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Timber — Round and sawn timber — Vocabulary

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 218, *Timber*.

This second edition of ISO 24294 cancels and replaces ISO 24294:2013 and ISO 1032:1974, which have been technically revised. The main changes compared to the previous editions are as follows:

— updated, corrected and clarified definitions;

— re-ordered term categories and terms within categories to match the subject matter.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Wood is a naturally occurring resource and is the only major construction material that is renewable. Because it is renewable, the use of wood and the many different timber products made from wood, contributes to overall sustainable development. Many of these timber products are intended specifically for use both as structural and non-structural elements in the construction of timber-framed or platform-frame buildings. Properties of wood are affected by species, natural growth characteristics and moisture content and with its unique cell structure; wood has different strength properties in different grain directions.

This document defines terms related to the physical and mechanical characteristics of the many different hardwood and softwood round, sawn and processed timbers in a manner that is consistent and recognized globally. This document has been prepared by the various groups involved in the timber industry, such as manufacturers, builders, wholesalers and importers, as well as research organizations, academia, national regulatory bodies, standards developers and professional design organizations.

Understanding the nature of the various physical characteristics and features of round and sawn timber enables effective communication related to sawn and processed timber, in a manner that is consistently understood by and equitable to all active and potential traders/users. Its use alongside other standards also aids harmonization and provide a basis for specialist terminology.

Timber — Round and sawn timber — Vocabulary

1 Scope

This document defines terms related to round and sawn timber. It applies to identification of a tree and its components, stages of processing in round and sawn forms, and timber grading, dimensions, anatomical structure, features, moisture content and conditions relating to stain, fungal and insect attack. It does not apply to terms related to strength properties of wood, engineered timber products or timber structures.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
wood
lignocellulosic substance between the *pith* (9.14) and *bark* (9.5) of a tree or a shrub

Note 1 to entry: Lignified materials from bamboo, cork, rattan, palm trees and other monocotyledons are not wood.

Note 2 to entry: Internationally, the terms “wood” and *timber* (3.2) are often used interchangeably to represent the basic material of wood products.

3.2
timber
wood (3.1) in the form of standing or felled trees, or a solid wood product of these after *processing* (3.10)

Note 1 to entry: In the case of processed solid wood products, refers to *round timber* (4.1) and *sawn timber* (5.1). Does not apply to other wood products, such as wood-based panels, veneer, wood pulp, *chips* (3.11) or *sawdust* (3.12).

Note 2 to entry: Internationally, the terms “timber” and “wood” are often used interchangeably to represent the basic material of wood products.

Note 3 to entry: In Canada and the U.S., there is a homograph for the term “timber”. See 5.6.

3.3
species
botanical category classifying a group of distinct trees with a significant level of genetic similarity

EXAMPLE Douglas-fir (*Pseudotsuga menziesii*) and Norway spruce (*Picea abies*).

Note 1 to entry: Usually referred to by a common name and identified by a botanical name that is based on a Linnaean binomial of its genus and species.

3.3.1
species group
species combination, en CA, U.S.
population of two or more tree *species* (3.3) or multiple populations of the same tree species combined into a single marketing group on the basis of similar properties using criteria appropriate for the intended end use

EXAMPLE Spruce-pine-fir (S-P-F).

Note 1 to entry: Evaluated to develop combined species properties so that the wood products from species within the group can be used interchangeably.

Note 2 to entry: Trees of the same species group may originate from one or more growth or production regions.

3.4
hardwood
wood (3.1) of trees of the botanical class *Angiospermae*, subclass *Dicotyledonae*

Note 1 to entry: The term has no reference to the actual hardness of the wood.

Note 2 to entry: Generally deciduous trees with broad leaves and enclosed seeds.

3.5
softwood
wood (3.1) of trees of the botanical class *Gymnospermae*, subclass *Coniferophytae*

Note 1 to entry: The term has no reference to the actual hardness of the wood.

Note 2 to entry: Generally evergreen trees with needle or scale-like leaves and unenclosed seeds, also known as conifers.

