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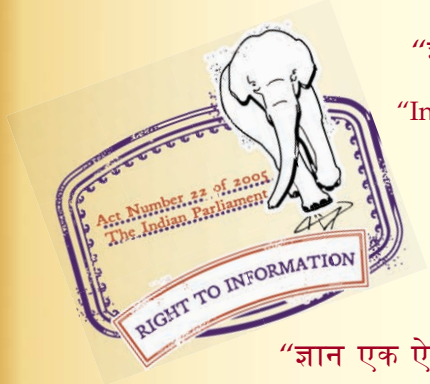
IS 15457 (2004): Logs for production of sliced veneers - [CED 9: Timber and Timber Stores]



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Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"

"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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IS 15457 : 2004
(Superseding IS 5248 : 1988, IS 6342 : 1987 and IS 13240 : 1991)

भारतीय मानक

पतली कटी (स्लाईस) हुई विनियर के उत्पादन के लिए लट्ठे — विशिष्टि

Indian Standard

LOGS FOR PRODUCTION OF SLICED VENEERS — SPECIFICATION

ICS 79.040

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

August 2004

Price Group 2

FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Timber and Timber Stores Sectional Committee had been approved by the Civil Engineering Division Council.

It was seen that there were three separate specification for logs for production of sliced veneers, namely :

IS No.	*Title*
5248 : 1988	Specification for teak logs for production of sliced veneers (*first revision*)
6342 : 1987	Specification for rosewood logs for production of sliced veneer (*first revision*)
13240 : 1991	Specification for walnut logs for production of sliced veneers

In place of separate specification for each species, it was suggested to bring out a general specification for logs for production of sliced veneers to cover all the important requirements. Accordingly efforts were made to bring out this standard, which supersedes IS 5248, IS 6342 and IS 13240.

Logs meant for slicing are first converted into flitches. These are sliced from tangential or radial directions depending upon the grain pattern of the flitches and veneers to be obtained. The buyer, when purchasing the logs for decorative veneers is naturally interested in the colour, texture, grain pattern and the possible out turn of veneers. The out turn will depend upon the size of the logs, the quality of wood, the proportion of sapwood and heartwood and visual defects in the log. The figure characteristics of veneers depend on the colour of wood and the texture, grains and figure therein. All these aspects have been taken into consideration in formulating this standard. In the process of flitching, if the defects are on one side, an acceptable flitch can be made from the other side of the log. Production of decorative veneers is to a considerable extent an art and it is impossible to lay down strict requirements for veneering. In fact much has to be left to the judgment of individual selectors. It is expected that this standard would give some guidelines for selecting the logs for veneering purposes.

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

LOGS FOR PRODUCTION OF SLICED VENEERS — SPECIFICATION

1 SCOPE

This standards covers the minimum requirements for logs of decorative timber species for production of sliced veneers.

2 REFERENCES

The standards listed below contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

IS No.	*Title*
707 : 1976	Glossary of terms applicable to timber technology and utilization (*second revision*)
3364 (Part 1) : 1976	Method of measurement and evaluation of defects in timber: Part 1 Logs (*first revision*)
9104 : 1979	Guide for storage and protection of logs and sawn timber

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 707 shall apply.

4 GENERAL REQUIREMENTS

4.1 Logs meant for veneering by slicing method shall be free from knots, wandering heart, spongy wood, tension or compression wood, twisted and spiral grain, crotch, resin or gum pockets, decay and live insects attack. Hollow heart if present, shall not exceed in diameter by 10 percent of the diameter on either end of the logs and this portion shall be deducted while calculating the volume of the timber.

4.2 The logs shall be sound, straight and cylindrical and free from stains and insect holes.

4.3 Plugging or covering of the visible defects shall not be permitted in any form.

4.4 Logs meant for veneering shall not be dressed or straightened in such a manner so as to hide the defects.

5 DEFECTS

5.1 The logs shall be inspected for defects and rejections or deductions for defects are done in gross-length and girth in the manner specified in **5.2** to **5.11**. The measurement of defect shall be done according to IS 3364 (Part 1).

5.2 Dead Knots

One dead knot per 2.5 m length shall be permitted provided diameter does not exceed 25 mm and the knot is not in the middle, but leaves a minimum of 2 m length free of defects on the log.

5.3 Live Knots

Live knots up to 2 numbers per 2.5 m length shall be permitted, provided these lie on one side of the log within 150 mm segment of circumference on the surface and the knot is not in the middle but leaves a minimum of 2m length, free of defects on the log.

5.4 End Cracks

End cracks up to 3 numbers shall be permitted on one end provided the cumulative depth does not exceed 150 mm. A single larger crack, shall be permitted provided the log can be flitched along the cracks from other considerations.

5.5 Buttresses

Buttresses up to not more than 2 numbers shall be permitted in a log and not extending more than 1/10th of the length.

5.6 Crotches

Crotch shall not be permitted, if it occurs it should be eliminated in measurements.

