CCS B 68

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 1927.11-2022

Test methods for physical and mechanical properties of small clear wood specimens - Part 11: Determination of ultimate stress in compression parallel to grain

Issued on: July 11, 2022 **Implemented on: February 1, 2023**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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5.2 The measurement size of the test measuring tool should be accurate to 0.1mm.

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" drafted.

This document is part 11 of GB/T 1927 "Test Methods for Physical and Mechanical Properties of Small Specimens of Wood without Defects". GB/T 1927 has been issued

The following parts are distributed.

--- Part 1.Collection of test materials;

--- Part 2.Sampling methods and general requirements;

--- Part 3.Determination of growth ring width and latewood rate;

--- Part 4.Determination of moisture content;

--- Part 5.Density determination;

--- Part 6.Determination of dry shrinkage;

--- Part 7.Determination of water absorption;

--- Part 8.Determination of swelling properties;

--- Part 9.Determination of flexural strength;

--- Part 10.Determination of flexural modulus of elasticity;

--- Part 11.Determination of compressive strength along grain;

--- Part 12.Determination of transverse grain compressive strength;

--- Part 13.Determination of compressive elastic modulus of transverse grains;

--- Part 14.Determination of tensile strength along grain;

--- Part 15.Determination of transverse grain tensile strength;

--- Part 16.Determination of shear strength along grain;

--- Part 17.Determination of impact toughness;

--- Part 18.Determination of impact indentation;

--- Part 19.Determination of hardness;

--- Part 20.Determination of splitting resistance;

--- Part 21.Determination of nail holding force.

This document replaces GB/T 1935-2009 "Test method for compressive strength along grain of wood". Compared with GB/T 1935-2009, except for the structural

In addition to adjustments and editorial changes, the main technical changes are as follows.

a) Changed the testing machine requirements (see 5.1; 4.1 and 6.2 of the.2009 edition);

b) Changed the size requirements of the sample (see 6.2; 5.2 of the.2009 edition);

c) changed the loading speed (see 7.2; 6.2 of the.2009 edition);

d) Modified the applicable moisture content range for the compressive strength along grain when the moisture content of air-dried wood samples is 12% (see 8.2,.2009 edition)

7.2).

This document is modified to adopt ISO 13061-17.2017 "Test methods for the physical and mechanical properties of wood with small specimens without defects - Part 17.Along grain

Determination of Compressive Ultimate Stress".

The technical differences between this document and ISO 13061-17.2017 and the main reasons are as follows.

--- Changed terms and definitions (see Chapter 3).

The following editorial changes have been made to this document.

--- In order to harmonize with the existing standards, the name of the standard is changed to "Test methods for the physical and mechanical properties of wood with small samples without defects - Part 11.

Determination of Grain Compressive Strength.

Please note that some content of this document may be patented. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

The standard of test methods for physical and mechanical properties of wood is used in wood scientific research, teaching, wood inspection, wood structure design, wood processing and production, etc.

It is widely used and is an important basic standard in the wood industry. In 1980, my country issued the first edition of the test methods for physical and mechanical properties of wood.

The domestic standard (GB/T 1927~GB/T 1943) was revised twice in.1991 and.2009 respectively. In recent years, with the development of wood science and technology

The development of technology, ISO 3129.2012 "Sampling methods for wood physical and mechanical tests of small samples of wood without defects and

"General Requirements" has been revised, ISO 3130.1975 "Determination of moisture content by physical and mechanical tests of wood", ISO 3131.1975 "Wood

15 international standards for test methods such as "Determination of Density in Physical and Mechanical Tests" have been integrated and revised. Based on this, in order to be in line with international standards, this time

The third revision was made to the national standard for test methods for physical and mechanical properties of wood in my country, and the 22 scattered test method standards were integrated and adjusted to

The sub-part document of GB/T 1927 adopts the latest version of the international standard in the revision.

GB/T 1927 aims to establish a test method for the physical and mechanical properties of small sample wood without flaws, and is intended to be composed of 21 parts.

--- Part 1.Collection of test materials. The purpose is to describe the sample collection method for testing the physical and mechanical properties of wood with small samples without defects.

--- Part 2.Sampling methods and general requirements. The purpose is to establish a suitable test for the physical and mechanical properties of small wood samples without defects.

Specimen sawing, interception methods and general requirements to be observed when testing methods.

--- Part 3.Determination of growth ring width and latewood rate. The purpose is to characterize the growth ring width and latewood rate of small samples of clear wood

method of measurement.

--- Part 4.Determination of moisture content. The purpose is to describe a method for the determination of the moisture content of small wood samples without defects.

--- Part 5.Density determination. The purpose is to describe the density, air-dry density, absolute dry

Methods for the determination of density and basic density.

--- Part 6.Determination of dry shrinkage. The purpose is to describe the measurement of radial, chordwise and volume drying shrinkage of unblemished small sample wood.

determined method.

--- Part 7.Determination of water absorption. The purpose is to describe the determination method of 6h, 24h and the maximum water absorption rate of small sample wood without defect.

--- Part 8.Determination of swelling. The purpose is to describe the measurement of radial, chordwise and volumetric swell of unblemished small wood samples.

determined method.

--- Part 9.Determination of flexural strength. The purpose is to describe a method for the determination of the flexural strength of small wood samples without defects.

--- Part 10.Determination of flexural modulus of elasticity. The purpose is to describe a method for the determination of the flexural modulus of elasticity of small wood samples without defects.

--- Part 11.Determination of compressive strength along grain. The purpose is to describe a method for the determination of the compressive strength along the grain of small wood samples without defects.

--- Part 12.Determination of transverse grain compressive strength. The purpose is to describe the transverse grain compressive proportional ultimate strength of small unblemished wood samples, including

Method for the determination of the ultimate compressive proportional ultimate strength of the entire transverse grain and the partial compressive proportional ultimate strength of the transverse grain

--- Part 13.Determination of compressive elastic modulus of transverse grains. The purpose is to describe the measurement of the transverse-grain compressive elastic modulus of unblemished small samples of wood.

determined method.

--- Part 14.Determination of tensile strength along grain. The purpose is to describe a method for the determination of the along-grain tensile strength of unblemished small