3.6
feature
physical, morphological or growth characteristic of *timber* (3.2) that could affect its use

3.7
defect
feature (3.6) that results in lower quality of *timber* (3.2) which causes restrictions in use

3.8
grading
separation or sorting of *timber* (3.2) by end-use, tree *species* (3.3)**,** appearance, mechanical or working properties, sizes or some combination thereof

3.9
batch
lot
specified quantity of a product

3.10
processing
function or a combination of functions other than *felling* (4.26) that change the form of the material without changing its solid *wood* (3.1) structure

Note 1 to entry: May include *debarking* (4.14), sawing, re-sawing, planing (surfacing), cross-cutting and trimming at the sawmill, but does not include gluing.

Note 2 to entry: May be supplemented by *drying* (6.10) at various stages of production.

3.11
chips
small flakes of *wood* (3.1) produced during a fragmentation process

Note 1 to entry: Generally utilized for pulp, wood-based products or fuel.

3.12
sawdust
fine particles of *wood* (3.1) produced during the process of sawing

3.13
cross-section
virtual section at a right angle to the longitudinal axis

3.14
length
shortest distance between the ends of a piece of *timber* (3.2)

4 Terms related to round timber

4.1
round timber
felled tree after delimbing and removal of top, that may or may not have been cross-cut

4.1.1
long pole
round timber (4.1) that has not been cross-cut

4.1.2
log
cross-cut portion of *round timber* (4.1)

4.1.3
butt log
log (4.1.2) produced from the larger end of a *long pole* (4.1.1)

4.1.4
middle log
log (4.1.2) produced from the portion of a *long pole* (4.1.1) between the *butt log* (4.1.3) and the *top end log* (4.1.5)

Note 1 to entry: More than one middle log may be obtained from one long pole.

4.1.5
top end log
log (4.1.2) produced from the smaller end of a *long pole* (4.1.1)

4.1.6
cylindrical log
perfect round log
log (4.1.2) that has a *cross-section* (3.13) on both ends that represents a true circle

Note 1 to entry: The roundness of a log is determined by measuring the largest *diameter* (7.1) and the diameter at right angles to it, at the least round end and calculating the ratio of the lesser and greater diameters, expressed as a percentage. The roundness of 100 % is rarely achieved naturally.

4.2
crown
upper portion of a tree with branches

4.3
spring of the crown
zone of the *stem* (4.4) from where the lowest branches of the *crown* (4.2) grow out

4.4
stem
portion of a tree above ground, excluding branches

Note 1 to entry: Sometimes refers to trees in general, i.e. stems per unit area.

4.5
trunk
portion of a *stem* (4.4) used for valuing a standing tree

Note 1 to entry: Usually specified by stating the minimum *top diameter* (7.1.3).

4.6
butt swelling
flared base part of the *stem* (4.4)

4.7
buttress
projecting rib at the lower end of the *stem* (4.4)

4.8
stump
portion of the tree that remains above and below ground level after *felling* (4.26)

Note 1 to entry: Does not apply to *uprooted trees* (4.26.1).

4.9
branch whorl
zone of the *stem* (4.4) where several branches or *knots* (10.1) occur at approximately the same *cross-section* (3.13)

4.10
de-sapped round timber
round timber (4.1) that has had all *sapwood* (9.1) thoroughly removed

Note 1 to entry: The sapwood is removed generally to prevent *biodeterioration* (13.1).

4.11
pruned timber
timber (3.2) from a tree that had its lower branches removed by *pruning* (4.11.1)

4.11.1
pruning
removal of live or dead branches or of multiple leaders of shoots from standing trees

[SOURCE: ISO 6814:2009, 2.19]

4.12
stop
portion of a *stem* (4.4) where there is a marked reduction in *diameter* (7.1)

Note 1 to entry: Can occur at a thick branch or at a *branch whorl* (4.9) in some tree *species* (3.3).

