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Sound-proof wood-based indoor doors

室内木质隔声门

(English Translation)

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

Please note that some elements of this document may involve patents. The issuer of this document is not responsible for identifying these patents.

This standard was proposed and managed by the National Timber Standardization Technical Committee (SAC/TC 41).

This standard was drafted. Institute of Wood Industry, Chinese Academy of Forestry, Jilin Brothers Wood Co., Ltd., Zhejiang Forest Products Quality Measuring station, Beijing Tongtongchuang Industry and Trade Co., Ltd., Mengtian Wooden Door Group Co., Ltd.,

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Indoor wooden sound insulation door

1 Scope

This standard specifies the terms and definitions, classifications, requirements, inspection methods, inspection rules, identification, packaging, Transportation and storage.

This standard applies to indoor wooden doors specified in 3.1.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 8485-2008 Classification and testing method for air sound insulation performance of building doors and windows LY/T 1923 interior wooden door

3 Terms and definitions

GB/T 8485-2008, LY/T 1923 and the following terms and definitions apply to this document.

Sound-proof wood-based indoor doors Indoor wooden doors that meet certain sound insulation requirements.

4 Classification

4.1

By place of use

a) Indoor wooden sound insulation door;

b) Indoor wooden sound insulation doors for public places.

4.2 According to sound insulation performance

- a) Class I indoor wooden sound insulation door;
- b) Class II indoor wooden sound insulation door;
- c) Class III indoor wooden sound insulation door;
- d) Class IV indoor wooden sound insulation door.

5.1 General requirements

The appearance quality, specifications, dimensions, deviations and physical and chemical properties of indoor wooden sound insulation doors shall meet the requirements of LY/T 1923.

5.2 Sound insulation performance

For the sound insulation performance of indoor wooden sound insulation doors, the "sum of weighted sound insulation amount R_w and pink noise spectrum correction amount C " is used as a grading index. See table for classification 1.

Table 1. Classification of sound insulation performance of indoor wooden sound insulation doors

Grading

Classification index (dB) for domestic public places I $20 \leq R_w + C < 25$ II $25 \leq R_w + C < 30$ III $30 \leq R_w + C < 35$ IV $R_w + C \geq 35$

6.1 Appearance quality, specifications and deviations and physical and chemical properties

According to LY/T 1923.

6.2.1 Installation

The test piece is a whole gate, including parts and accessories attached to the specifications. When the storage temperature of the test specimen is below 5 °C, the whole door should be moved to the environment the temperature is not lower than 15 °C for 24h.

The structure of the test piece is shown in Figure 1.

1. Door leaf
2. Door perimeter sealing strip
3. Door frame door cover
4. Door frame perimeter filler
5. Door frame edge sealing strip
6. Interstitial wall
7. Door bottom sealing

strip

Figure 1 Schematic diagram of sound insulation performance test installation

Before installation, check the test piece weight, structure, door leaf thickness and area. When the size of the test piece is smaller than the test hole of the sound insulation room, A gap wall is built inside the mouth. The thickness of the interstitial wall should be less than 500mm, and double-layer concrete blocks should be used. Cavity filling between two walls Rock wool or glass wool, and sealed with acoustic reflective elastic materials such as gypsum board or calcium silicate board to form a multilayer composite wall. The gap wall should have with sufficient sound insulation, indirect sound transmission through the interstitial wall is negligible compared to direct sound transmission through the test piece. Specimen opening height and width should be large the height and width of the test piece are 20mm ~ 30mm.

Insert the test piece into the test piece hole, and adjust the verticality and horizontality of the test piece to make the gap between the outer frame of the test piece and the test piece hole uniform. Specimen the gap between the opening and the outer frame of the test piece can be filled with sound-absorbing materials such as mortar, rock wool or glass wool, and sealed on both sides with a sealant. The test piece must not be safe Installed without any deformation.

6.2.2 Sound insulation test and calculation

The test should be performed after the mortar and sealant have cured. Before starting the test, open and close the door normally 10 times. Seals fall off during opening and closing or damaged, no repair measures should be taken.

The sound insulation test and calculation of the test piece shall be performed in accordance with Articles 5.4 and 5.5 of GB/T 8485-2008.

7.1 Inspection classification

Product inspection includes factory inspection and type inspection.

7.1.1 Factory inspection

Factory inspection should include.

- a) appearance quality;
- b) specifications;
- c) Physical and chemical properties. dipping and peeling, moisture content.