7 in)
2 (a) Battens (with mitred ends)	Top and bottom	8 pieces 390 mm x 21 mm x 21 mm (15.4 in x 0.8 in x 0.8 in)	4 pieces 390 mm x 21 mm x 21 mm (15.4 in x 0.8 in x 0.8 in) 4 pieces 490 mm x 21 mm x 21 mm (19.3 in x 0.8 in x 0.8 in)
	(b) Battens (with square ends) Corners	4 pieces 548 mm x 21 mm x 21 mm (21.6 in x 0.8 in x 0.8 in)	4 pieces 548 mm x 21 mm x 21 mm (21.6 in x 0.8 in x 0.8 in)
3 Batten covers (tissue paper)	Top and bottom	8 pieces 400 mm x 100 mm (15.7 in x 3.9 in)	4 pieces 400 mm x 100 mm (15.7 in x 3.9 in) 4 pieces 500 mm x 100 mm (19.7 in x 3.9 in)
	Corners	4 pieces 585 mm x 100 mm (23.0 in x 3.9 in)	4 pieces 585 mm x 100 mm (23.0 in x 3.9 in)
4 Linings (Aluminium foil 0.020 mm (0.0008 in) minimum thickness, backed with tissue paper)	Top and bottom	2 sheets 425 mm x 425 mm (16.7 in x 16.7 in)	2 sheets 425 mm x 525 mm (16.7 in x 20.7 in)
	Side	4 sheets 650 mm x 410 mm (25.6 in x 16.1 in)*	2 sheets 650 mm x 410 mm (25.6 in x 16.1 in)* 2 sheets 650 mm x 510 mm (25.6 in x 20.1 in)*

* To be cut from larger sheets available in sizes 1650 mm x 650 mm (65.0 in x 25.6 in) and 1850 mm x 650 mm (72.8 in x 25.6 in)

Table 1 Continued

Parts	Location	Chest size 600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)	Chest size 600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in)
5 Metal strips**	Corners	3 flat strips 575 mm x 50 mm (22.6 in x 2.0 in) 1 angled strip 575 mm x 50 mm (22.6 in x 2.0 in)	3 flat strips 575 mm x 50 mm (22.6 in x 2.0 in) 1 angled strip 575 mm x 50 mm (22.6 in x 2.0 in)
	Top and bottom	8 angled and V-notched strips 415 mm x 38 mm (16.3 in x 1.5 in)	4 angled and V-notched strips 465 mm x 38 mm (18.3 in x 1.5 in) 4 angled and reverse notched strips 465 mm x 38 mm (18.3 in x 1.5 in)
6 (a) 25 mm nails ⁺	Battens ^{††}	3 per batten = 36	3 per batten = 36
	Corner metals	9 per edge = 72	9 per edge = 72
	Top and bottom metals	7 per side edge = 56	9 per 500 mm edge and 7 per 400 mm edge = 64
(b) Tenterhooks	Top and bottom metals	5 per edge = 40	7 per 500 mm edge and 5 per 400 mm edge = 48
(c) 30 mm nails [†]	Top and bottom metals	2 per side edge at corner = 16	2 per side edge at corner = 16

** These shall conform to the requirements in CS 109:1971 - Specification for metal fittings for tea chests (Metric units).

+ All wire nails shall be of shank diameter 2.00 mm (0.079 in)

†† For nailing of battens to panels prior to assembly with metal strips (see assembly instruction in Appendix A.

