

ICS 79.040
CCS B 60

LY

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

LY/T 3225-2020

**Code of practice of high temperature drying for sawn timber
(English Translation)**

Issued on: December 29, 2020

Implemented on: June 1, 2021

Issued by: State Forestry and Grassland Administration

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Foreword

This document starts from the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" grass.

1 Scope

This document specifies the terms and definitions of high-temperature drying of sawn timber, material selection and stacking requirements, inspection boards and moisture content testing, recommended drying standards, dry Drying process rules and quality inspection.

This document applies to sawn timber from conifers or easy-to-dry broad-leaved trees, using moist air or superheated steam as the drying medium, and the artificial temperature is higher than 100°C.

dry.

2 Normative references

The contents of the following documents constitute indispensable clauses of this document through normative references in the text. Among them, the dated reference documents only the dated version applies to this document; for undated references, the latest version (including all amendments) applies to this document.

GB/T 153 Sawn timber of conifers GB/T 4817 Hardwood sawn timber GB/T 6491 Dry quality of sawn timber GB/T 15035 Terminology for wood drying LY/T 1068 kiln drying process specification for sawn timber LY/T 1069 Air-drying process specification for sawn timber LY/T 1798 General technical conditions for sawn timber drying equipment

3 Terms and definitions

The terms and definitions defined in GB/T 15035 and LY/T 1798 apply to this document.

4 Material selection and stacking requirements

4.1

The sawn timber of different tree species should be stacked and dried separately. When the number of sawn timber of the same tree species is less than one kiln, the drying characteristics are similar and the initial moisture content is allowed the sawn timber of different tree species is dried in the same kiln. The requirements of sawn timber are in accordance with GB/T 153 and GB/T 4817.

4.2

The thickness deviation from the kiln sawn timber thickness should generally not exceed $\pm 3.0\text{mm}$.

4.3

The deviation of the initial moisture content of wet sawn timber should not exceed $\pm 7.5\%$, and the deviation of the initial moisture content of air-dried sawn timber should not exceed $\pm 5.0\%$, otherwise it should be separately Dry it.

4.4

The length, width and height of the stacking materials should meet the design requirements of the drying kiln. When the amount of wood is less than one kiln, the width of the pile can be reduced to ensure the pile the height and length of the stack must be stable; the sides of the sawn timber of the same layer of the stack should be close; the sides of the stack should be flush, and the end of the stack should be at least one end Flush; the upper part of the pile is pressurized or a pressing device is used to prevent the upper plate from warping; the railcar type kiln is installed, and the sawn timber of different lengths should be matched reasonably.

Make the total length of the wood pile compatible with the length of the kiln; when loading the kiln with a forklift, the wood pile must be compatible with the width of the kiln.

4.5

The spacers and spacing spacers should be made of dry sawn timber with good dimensional stability, straight texture, high hardness, no decay, moth-eaten and other defects.

Planed on all sides, thickness is 20mm~30mm, thickness tolerance is $\pm 1.0\text{mm}$, width is 20mm~40mm, and the length should exceed the width of the stack and the maximum no more than 50mm of stack width. The spacing of the spacers is determined according to the tree species, the length of the timber, and the thickness of the timber, generally 0.3m~0.6m. Easy-drying hardwood sawn timber and veneer the smaller value is used, and the larger value is used for sawn timber and thick boards of coniferous trees. For coniferous sawn timber with a thickness of more than 40 mm, the spacing can be increased to 1.0m. For short size the spacing of the spacers can be reduced according to the actual situation. The upper and lower partitions of the timber pile should be kept on the same vertical line and fall on the crossbar or skid of the timber car. material the thickness of each layer of spacers in the stack should be the same. The spacers at the end of the stack should be flush with the end of the stack.

5.1 Selection of inspection board

5.1.1

It is generally required that the moisture content and drying characteristics of the test panels should be representative.

5.1.2

Selection of inspection board The inspection board shall be selected at a distance not less than 0.3m from the end of the sawn timber. It shall not have bark, contain phloem, decay, large knots, and cracks.

Defects such as lines, pith and worm eyes.

5.1.3

The size of the inspection board is similar to the average size of the sawn timber, the length is 0.6m~1.2m, and the two ends are sealed; for the shorter length Sawn timber can be used as inspection board by itself.

5.1.4

Number of inspection boards 5-6 inspection boards are to be used. Among them, 3 to 4 pieces of string cutting boards with high moisture content and good materials are placed in the part where the stack of materials is slow to dry.

Position, or other easy-to-take-out parts in the pile, measure its moisture content change, used to adjust the drying benchmark. 1 piece of string cutting board with lower moisture content, moisture content One piece of diameter-cutting board with a higher rate is placed in the parts where the pile is dried faster and slower, and its moisture content is used as the basis for the final balance treatment. When drying board when the materials are all diameter-cut boards, the above-mentioned string-cut boards are replaced with those with equivalent moisture content.

5.2 Water content detection

5.2.1

The moisture content inspection during the high temperature drying process shall be carried out by weighing method or electrical measurement method.

5.2.2

The specific detection method for the moisture content of sawn timber shall be carried out in accordance with GB/T 6491 The method for measuring moisture content in the dry quality of sawn timber. Determination of the inspection board the initial moisture content, the initial quality of the inspection board, the absolute dry quality and the current moisture content.

6 Recommended drying criteria

6.1

Refer to Appendix A for the criteria for high-temperature drying of sawn timber and related selection examples.

6.2

For wood species with many drying defects, it is recommended that the sawn timber be air-dried (LY/T 1069) or kiln-dried (LY/T 1068) after pre-drying.

Warm and dry.

6.3

In addition to the recommended benchmarks listed above, for other tree species, specifications and sizes of sawn timber, corresponding drying benchmarks can be formulated according to the density and drying characteristics of the sawn timber. For dry for sawn timber with mature drying process, a time reference can be established and adopted.