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

GB/T 34219-2025

Replacing GB/T 34219-2017

**Refractory products - Determination of tensile strength at room
temperature**

耐火材料 常温抗拉强度试验方法

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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 for standardization documents" Drafting.

This document replaces GB/T 34219-2017 "Test method for tensile strength of refractory materials at room temperature" and is consistent with GB/T 34219-2017.

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

a) Changed the fixture requirements, deleted the wedge clamp test fixture and the corresponding diagram, and added the bonding fixture requirements and the corresponding diagram.

Intent (see 5.2, 5.2 of the 2017 edition);

b) Added requirements for bonding materials (see 5.5);

c) Added requirements for the surface flatness of the specimen (see 6.2);

d) The sample preparation standard for monolithic refractory materials has been changed (see 6.3, 6.3 of the 2017 edition);

e) Added the treatment requirements for the sample after drying (see 6.4);

f) Added "Method 2 - Tensile test method for bonded specimens" (see 7.2);

g) The test report has been changed (see Chapter 9, Chapter 9 of the 2017 edition).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Technical Committee for Standardization of Refractory Materials (SAC/TC193).

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This document was first published in 2017 and this is the first revision.

1 Scope

This document specifies the principles, equipment and materials, specimens, test procedures, result calculation and test results of the room temperature tensile strength test method for refractory materials. Inspection report.

This document is applicable to the determination of tensile strength at room temperature of dense shaped refractory products and dense monolithic refractory materials.

2 Normative references

GB/T 4513.5

GB/T 7321

GB/T 8170

GB/T 18930

3 Terms and Definitions

The terms and definitions defined in GB/T 18930 and the following apply to this document.

3.1 [Source. GB/T 18930-2020, 2.5.78]

At room temperature, the specimen is stretched at a constant rate, and the ultimate tensile force per unit area that the specimen can withstand when it is destroyed.

4 Principles

Under normal temperature conditions, load is applied to the refractory material sample at a constant rate until it is destroyed, and the volume per unit area of the sample is measured when it is destroyed.

The maximum load that can be tolerated.

5.1 Tensile testing machine

The indication error is within $\pm 2\%$, and the load can be loaded at a constant loading rate. The measured breaking load is within the effective range of the measuring range.

5.2 Fixtures

5.2.1 Clamping fixture. usually made of cast iron or other materials, to ensure that the specimen is subjected to only axial tension in addition to gravity and clamping force during the test.

Use a direct clamping test fixture (see Figure 1).