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

LY/T 1703-2007

Replacing LY/T 1703-2007

**Comprehensive energy consumption of solid wood floor
production
(English Translation)**

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents" Drafting.

This document replaces LY/T 1703-2007 "Comprehensive Energy Consumption in the Production of Solid Wood Flooring". Compared with LY/T 1703-2007, the main technical changes are Change as follows.

- a) Modified the content in the scope and expanded the scope of application of the standard (see Chapter 1);
- b) The normative reference document LY/T 2394 Management Regulations for Energy Measuring Instruments for Forestry Enterprises has been added (see Chapter 2);
- c) The definition of basic energy consumption per unit output of solid wood flooring production has been deleted (see 3.5 in the 2007 edition);
- d) The definition of comparable comprehensive energy consumption per unit output of solid wood flooring production has been added (see 3.5);
- e) Deleted the basic energy consumption classification index levels. excellent, good, and qualified;
- f) Added comparable comprehensive energy consumption grading index levels. Level 1,

Level 2, and Level 3, and revised the energy consumption value (see Chapter 4);

g) The temperature correction coefficient for solid wood floors has been added (see 5.4.2);

h) Increased the annual output correction coefficient of solid wood flooring (see 5.4.1);

i) The calculation of basic energy consumption per unit output of solid wood flooring production has been deleted (see 5.3);

j) The calculation of the comparable comprehensive energy consumption per unit output of solid wood flooring has been added (see 5.3);

k) Deleted the length correction factor (see 5.4.2 of the 2007 edition);

l) The width correction factor is deleted (see 5.4.3 of the 2007 edition);

m) The thickness correction factor is deleted (see 5.4.4 of the 2007 edition);

n) Deleted the correction coefficient of the degree of mechanization based on the proportion of energy consumption in the processing of the plain board (see 5.4.5 of the 2007 edition);

o) Deleted the monthly heating energy consumption correction coefficient in areas where heating facilities are installed in accordance with national regulations (see 5.4.6 in the 2007 edition);

p) Deleted areas where cooling devices are installed in accordance with national regulations, and the monthly cooling energy consumption correction coefficient (see 5.4.7 of the 2007 edition);

q) The heating energy consumption measurement has been deleted (see 6.3.7 of the 2007 edition);

r) The cooling energy consumption metering has been deleted (see 6.3.8 of the 2007 edition).

This document was proposed by the Forestry Energy Management Sub-Technical Committee of the National Energy Fundamental and Management Standardization Technical Committee (SAC/TC20/SC7) Go out and go out.

1 Scope

This document defines the terms and definitions of the comprehensive energy consumption in the production of solid wood flooring, and specifies the grading index and calculation of the comprehensive energy consumption per unit output.

Principles and methods, energy consumption testing and measurement.

This document is applicable to the calculation and index assessment of the comprehensive energy consumption for the production of solid wood flooring production enterprises.

Comparable comprehensive energy consumption for the production of underfloor heating can be referred to According to the implementation (reference use).

2 Normative references

The content of the following documents constitutes an indispensable clause of the cost document through normative references in the text. Among them, dated quotations Only the version on that date is applicable to this document. For undated references, the latest version (including all amendments) is applicable to this file.

GB/T 1933 Method for determination of wood density GB/T 2589 General Rules for Comprehensive Energy Consumption Calculation GB/T 6422 Energy Test Guidelines for Energy-using Equipment GB/T 15036.1 Technical requirements for solid wood flooring GB/T 15316 General Rules for Energy-saving Monitoring Technology GB 17167 General rules for the provision and management of energy measuring instruments for energy-consuming units LY/T 2394 Management Specification for Energy Measuring Instruments for Forestry Enterprises

3 Terms and definitions

The following terms and definitions apply to this document.

Solid wood floor

Floors directly processed from a single piece of wood that has not been spliced or pasted (see 3.1 in GB/T 15036.1).

Unlacquered solid wood floor Unpainted solid wood flooring (see 3.5 in GB/T 15036.1).

Specific yield comprehensive energy consumption of solid solid wood flooring wood floor production the ratio of the total comprehensive energy consumption of solid wood flooring production to the output of qualified solid wood flooring during the same statistical period.

Comprehensive energy consumption of solid wood floor production During the statistical period, the actual amount of energy consumed by the production enterprise in the production of solid wood flooring shall be converted separately according to the prescribed calculation method it is the sum of standard coal.

Comparable comprehensive energy consumption for unit production of solid wood flooring output of solid wood floor when the solid wood floor is produced, the ratio of the material density above 0.6 g/cm³ is $75 > M \geq 50$, and the annual production of solid wood floor is $100 \leq M < 150$ the amount of energy consumed to produce 1 m² of qualified solid wood flooring when the monthly average temperature is $20^{\circ}\text{C} \leq T < 35^{\circ}\text{C}$.

4 Comparable comprehensive energy consumption classification index per unit output of solid wood flooring the grading index of comparable comprehensive energy consumption

per unit output of solid wood flooring should meet the requirements of Table 1;

Note: The production of underfloor heating can increase the comprehensive energy consumption by 70% compared with the latter process

5.1 Calculation of comprehensive energy consumption for solid wood flooring production

The calculation of the comprehensive energy consumption for the production of solid wood flooring is carried out according to formula (1) or (2).

5.2 Calculation of comprehensive energy consumption per unit output of solid wood floor production the calculation of comprehensive energy consumption per unit output of solid wood flooring production is carried out according to formula (3).

q--Comprehensive energy consumption per unit output of solid wood flooring production, in kilograms of standard coal per square meter (kgce/m²);

M--The output of qualified products during the statistical period, in square meters (m²).

5.3 Calculation of comparable comprehensive energy consumption per unit output of solid wood floor production the calculation of the comparable comprehensive energy consumption per unit output of solid wood floor production is carried out according to formula (4) or (4).

Kc-annual output correction coefficient;

Kt-temperature correction coefficient;

Km--Material (tree species) density ratio correction factor;

5.4.1 Annual production correction factor

The annual output correction coefficient Kc is shown in Table 2.

5.4.2 Temperature correction coefficient

The temperature correction coefficient Kt is shown in Table 3.

5.4.3 Material (tree species) density ratio correction factor

The density ratio correction coefficient Km of the material (tree species) is shown in Table 4.

Note 1: Density refers to the absolute dry density of wood.

Note 2: The density test should be tested according to GB/T 1933-2009 wood density determination method.

5.5 Calculation principles of comprehensive energy consumption for solid wood flooring production the calculation principle of comprehensive energy consumption for solid wood