NOTES

1 Thickness of plywood panels shall be not less than 4 mm (0.16 in).

2 Tolerance on dimensions of panels shall be ± 1.5 mm (±0.06 in).

3 Tolerance on dimensions of battens (length, width or thickness) shall be ± 1.5 mm (0.06 in).

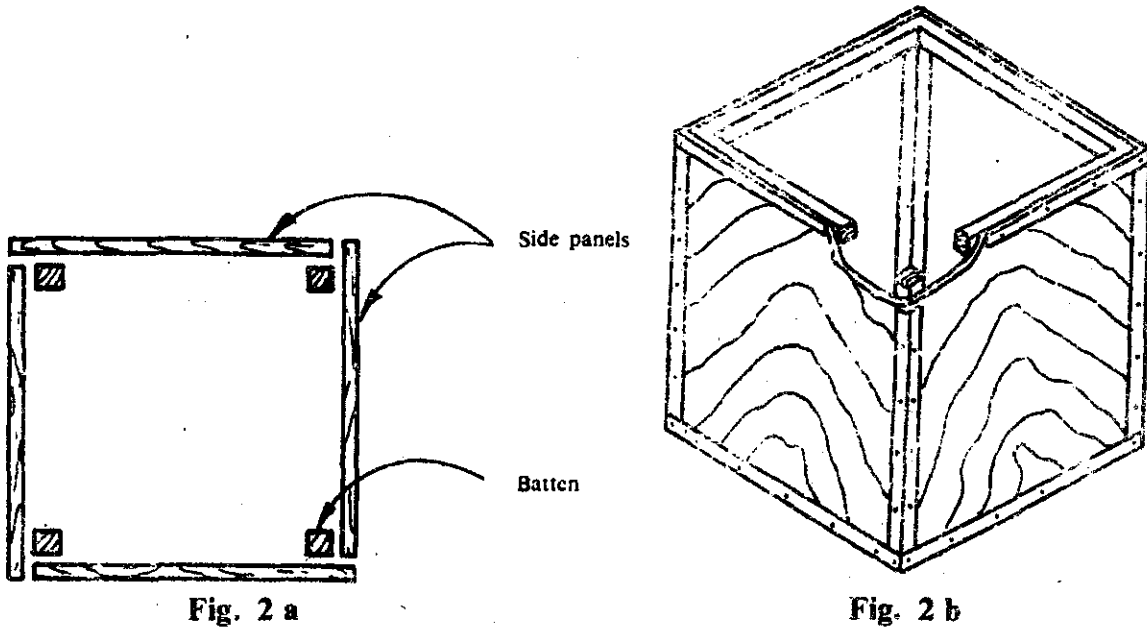


FIGURE 2 - Assembly of a 12-batten type chest

1.6 TARE

The mass of an empty chest shall not be more than the value given below:

Type	Size	Mass
12-batten	600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in)	8 kg (18 lb)
12-batten	600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)	7 kg (15 lb)

1.7 BURST STRENGTH

Tea chests shall pass the test given in Appendix C.

1.8 PACKING OF TEA

The net mass of the tea packed in a chest shall not exceed by 5 per cent, the theoretical mass determined by any one of the methods given in Appendix D.

1.9 SAMPLING

1.9.1 Definition

1.9.1.1 lot : In any consignment, all the tea chests of the same type and size belonging to the same manufacturer/shipper shall constitute a lot.

1.9.1.2 defective chest : A tea chest failing to conform to any one or more requirements of this standard is considered as a defective chest.

1.9.1.3 selection : Tea chests to be examined for conformity to this standard shall be selected at random in accordance with Table 2. To ensure randomness in selection a random number table shall be used if available, otherwise the method of random selection shall be as agreed upon by the examiner/purchaser and shipper/manufacturer.

1.9.1.4 criterion for conformity : If the number of defective chests in the sample is less than or equal to the corresponding permissible number of defectives given in Column 3 of Table 2 the lot shall be considered as conforming to the requirements of this standard; otherwise not.

TABLE 2 - Scale of sampling

No. of chests in the lot (1)	No. of chests to be tested (2)	Permissible number of defects in sample (3)
1 - 20	all	0
21 - 50	17	0
51 - 100	20	0
101 - 800	23	0
More than 800	39	1

PART 2 - 8-BATTEN TYPE TEA CHESTS

2.1 SCOPE

This part of the standard covers the requirements of components and assembly of 8-batten type plywood tea chests. Requirements of packing tea in tea chests are also covered in this specification.

2.2 TERMINOLOGY

For the purpose of this part of the standard definitions given in CS 108 shall apply.

2.3 SIZES

Tea chests shall be of two sizes having the following outside dimensions.