4.13
cross-cut point
location on *round timber* (4.1) where it will be cross-cut

4.13.1
theoretical cross-cut point
point at which a *trunk* (4.5) or *round timber* (4.1) is visually assessed for cross-cutting for *grading* (3.8) purposes

4.14
debarking
removing *bark* (9.5) from trees or *round timber* (4.1)

4.14.1
rough debarking
partial removing of *bark* (9.5)

4.14.2
bundle debarking
simultaneous *debarking* (4.14) of a group of *round timbers* (4.1)

4.14.3
piece-by-piece debarking
debarking (4.14) of individual *round timbers* (4.1)

4.14.4
patch debarking
rough debarking (4.14.1) resulting in spots or patches of remaining *bark* (9.5) on the surface of *round timber* (4.1)

4.14.5
clean debarking
complete removal of *bark* (9.5) and any remnants of branches and branch wood

4.15
ring barking
girdling, en CA, U.S.
removing a narrow strip of *bark* (9.5) around the *stem* (4.4) of a living tree to weaken it or cause death

Note 1 to entry: Not to be confused with *debarking* (4.14) for the purpose of *processing* (3.10) *round timber* (4.1).

4.16
sawlog
log (4.1.2) for *processing* (3.10) into *sawn timber* (5.1)

4.17
veneer log
log (4.1.2) for conversion into veneer

4.18
pulpwood
log (4.1.2) or logs used for mechanical or chemical conversion into pulp for paper or wood panel products

4.19
pit prop
round timber (4.1) intended for supporting mine works

4.20
special assortment log
log (4.1.2) specified by *length* (3.14) or *diameter* (7.1), or both, for a specific end-use

4.21
regularized round timber
round timber (4.1) processed to obtain a cylindrical or conical shape

4.22
pole
long *round timber* (4.1) for use in a free-standing application

4.23
stake
round timber (4.1) of small *diameter* (7.1) usually pointed at one end

Note 1 to entry: May also be split or sawn.

4.24
bundle
group of evenly placed *logs* (4.1.2), bundled by strapping or other packaging means

4.25
pile
stack, en CA, U.S.
deck, en CA, U.S.
group of *logs* (4.1.2) stacked in a row or several parallel rows

Note 1 to entry: Can be located at a forest landing, road-side landing or mill yard.

4.26
felling
separating the *stem* (4.4) of a tree from its root system

Note 1 to entry: Done by cutting a standing tree near ground level to leave a *stump* (4.8) or by cutting off a root ball of an *uprooted tree* (4.26.1).

4.26.1
uprooted tree
tree that is blown over as a result of wind or mechanically pushed over with the root ball still attached

5 Terms related to sawn timber

5.1
sawn timber
lumber, en CA, U.S.
sawn lumber, en CA, U.S.
solid *wood* (3.1) product obtained by the longitudinal sawing of *logs* (4.1.2), having at least two parallel planes

Note 1 to entry: Often supplemented by additional *processing* (3.10) and/or *drying* (6.10).

Note 2 to entry: Does not include any products obtained by end, *face* (5.17) or *edge* (5.18) gluing of sawn timber components.

5.1.1
rough sawn timber
sawn timber (5.1) without any additional *processing* (3.10)

5.1.2
regularized green timber
regularized green lumber, en CA, U.S.
sawn timber (5.1), in a green state, processed to specified *permitted deviations* (8.8)

5.1.3
prepared timber
blank
sawn timber (5.1) that, at the *end-use moisture content* (6.7), has been processed to *permitted deviations* (8.8) under special agreement between buyer and seller

5.2
regularized dried timber
regularized dried lumber, en CA, U.S.
regularized dry timber
sawn timber (5.1) that, after *drying* (6.10) to the *end-use moisture content* (6.7), has been processed to specified *permitted deviations* (8.8)

5.3
planed timber
planed lumber, en CA, U.S.
dressed lumber, en CA, U.S.
surfaced lumber, en CA, U.S.
sawn timber (5.1) that, at the *end-use moisture content* (6.7), has been processed for its full *length* (3.14) and *width* (8.2) on at least one *face* (5.17) to obtain a smooth surface

Note 1 to entry: The end-use moisture content forming part of a specification for planed lumber is typically specified as either an average *moisture content* (6.1) with a limit on the variation, or as a moisture content limit, which a large portion of the production shall not exceed.

