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**CODE OF PRACTICE FOR
SEASONING OF TIMBER**

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BUREAU OF CEYLON STANDARDS**

CODE OF PRACTICE FOR SEASONING OF TIMBER

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CEYLON STANDARD CODE OF PRACTICE FOR SEASONING OF TIMBER

FOREWORD

This Ceylon Standard Code of Practice has been prepared by the Drafting Committee on Seasoning of Timber. 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 3rd October, 1972.

Green timber, i.e. timber from freshly felled trees contains a high proportion of water. The actual moisture per cent of green timber varies greatly depending, *inter alia*, on the density of the timber. It generally ranges from 50 to 150 per cent. (See Clause 2.8).

Moisture in wood is found as "free water" in the cell cavities and as "bound water" in the cell walls.

When timber is exposed to the air it loses water. At first the free water is lost, and during this phase the wood does not undergo any appreciable dimensional changes. After all the free water is lost the water in the cell walls is gradually given up, and during this process the wood shrinks.

Wood does not shrink uniformly in all directions. Shrinkage in the tangential direction (i.e. at right angles to the rays) is generally appreciably greater than shrinkage in the radial direction (i.e. parallel to the rays), while longitudinal shrinkage in normal wood is negligible. Because of the difference in the extents of shrinkage in the tangential and radial directions, wood that is dried generally tends to acquire defects such as warping unless precautions are taken to prevent their occurrence.

Defects can also develop as a result of the outer layers drying faster than the inner core. When wood dries the exposed parts lose moisture first and a moisture gradient is set up in the wood. Moisture then moves outwards in the wood and the inner parts begin to dry. As drying beyond the Fibre Saturation Point (See Clause 2.4) is accompanied by dimensional changes the exposed parts will begin to shrink before the inner core, and this will result in stresses being set up. These stresses may cause defects to develop.

Seasoning is the process whereby timber is dried under controlled conditions so as to minimise or eliminate the defects referred to above.

The object of seasoning is to bring down the moisture content to a level at which the timber will be in equilibrium with the atmosphere under the conditions of use of the timber. The advantages of using seasoned timber instead of green timber is that shrinkage in service is minimised. Also, seasoned timber is not liable to be attacked by wood destroying and sap-staining fungi.

A set of tentative schedules extracted from the Indian Code of Practice for Seasoning of Timber (1958) are given in Appendix C. These schedules may only be taken as a rough guide.

All standard values given in this specification are in metric units. The Imperial units given in brackets for guidance are not the exact equivalents.

The assistance derived from the publications of the Indian Standards Institution in the preparation of this standard is gratefully acknowledged.

1. SCOPE

This code covers the methods of seasoning timber.

2. TERMINOLOGY

For the purpose of this standard the following definitions shall apply :

2.1 Case-hardening—This is a state of timber in which the surface layers become set (hardened) while in tension. It occurs as follows:

If loss of water from the exposed surfaces of timber is too rapid the outer layers may dry below the Fibre Saturation Point, while the core still remains above this point. The outer layers then tend to shrink but are prevented from doing so by the core which has not yet begun to shrink, and the outer layers may set while in tension. The wood is then said to be case-hardened. Subsequently the core dries below the Fibre Saturation Point and tends to shrink but is prevented from doing so by the outer layers which have set. The inner core is then under tension and outer layers under compression.

Case-hardening can give rise to honey-combing (See Clause 2.6) and, if the piece of timber is re-sawn, to severe warping (See Clause 2.11).