- a) 600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in)
- b) 600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)

2.4 COMPONENTS AND FITTINGS

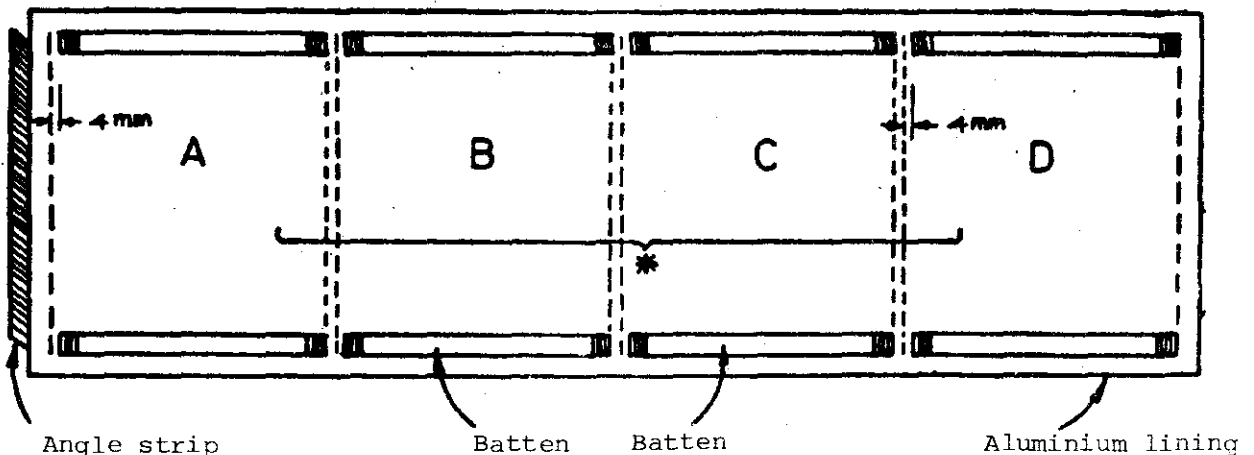
2.4.1 Plywood and battens used for the assembly of tea chests shall comply with the requirements given in CS 108.

2.4.2 Metal fittings used in the assembly of tea chests shall conform to the requirements given in SLS 109.

2.4.3 Aluminium foils of 0.020 mm (0.0008 in) minimum thickness conforming to the requirements given in CS 120 backed with tissue paper shall be used as a lining.

2.5 ASSEMBLY

Tea chests of the 8-batten type shall be constructed as in Figs. 1 and 3 (See pages 5, 10 and 11) using the components and accessories specified in Table 3. The guide lines for assembly are given in Appendix B.



* Aluminium lining

Fig. 3 a

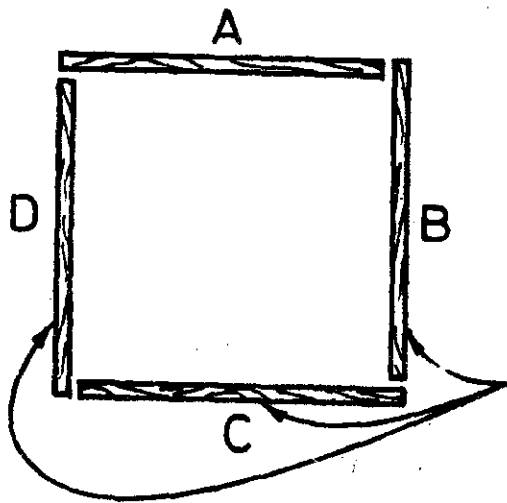


Fig. 3 b

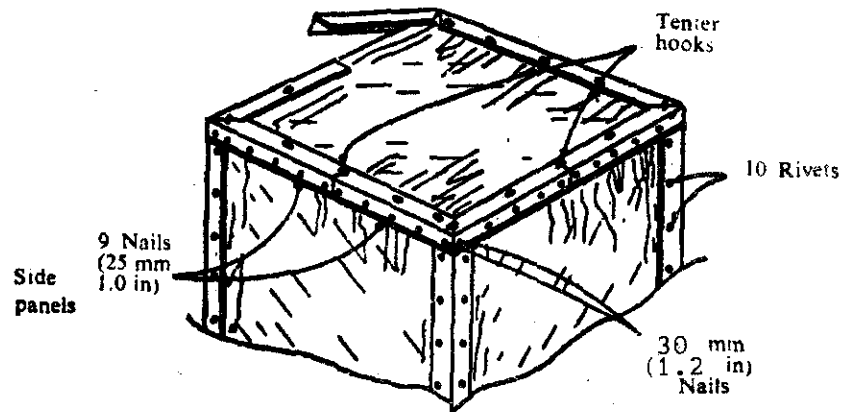


Fig. 3 c

Full size chest

FIGURE 3 - Assembly of a 8-batten type chest

2.6 TARE

The mass of an empty chest shall not be more than the value given below:

Type	Size	Mass
8-batten	600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in)	7 kg (15 lb)
8-batten	600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)	6 kg (13 lb)

2.7 BURST STRENGTH

Tea chests shall pass the test given in Appendix C.