5.4
profiled timber
profiled lumber, en CA, U.S.
sawn timber (5.1) that, at the *end-use moisture content* (6.7), has been processed to obtain a specified, non-rectangular *cross-section* (3.13)

5.5
boule
set of pieces of *unedged timber* (5.14), resulting from cutting a *log* (4.1.2) longitudinally by successive parallel cuts, and reassembled into the original log form without the *slabs* (5.15)

5.6
baulk
timber, en CA, U.S.
large scantling, en MY
large *sawn timber* (5.1) of square or rectangular *cross-section* (3.13)

Note 1 to entry: In Canada and the U.S., the minimum dimensions of the cross-section of a timber are 114 mm × 114 mm (nominal 5 in × 5 in).

Note 2 to entry: In Malaysia, the minimum dimensions of the cross-section of a large scantling are nominal 10 in × 6 in.

Note 3 to entry: In Belarus, Russia and Ukraine, the minimum dimensions of the cross-section of a baulk are 100 mm × 100 mm.

Note 4 to entry: In the EU, the minimum *thickness* (8.1) of a baulk is 80 mm and the sum of the thickness and *width* (8.2) shall be greater than or equal to 200 mm.

Note 5 to entry: In Canada and the U.S., there is a homograph for the term “timber”. See 3.2.

5.7
board
piece of *sawn timber* (5.1) of smaller dimensions

Note 1 to entry: In Malaysia, at least 141 mm (nominal 6 in) in *width* (8.2).

Note 2 to entry: In Belarus, Russia and Ukraine, less than 100 mm thick with the width at least twice the *thickness* (8.1).

Note 3 to entry: In Great Britain/UK, at least 100 mm (nominal 4 in) in width.

Note 4 to entry: In Japan, less than 75 mm thick with the width at least four times the thickness.

Note 5 to entry: In Canada and the U.S., less than 38 mm (nominal 2 in.) thick and 38 mm (nominal 2 in.) or more in width.

5.8
lath
slat, en CA, U.S.
strip, en MY
thin, narrow strip of *sawn timber* (5.1)

Note 1 to entry: Typically, 9 mm (3/8 in) to 12,5 mm (1/2 in) in *thickness* (8.1) and 38 mm (1-1/2 in) in *width* (8.2).

Note 2 to entry: In Malaysia, the width can be up to 141 mm (nominal 6 in).

Note 3 to entry: Typically used as backing for wall plaster and sometimes for fences.

5.9
scantling
piece of *sawn timber* (5.1) of rectangular *cross-section* (3.13) whose *thickness* (8.1) usually equals or exceeds half its *width* (8.2)

EXAMPLE 1 Small scantlings have sizes such as 3 in × 2 in, 4 in × 2 in, 4 in × 3 in, 6 in × 4 in, etc.

EXAMPLE 2 Large scantlings have sizes such as 10 in × 6 in, 12 in × 8 in, 12 in × 12 in, etc.

Note 1 to entry: In Malaysia, the minimum dimensions of the cross-section of a *large scantling* (5.6) are nominal 10 in × 6 in.

Note 2 to entry: In Belarus, Russia and Ukraine, the thickness of a small scantling is less than 100 mm.

5.10
cant
flitch, en CA, U.S.
log (4.1.2) sawn on at least one side

Note 1 to entry: Usually intended for further *processing* (3.10).

Note 2 to entry: In some countries, may be specified as having at least two flat sides.

5.11
square-edged timber
square-cornered timber, en CA, U.S.
sawn timber (5.1) of rectangular *cross-section* (3.13)

Note 1 to entry: *Wane* (5.13), in specified amounts, is permitted in some cases.

Note 2 to entry: In Canada and the U.S., the term “square-edged” refers to sawn timber free of wane and without *eased edges/eased arrises* (5.19.3).

Note 3 to entry: In Canada and the U.S., the term “square cornered” refers to sawn timber with an allowance for wane in some cases but without eased edges/eased arrises.

5.12
taper-edged timber
sawn timber (5.1) processed so that the *edges* (5.18) are not parallel

5.13
wane
absence of *wood* (3.1) in the *cross-section* (3.13) of *sawn timber* (5.1) due to the original rounded surface of a *log* (4.1.2), with or without *bark* (9.5), on any *face* (5.17) or *edge* (5.18) and extending along the longitudinal axis of the piece