5.7 Dote, Bird Peck, Wound or Fire Damage

Dote, Bird Peck, Wound or Fire Damage shall be permitted if restricted to one quadrant of the log, provided that these do not exceed 12 mm in diameter and 40 mm in depth and also that provided not more than 2 numbers of these defects are in 2.5 m length of log.

5.8 Borer Holes

Borer holes not exceeding 2 mm in diameter and depth not more than 2 mm shall be permitted provided, they are not more than 2 numbers/square metre of surface area.

5.9 Cracks or Checks

Cracks or checks shall be permitted, provided these do not penetrate more than 12 mm into the logs. If these penetrate more than 12 mm, a reduction in girth equal to 6 times the maximum penetration of the defect in any part of the logs shall be made.

5.10 Shakes

5.10.1 *Cup Shake (Ring Shake)*

Cup shake, visible on one or both ends and located within 50 mm from the centre of heart wood (pith of the log), shall be permissible.

5.10.1.1 If there is only one ring shake within 50 mm from the surface of a log, the log shall be accepted, subject to the girth being computed by taking the smallest diameter of the ring and multiplying the same by 3. If there are two or more ring shakes at different distances from the centre of a log, the centre log shall be rejected.

5.10.2 *Heart Shake*

Heart shake, radial shake, star shake visible on one or both ends and located within 50 mm from the centre heart (pith) of the log shall be permissible.

5.11 Taper

Taper up to 10 mm per 100 mm in diameter in every 2.5 m length of log shall be permissible.

5.12 Notwithstanding the permissible defects referred under **5.2** to **5.11** the total number of defects permitted under **5.2** to **5.11** shall not collectively exceed 2 per 2.5 m length of the log.

6 GRADING AND MEASUREMENT

6.1 Grading

Depending on the girth of logs, logs shall be graded as follows:

Grade I	logs with girth above 2 000 mm.
Grade II	logs with girth less than 2 000 and up to 1 500 mm.
Grade III	logs with girth less than 1 500 mm and up to 1 000 mm.

6.1.1 The minimum length of the logs shall be 2.5 m.

6.2 Measurement

The length and the girth of the log shall be measured as specified in **6.2.1** and **6.2.2**. The length shall be measured in metre and shall be rounded off to the nearest lower 0.05 m. Girth shall be measured in millimetres and shall be rounded off to the nearest lower 10 mm.

6.2.1 *Length*

6.2.1.1 When the ends are snouted, the length of the logs shall be measured from the first felling cut, that is, the cut extending farthest into the length from the butt end to the nearest cut at the top end.

6.2.1.2 When cross-cut by a saw and the end surfaces are parallel to each other as well as generally perpendicular to the length, the length of the log shall be measured from one end to the other end, and when the end surfaces are not parallel to each other, the length shall be measured by the shortest distance between the two ends.

6.2.1.3 Where there is a drag hole or chain cut and slope or a slot on one end, the length of the log shall be measured between the other end and the slot.

6.2.2 *Girth*

6.2.2.1 The girth, in case of logs of regular taper and without any protuberance at mid-girth shall be measured at the mid-length of the log.

6.2.2.2 In the case of a log with irregular taper three girth measurements shall be taken, that is, one at the mid-length and one at each end away from any protuberance, the minimum of those three shall be the girth measurement.

6.2.2.3 In the case of a log with regular taper but with protuberance at mid-length, the girth shall be measured at each side of the protuberances as near to it as possible but at equal distance from the middle of the log and the average taken.

6.2.2.4 The measurements shall be taken without bark and sapwood. For this purpose a ring shall be made in the middle of the log by removing bark and sapwood.

NOTE — If agreed to between the purchaser and the supplier, measurements may be taken over bark and suitable reduction on these measurements be made for bark and sap allowance.

6.2.3 *Volume*

The volume (V) of a log shall be calculated as follows:

$$V = \left(\frac{G}{4}\right)^2 \times L$$

where

V = volume, in m^3;

G = girth, in m; and

L = length, in m.

7 MEASUREMENT AND INSPECTION

Measurement and inspection shall be done in the

presence of the representative of the purchaser and the supplier at the place mutually agreed upon, and where this is not possible, the procedure for measuring and inspection shall be stipulated in the contract.

8 PROPHYLACTIC TREATMENT

Soon after felling and cross-cutting log shall be given prophylactic treatment as per IS 9104 to protect the wood from end cracking, splitting, fungus and insect attacks.

9 MARKING

Each log shall be legibly and indelibly marked on both the ends to indicate the following:

a) Supplier's identification mark by abbreviated initials,

b) Length and mid-girth of the log,

c) Grade I by a square □,

d) Grade II by a triangle Δ, and

e) Grade III by a circle ○.

10 BIS CERTIFICATION MARKING

10.1 Each log may also be marked with the 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. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act,* 1986 to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards : Monthly Additions'.

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Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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