2.8 PACKING OF TEA

The net mass of tea packed in a chest shall not exceed by 5 per cent the theoretical mass determined by any one of the methods given in Appendix D.

2.9 SAMPLING

The method of selection of samples and the criterion for conformity to the standard shall be as specified in 1.9.

TABLE 3 - COMPONENTS OF TEA CHESTS 8-BATTEN TYPE

Parts	Location	Chest size 600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)	Chest size 600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in)
1 Plyboards	Side	4 panels 590 mm x 395 mm (23.2 in x 15.6 in)	2 panels 590 mm x 495 mm (23.2 in x 19.5 in)
	Top and bottom	2 panels 400 mm x 400 mm (15.7 in x 15.7 in)	2 panels 590 mm x 395 mm (23.2 in x 15.6 in) 2 panels 500 mm x 400 mm (19.7 in x 15.7 in)
2 Battens	Top and bottom	8 pieces 390 mm x 21 mm x 21 mm (15.4 in x 0.8 in x 0.8 in)	4 pieces 390 mm x 21 mm x 21 mm (15.4 in x 0.8 in x 0.8 in)
			4 pieces 490 mm x 21 mm x 21 mm (19.3 in x 0.8 in x 0.8 in)
3 Batten covers (tissue paper)	Top and bottom	8 pieces 400 mm x 100 mm (15.7 in x 3.9 in)	4 pieces 400 mm x 100 mm (15.7 in x 3.9 in)
			4 pieces 500 mm x 100 mm (19.7 mm x 3.9 in)
4 Linings (Aluminium foil 0.020 mm (0.0008 in) minimum thickness, backed with tissue paper)	Side	1 sheet 1650 mm x 650 mm (65.0 in x 25.6 in)	1 sheet 1850 mm x 650 mm (72.8 in x 25.6 in)
	Top and bottom	2 sheets 425 mm x 425 mm (16.7 in x 16.7 in)	2 sheets 425 mm x 525 mm (16.7 in x 20.7 in)

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(Table 3 Continued)

5	Fittings*			
	(a) metal strips	Corners	3 flat strips 575 mm x 50 mm (22.6 in x 2.0 in) 1 angled strip 575 mm x 50 mm (22.6 in x 2.0 in)	3 flat strips 575 mm x 50 mm (22.6 in x 2.0 in) 1 angled strip 575 mm x 50 mm (22.6 in x 2.0 in)
		Top and bottom	8 angled and V notched strips 415 mm x 38 mm (16.3 in x 1.5 in)	4 angled and V-notched strips 465 mm x 38 mm (18.3 in x 1.5 in) 4 angled and reverse notched strips 465 mm x 38 mm (18.3 in x 1.5 in)
	(b) Rivets	Corner metals	10 per edge = 80	10 per edge = 80
	(c) 25 mm nails	Top and bottom metals	7 per side edge = 56	9 per 500 mm edge and 7 per 400 mm edge = 64
	(d) Tenterhooks	Top and bottom metals	5 per edge = 40	7 per 500 mm edge and 7 per 400 mm edge = 48
	(e) 30 mm nails	Top and bottom metals	2 per side edge at corner = 16	2 per side edge at corner = 16
		Battens**	2 per batten = 16	2 per small batten and 3 per large batten = 20

* These metal fittings shall comply with the requirements given in CS 109. Metal fittings for plywood tea chests.

** For nailing of battens to panels prior to assembly with metal strips (see assembly instructions in Appendix B). Tenter-hooks shall be 25 mm (1.00 in) in height and 2.34 mm (0.092 in, 13 SWG) in diameter. All nails shall be of shank diameter 2.00 mm (0.079 in).

Rivets to be 7.94 mm (0.313 in) No. 9 Bifurcated ordinary oval head, plain steel.

