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

GB/T 47108-2026

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

耐火材料 常温圆柱劈裂抗拉强度试验方法

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Refractory Materials (SAC/TC193). This document was drafted by: Wuhan University of Science and Technology, China Steel Group Luoyang Refractory Materials Research Institute Co., Ltd., and China Metallurgical Construction Research Institute. Institute Co., Ltd., Henan Ruitai Refractory Materials Technology Co., Ltd., Jiangsu Ruifuda New Materials Co., Ltd., China Machinery Testing Equipment Co., Ltd. Company. Huanggang Huatai Kiln Industry Co., Ltd. The main drafters of this document are. Dai Yajie, Li Yawei, Yin Yucheng, Peng Xigao, Cheng Shuiming, Zhai Jianwei, Song Xuebin, Long Jian, Tan Jinshan, and Yan Wen. Ao Ping, Xiao Zhedong, Guo Xueliang, Kong Chuizhou, Jia Haoran, Tan Ye, Huang Ao, Wang Xiaoli, Wu Shujun, Zhou Zhenni, Chen Yun, Zhao Quanliang, Zhang Pingyang. Splitting tensile strength of refractory cylindrical shell at room temperature Test methods

1 Scope

GB/T 47108-2026 is the Chinese national standard covering the Brazilian splitting test on a refractory - a brittle material's tensile strength measured by compressing a cylinder across a diameter, since pulling it directly is impractical, and tension is how a lining actually cracks. First edition. It was issued on 28 January 2026 and has been in force since 1 August 2026, as a first edition. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2026 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document describes the principle, equipment, sampling, sample preparation, test procedure, and results of the room-temperature cylindrical splitting tensile strength test method for refractory materials. Calculation and test reports. This document applies to the determination of the room-temperature splitting tensile strength of dense shaped and unshaped refractories in cylindrical materials. Other materials, such as concrete and rock, are also applicable. The room temperature tensile strength of the material is used as a reference.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 4513.2 Unshaped refractories - Part

3 Terms and Definitions

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

3.1 By applying pressure along the diameter of the cylindrical specimen, tensile stress is formed in the central region, which is the maximum tensile stress that the tensile surface can withstand.

4.Principles At room temperature, pressure is applied along the diameter of a cylindrical specimen, creating tensile stress in the central region until the specimen completely fractures. The stress is measured at the point before fracture. The splitting tensile strength of the refractory material cylinder is calculated by dividing the large load by half the circumferential area of the cylindrical specimen.

5 Specimen preparation and pretreatment

GB/T 7321 Method for preparing test specimens of shaped refractory products

GB/T 8170 Rules for rounding off numerical values and the representation and determination of limiting values

GB/T 10325 Sampling Inspection Rules for Acceptance of Shaped Refractory Products

GB/T 18930 Terminology for Refractory Materials