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वस्त्रादि — कपास करघों के स्लेय बॉटम,  
रेस, कैप और बॉक्स बैक के लिए  
बोर्ड्स/ब्लैंक्स — विशिष्टि

( पहला पुनरीक्षण )

**Textiles — Boards/Blanks for Sley  
Bottom, Race, Cap and Box Back of  
Cotton Looms — Specification**

( *First Revision* )

ICS 59.120.30

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## FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Textile Machinery and Accessories Sectional Committee had been approved by the Textiles Division Council.

Sley bottom is the wooden part of the sley (of a loom) on which sley race, reed and two shuttle boxes are fixed. Sley race is made of a thin wooden board and is fixed on the upper surface of the sley bottom. The shuttle traverses along the length of the sley race from one shuttle box to the other. Sley cap holds the upper rib of the reed.

Box back is the part of the shuttle box fixed in line with the reed. The shuttle carrying the weft when propelled by the picking motion enters the shuttle box and is held in position with the help of swell fixed on the box back.

A recommended code of practice for manufacture of boards/blanks is given in Annex A and a list of approved species of timber is given in Annex B.

This standard was originally published in 1981. The standard has been revised to incorporate the following changes:

- a) Sampling clause has been incorporated;
- b) Packing clause has been incorporated; and
- c) Marking clause has been modified.

The composition of the Committee responsible for the formulation of this standard is given in Annex C.

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 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard*

**TEXTILES — BOARDS/BLANKS FOR SLEY BOTTOM,  
RACE, CAP AND BOX BACK OF COTTON  
LOOMS — SPECIFICATION**

( *First Revision* )

**1 SCOPE**

This standard prescribes requirements of wooden boards/blanks for the manufacture of sley bottoms, races, caps and box back.

**2 TERMINOLOGY**

For the purpose of this standard, the following definitions shall apply.

**2.1 Centre Heart** — The core of a log including the pith.

**2.2 Crack** — A separation of fibres which is confined to one face of piece of wood and runs along the grain of the piece.

**2.3 Cup** — A curvature in a piece of timber across the grain or width of the piece.

**2.4 Sapwood** — Timber from the outer layers of a log exclusive of bark, which in the growing tree contains living cells and food material. The sapwood is usually lighter in colour and is readily attacked by insects and fungi.

**2.5 Split** — A separation of fibres which extends from one face of a piece of wood to the other and runs along the grain of the piece.

**2.6 Straight Grain** — Grain which is parallel to the length of the piece.

**2.7 Tight Knot** — A knot free from decay and other defects so held by growth or position as to remain firm in position in the piece.

**2.8 Twist** — A spiral distortion along the grain.

**2.9 Warp** — A longitudinal deviation in sawn timber from a true plane surface or distortion due to stresses causing departure from a true plane.

**2.10 Reed Space (of the Loom)** — Maximum space available on the loom for the insertion of a reed, that is, the overall length of the reed which can be fixed on the loom.

**3 GENERAL REQUIREMENTS****3.1 Freedom from Defects**

Boards/blanks shall be free from defects, such as warp, cup, twist, crack, split, centre heart, etc and sapwood, if any, in any individual board/blank shall

not exceed 10 percent of its total volume provided the entire piece is brush-coated with suitable preservative.

**3.2 Freedom from Knots**

Boards/blanks shall be free from knots. However, the diameter and number of maximum permissible tight knots shall not exceed the following provided they are not so grouped together or located with respect to the edges of the blank as to unduly effect its strength or its fitness for manufacture:

- a) Five not exceeding 19 mm in diameter for sley bottoms;
- b) Three not exceeding 12 mm in diameter for sley races;
- c) Two not exceeding 12 mm in diameter for sley caps; and
- d) Two not exceeding 12 mm in diameter for box back.

**3.2.1** In determining the size of a knot, the largest lateral distance between any two opposite points on its periphery shall be taken into account, the distorted grain immediately surrounding the knot shall not be included in the measurement.

**4 SPECIFIC REQUIREMENTS****4.1 Slope of Grain**

The timber used in the manufacture of boards/blanks shall be straight-grained. However, a slope of grain up to 1 in 16 shall be permitted.

**4.1.1** The slope of grain shall be estimated by means of a template of the shape illustrated in Fig. 1 with the base line parallel to the lengthwise edge of the blank. The blank shall be considered to be in conformity with the requirement of 4.1 if the grains do not cut both the base line and the hypotenuse of the template.

**4.2 Species of Timber**

The boards/blanks shall be sawn out of any one of the approved species of timber (*see* Annex B) as agreed to between the buyer and the seller.

**4.3 Dimensions**

The dimensions of boards/blanks shall be in accordance with the requirements of Table 1.