NOTES

1 Thickness of plywood panels shall be not less than 4 mm (0.16 in).

2 Tolerance on dimensions of panels shall be ± 1.5 mm (± 0.06 in).

3 Tolerance on dimensions of battens (length, width or thickness) shall be ± 1.5 mm (0.06 in).

APPENDIX A

METHOD OF ASSEMBLY OF A 12-BATTEN TYPE TEA CHEST

A.1 JIG AND TABLE

A jig shown in Fig. 4 and a table with a vertical wooden plank fixed along one edge of the table-top are required for the assembly of a 12-batten chest. (Instead of the one described above a table placed against a wall or other rigid vertical support could be used). The jig should have six wooden battens fixed on to a plank in the manner shown in Fig. 4. The gaps between the battens marked *A*, *B*, and *C*, should be just spacious enough to hold three tea chest battens as follows:

- a) Two battens with mitred ends along *A* and *B* with one end of each batten in contact with the batten *D* of the jig and with the slanting side facing downwards; and
- b) One batten with square ends along *C* with the ends in contact with the two mitred battens already placed along *A* and *B*.

The top of the table should be about 0.7 m x 0.7 m (2.3 ft x 2.3 ft).

A.2 PROCEDURE

The battens shall be wrapped in tissue paper ensuring that the joint of the tissue lies on the face of the batten which comes in contact with a panel. (See Fig. 1a on page 5).

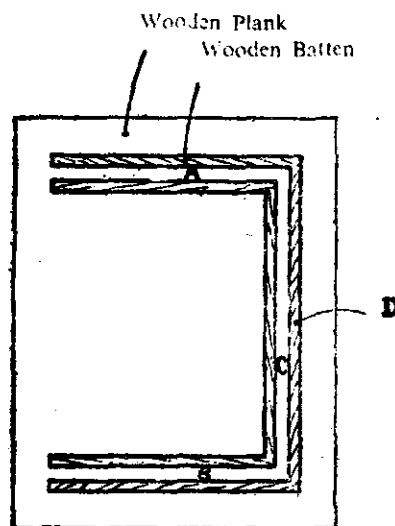


FIGURE 4 - Jig for assembly of a 12-batten type chest

Two mitred battens and a square end batten (wrapped in tissue paper) are placed on the jig as described in A.1 above.

A piece of lining is now placed on the battens, with the tissue paper facing the battens and the aluminium foil facing upwards. A side panel is placed over the lining in such a way that the two shorter edges and one long edge of the panel coincides with the outer edges of the battens.

The two mitred battens are nailed to the side panel. Three nails per batten shall be used.

NOTE - 25 mm (1.0 in) wire nails should be used for fixing battens and metal strips to plywood panels. 30 mm (1.2 in) wire nails are only used at the corners of tea chests for nailing adjacent battens together. (See also Table 1).

A flat corner metal strip shall be nailed to the vertical edge of the panel, with half the metal strip in contact, using 9 wire nails.

All four side panels are fixed with the appropriate battens, linings and the corner metal strip in the same manner (The fourth panel should be fixed with an angular corner metal strip).

A side panel is now placed on the table in such a manner that the vertical edge of the panel without the metal strip, of another appropriate panel is next placed along the metal strip of the first panel and held perpendicular to the first panel. The protruding half of the metal strip of the first panel should be folded and nailed against the edge of the second panel using 9 wire nails.

Now the above structure is placed on the table in such a way that the first panel will lie against the vertical plank and the second side along the table top. Third panel is nailed to the metal strip of the second panel in the same manner described above.

Keeping the above structure in the same position the fourth panel is placed on the edges of the first and the third panels. The protruding portion of the metal strip of the third panel should be nailed against the fourth panel and that of the fourth panel nailed to the first panel thus completing the four side panels of the chest.

The piece of lining at the bottom is placed on one of the open ends of the above structure and folded with the protruding edges of the linings of the walls as shown in Figs. 1b and 1c. One of the end panels shall be now placed flushed with the lining and to rest exactly on the edges of the side panels. Four V notched angle strips should be bent at 90° at the notches and be placed properly along the edges of the panels so that the two flaps of the strips will lie flush against the end and the side panels respectively.

These strips shall be nailed to the panels (and the battens too) using 9 wire nails on each side of each batten. In addition 30 mm (1.2 in) wire nails should be driven across adjacent battens at the 4 corners. After filling the chest with tea the top panel should be fixed in the same manner described above.

APPENDIX B

METHOD OF ASSEMBLY OF A 8-BATTEN TYPE TEA CHEST

B.1 The side panels are placed at least 4 mm (0.16 in) apart and joined together with metal edgings, three of which are supplied flat and one angular. The flat metal strips are placed evenly distributed over the two adjacent panels, and riveted in position. The angular metal strip is riveted to the edge of the fourth panel.

B.2 These joined panels are turned over and a long sheet of aluminium lining is placed in position so as to over-lay equally on both ends and sides. A sheet of tissue paper is placed over this. Eight battens are then wrapped with tissue paper in the manner shown in Fig. 1a taking care to have the batten cover joint between the batten and the plywood panel. One mitred edge of each batten should be flush with the right edge of the panel as per Fig. 3a, while the other end of the batten falls 4 mm (0.16 in) short of the left edge of the same panel. The battens should be placed with the longer side flush with the panel. These battens are then nailed and the joined panels are then folded so that the relevant positions of the folded panels are as per Fig.3b. Overlap of lining at the final joint should be double folded under the metal edging. This joint is made between boards A and D by riveting the angular strip.

B.3 The bottom is now covered with a sheet of metal lining and tissue paper the edges of which are folded as in Figs. 1b and 1c. The bottom board is then placed in position and the V-notched metal strips fitted. Where the strips overlap one tenterhook should be driven through the board into the batten beneath. The other four tenterhooks are equally spaced.

B.4 Each strip is then secured to the side of the chest by driving 25 mm (1.0 in) nails through the metal and board into the batten. Two nails, 30 mm (1.2 in) should be driven in at each corner so as to hold securely the 2 battens together. After filling the chest with tea, the top panel is fixed and secured in the same way.

APPENDIX C

BURST STRENGTH TEST (CORNER DROP TEST)

C.1 TEST SAMPLES

Five tea chests shall be selected at random for this test from the sample drawn in accordance with 1.9. The chests should be assembled in accordance with 1.5 and Appendix A or Appendix B.

C.2 PROCEDURE

The tea chests shall be fully packed with dry saw dust equal to 50 kg in the case of chests of size 600 mm x 500 mm x 400 mm (23.6 in x 19.7 in x 15.7 in) and 40 kg in the case of chests of size 600 mm x 400 mm x 400 mm (23.6 in x 15.7 in x 15.7 in)

The sides of each tea chest is marked 1,2,3... in the clockwise order, the top face being marked '5' and the bottom face '6'. The loaded and marked tea chest is suspended on a suitable hoisting device at a pair of diagonally opposite corners and dropped on a cast iron plate or a heavy concrete block on each of the 8 corners in turn in the following order from a constant height of 600 mm (23.6 in).

Drop No.	Corner where faces meet
1	5 - 1 - 2
2	6 - 3 - 4
3	5 - 2 - 3
4	6 - 4 - 1
5	5 - 3 - 4
6	6 - 1 - 2
7	5 - 4 - 1
8	6 - 2 - 3

The drop shall be freely under gravity.

C.3 RESULT

A tea chest will be considered to have passed the test.

- a) If there is no split or crack in any panel to render the contents exposed, and
- b) If there is no tearing of any metal strip.

APPENDIX D

BULK DENSITY TEST

D.1 TEST SAMPLE

A representative sample of tea to be packed and weighing about 50 g.

D.2 DETERMINATION OF BULK DENSITY OF TEA USING A SIEVE SHAKER

D.2.1 Apparatus

- a) *Laboratory sieve-shaker*
- b) *Measuring cylinder, capacity 250 ml.*

D.2.2 Procedure

Place the measuring cylinder on the platform of the sieve shaker and clamp tightly to one of the vertical bars using a ring clasper, so that when the sieve-shaker is switched on the cylinder does not rotate relative to the sieve-shaker. Weigh to the nearest 0.5 g about 50 g of the made tea sample and transfer it into a cylinder while it is vibrating. The tea inside the cylinder should have a circular as well as a vibratory vertical motion. This could be achieved by proper clamping. Run the sieve-shaker for five minutes from the time of transfer of tea into the cylinder. Stop the sieve-shaker, remove the cylinder and note the volume.

D.3 DETERMINATION OF BULK DENSITY OF TEA USING AN ESTATE VIBRATORY TEA PACKER

D.3.1 Apparatus

- a) *Estate vibratory tea packer, working at about 1000 rpm.*
- b) *Measuring cylinder, capacity 250 ml*
- c) *Funnel, diameter about 80 mm*
- d) *T-piece constructed of copper wire (diameter about 2 mm), so that the horizontal piece is longer than the diameter of the funnel and the vertical piece is longer than the height of the funnel.*

D.3.2 Procedure

Place the measuring cylinder on the platform of the Vibratory tea packer, centrally so that one of the edges of the base of the cylinder is flush with the front edge of the platform. Maintain the cylinder in position by holding it gently by hand. Place the T-piece on the funnel so that the vertical portion passes through the funnel tube and the horizontal portion rests on the rim of the funnel. Place the funnel with the T-piece on the cylinder so that the funnel tube is inside the cylinder and the tapering portion rests on the rim of the cylinder (see Fig. 5).