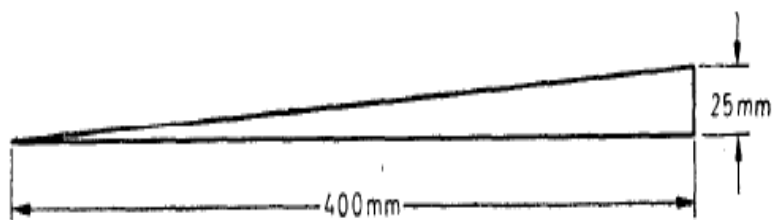


FIG. 1 TEMPLATE FOR MEASURING SLOPE OF GRAIN

**Table 1 Dimensions of Boards/Blanks**

(Clause 4.3)

Sl No.	Name of Part	Type	Dimensions of Boards/Blanks, <i>Min</i>		
			Length cm	Width cm	Thickness cm
(1)	(2)	(3)	(4)	(5)	(6)
i)	Sley bottom (see Note 1)	1	Reed space + 110	11	7.5
		2	Reed space + 120	11	8
		3	Reed space + 130	12	9
ii)	Sley race	—	Reed space + 5	10	1.5
iii)	Sley cap	1	Reed space + 20	6.5	5
		2	Reed space + 25	7.5	6
iv)	Box back	1	50	9	2
		2	55	9	2
		3	60	9	2
		4	65	9.5	2
		5	70	9.5	2
NOTES					
1 For non-automatic looms Only.					
2 Reed space of the loom shall be as agreed to between the buyer and the seller.					
3 Usual reed spaces are 80 cm, 90 cm, 100 cm, 110 cm, 120 cm, 130 cm, 140 cm, 150 cm, 160 cm, 170 cm, 180 cm, 190 cm and 200 cm.					

**5 SAMPLING**

**5.1 Lot**

The quantity of boards/blanks made from the same species of timber and of the same dimensions delivered to a buyer against a despatch note shall

constitute a lot.

**5.2** Unless otherwise agreed to between the buyer and the seller the number of boards/blanks to be selected at random from a lot shall be according to col (1) and col (2) of Table 2.

**Table 2 Sample Size and Criteria for Conformity***(Clause 5.2)*

Sl No.	Lot Size	Sample Size	Permissible Number of Defective Blocks	Sub-sample Size
(1)	(2)	(3)	(4)	(5)
i)	up to 100	5	0	2
ii)	101 to 300	8	0	2
iii)	301 to 500	13	1	3
iv)	501 to 1 000	20	1	3
v)	1 001 and above	32	2	5

**6 MARKING**

**6.1** Each board/blank shall be marked with the following information:

- a) Name and type of the article  
*Example:*  
Blank for Sley cap, Type 1;
- b) Gross and net mass;
- c) Lot/batch number;
- d) Country of origin;
- e) Manufacturer's name, initials or trade-mark, if any; and
- f) Any other information required by the law in force and/or by the buyer.

**6.2 BIS Certification Marking**

The board(s)/blank(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

**7 PACKING**

Board(s)/blank(s) shall be suitably packed as may be agreed to between the concerned parties. The package should contain fixed number of wooden shuttle blocks essentially of the same variety.

**ANNEX A***(Foreword)***CODE OF PRACTICE FOR MANUFACTURE OF BOARDS/BLANKS****A-1 PROCEDURE**

**A-1.1** The selected timber shall be converted into blanks of suitable size. They shall then be air-seasoned by keeping them under cover or shall be

kiln-seasoned under proper conditions of drying to the required moisture content. The moisture content of well-seasoned blanks should not be more than 12 percent.

**ANNEX B**

(Foreword and Clause 4.2)

**APPROVED SPECIES OF TIMBER**

**B-1 BOARDS/BLANKS FOR SLEY BOTTOMS AND SLEY CAPS**

<i>Trade Name</i>	<i>Botanical Name</i>
Aini	<i>Artocarpus hirsutus</i>
Badam	<i>Terminalia proccra</i>
Benteak	<i>Lagcrstroemia lanceolata</i>
Deodar	<i>Cedrus deodara</i>
Hollock	<i>Terminalia myriocarpa</i>
Kail	<i>Pinus wallichiana</i>
Pali	<i>Palaquium ellipticurn</i>
Poon	<i>Calophyllum spp.</i>
Pyinma	<i>Lagcrstroemia hypoleuca</i>
Teak	<i>Tactona grandis</i>
Vellapine	<i>Vatcria indica</i>
Beech	<i>Fagus spp.</i>
Benteak	<i>Lagtrstrocmia lanceolata</i>
Irul	<i>Xylia xylocarpa</i>
Padauk	<i>Ptrocarpus dalbergioides</i>
Kokko	<i>Albizia lebbek</i>
Rosewood	<i>Dalbergia latifolia</i>
Sandan	<i>Ougcinia oojeinensis</i>
Sissoo	<i>Dalbergia sissoo</i>
White chuglam	<i>Terminalia bialata</i>

## ANNEX C

(Foreword)

## COMMITTEE COMPOSITION

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Central Manufacturing Technology Institute, Bengaluru	DR NAGAHANUMAIAAN ( <b>Chairperson</b> )
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Ludlow Jute Limited, Kolkata	REPRESENTATIVE

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