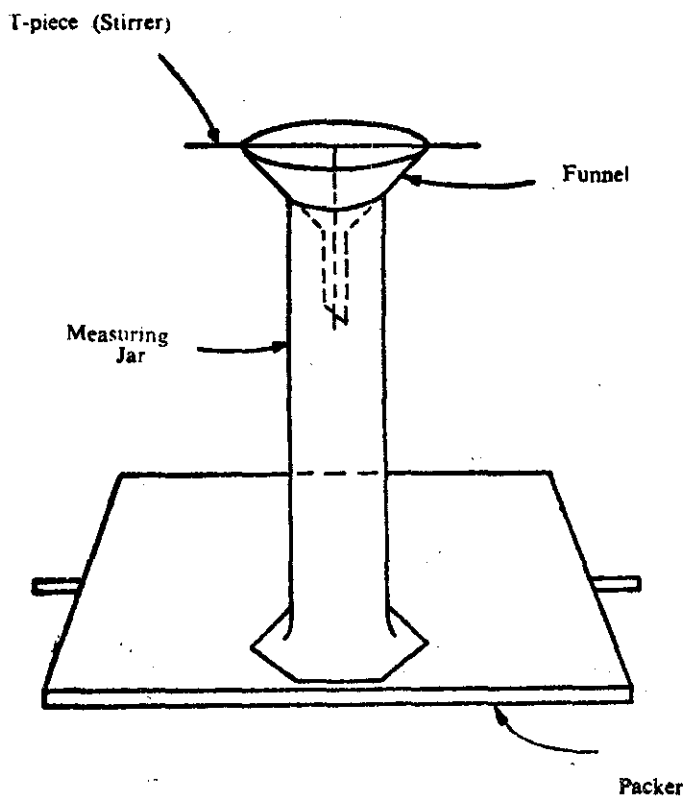


FIGURE 5 - Bulk density test using an estate vibratory tea packer

Weigh to the nearest 0.5 g about 50 g of the made tea sample and transfer it into the cylinder, through the funnel, while it is vibrating. The vibrating T-piece would ensure that the tea falls into the cylinder at a uniform rate. Vibrate the cylinder for 10 minutes from the time of transfer of tea into the cylinder. Remove the cylinder and note the volume.

D.4 EXPRESSION OF RESULTS

Bulk density d , in grams per millilitre

$$= \frac{\text{Mass, in grams, of sample}}{\text{Volume, in millilitres}}$$

D.5 CALCULATION OF THEORETICAL MASS OF TEA THAT SHOULD BE PACKED IN CHEST

Using the bulk density value as obtained from the above result the theoretical mass can be calculated as follows:

Let the volume of chest = V ml

Therefore, the theoretical mass in grams of tea

that should be packed in chest = $d \times v$

APPENDIX E

Presently existing imperial sizes of tea chests have the following outside dimensions:

- a) 24 in x 20 in x 16 in (known as full chests in the tea trade)
- b) 24 in x 16 in x 16 in (known as half chests in the tea trade)

The dimensions of plywood panels and battens that should be used for the above sizes of tea chests are as follows:

Parts	Location	Chest size	
		24 in x 20 in x 16 in	24 in x 16 in x 16 in
1 Panels	Side	2 panels 23 5/8 in x 19 13/16 in	4 panels 23 5/8 in x 15 13/16 in
	Top and bottom	2 panels 23 5/8 in x 15 13/16 in	2 panels 16 in x 16 in
2 (a) Battens (with mitred ends)	Top and bottom	4 pieces 15 5/8 in x 13/16 in x 13/16 in	8 pieces 15 5/8 x 13/16 in x 13/16 in
		4 pieces 19 5/8 in x 13/16 in x 13/16 in	
(b) Battens* corners (with square ends)		4 pieces 22 in x 13/16 in x 13/16 in	4 pieces 22 in x 13/16 in x 13/16 in

*These battens are required only for chests of 12 batten type.

AMENDMENT NO. 02 APPROVED ON 1990-09-24

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PAGE 4

Clause 1.4.3

Substitute the existing clause with the following:

"1.4.3 Lining materials

Lining material used in tea chests shall be as specified in 1.4.3.1 or 1.4.3.2.

1.4.3.1 Aluminium foil with tissue paper

Aluminium foil of 0.020 mm minimum thickness, conforming to the requirements given in CS 120, backed with tissue paper.

1.4.3.2 Laminated aluminium foil

Aluminium foil of 0.09 mm minimum thickness, conforming to the requirements given in CS 102, laminated with tissue paper having a grammage of 20 g/m² to 30 g/m². The bonding material used for lamination shall be free from any taint or odour which could be transmitted to the tea and shall be free from chlorophenol or its derivatives."

AMENDMENT NO. 03 APPROVED ON 1995-08-24

TO SLA 378 : 1976 SPECIFICATION FOR PLYWOOD TEA CHESTS

(AMD ...191.....Supersedes AMD 135)

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Clause 1.4.3

Substitute the existing clause with the following:

“1.4.3 Lining materials

Lining material used in tea chests shall be as specified in **1.4.3.1** or **1.4.3.2**.

1.4.3.1 Aluminium foil with tissue paper

Aluminium foil of 0.020 mm minimum thickness, conforming to the requirements given in CS 120, backed with tissue paper.

1.4.3.1 Laminated aluminium foil

1.4.3.2 a) Aluminium foil of 0.009 mm minimum thickness, conforming to the requirements given in CS 120, laminated with tissue paper. The bonding material used for the lamination shall be free from any taint or odour which could be transmitted to the tea and shall be free from chlorophenol or its derivatives.

1.4.3.2 b) Aluminium foil of 0.007 mm thickness, conforming to requirements given in CS 120, laminated with unbleached kraft paper. Kraft paper used shall be free from any substance injurious to health or have any deleterious effect on the quality of the packed material. The bonding material used for the lamination shall be free from any taint or odour which could be transmitted to the tea and shall be free from chlorophenol or its derivatives.”

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TABLE 1 - Components of tea chests 12 - batten type

Substitute the existing item 4 with the following:

Parts	Location	Chest size 600 x 400 x 400 mm	Chest size 600 x 500 x 400 mm
4 Linings a) Aluminium foil 0.020 mm minimum thickness, backed with tissue paper	T & B	2 sheets 425 x 425 mm	2 sheets 425 x 525 mm
	Side	4 sheets 650 x 410 mm*	2 sheets 650 x 410 mm* 2 sheets 650 x 510 mm*
b) Laminated aluminium foil (Aluminium foil 0.009 mm minimum thickness, laminated with tissue paper)	T & B	2 sheets 425 x 425 mm	2 sheets 425 x 525 mm
	Side	4 sheets 630 x 410 mm*	2 sheets 630 x 410 mm* 2 sheets 630 x 510 mm*
c) Laminated aluminium foil (Aluminium foil 0.007 mm minimum thickness, laminated with unbleached kraft paper)	T & B	2 sheets 425 x 425 mm	2 sheets 425 x 525 mm*
	Side	4 sheets 630 x 410 mm*	2 sheets 630 x 410 mm* 2 sheets 630 x 510 mm*

* To be cut from larger sheets available in sizes 1650 mm x 650 mm, 1850 mm x 650 mm, 1650 mm x 630 mm and 1850 mm x 630 mm.

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Clause 2.4.3

Substitute the existing clause with the following:

2.4.3 Lining material used in tea chests shall be as specified in **2.4.3.1** or **2.4.3.2**.

2.4.3.1 Aluminium foil of 0.020 mm, thickness, conforming to the requirements given in CS 120, backed with tissue paper.

2.4.3.2 Laminated aluminium foil

2.4.3.3 a) Aluminium foil of 0.009 mm minimum thickness, conforming to the requirements given in CS 120, laminated with tissue paper. The bonding material used for the lamination shall be free from any taint or odour which could be transmitted to the tea and shall be free from chlorophenol or its derivatives.

2.4.3.2 b) Aluminium foil of 0.007 mm minimum thickness, conforming to the requirements given CS 120, laminated with unbleached kraft paper. Kraft paper used shall be free from any substance injurious to health or have any deleterious effect on the quality of the packed material. The bonding material used for the lamination shall be free from any taint or odour which could be transmitted to the tea and shall be free from chlorophenol or its derivatives.”

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