

ICS 81.080

CCS Q 46



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

GB/T 22590-2021

Replacing GB/T 22590-2008

Refractory castables for rolling mill reheating furnace

轧钢加热炉用耐火浇注料

Issued on: August 20, 2021

Implemented on: March 1, 2022

**Issued by: State Administration for Market Regulation;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Classification and grades
- 5 Technical requirements
- 6 Determination of physical properties

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 GB/T 22590-2008 "Refractory Castables for Steel Rolling Heating Furnace". Compared with GB/T 22590-2008, except for the structure In addition to adjustments and editorial changes, the main technical changes are as follows:

- a) Modified the standard English name (see cover, cover of the.2008 edition);
- b) Revised part of the cited documents (see Chapter 2, Chapter 2 of the.2008 edition);
- c) Adjusted product grades. ZJ-42 was deleted, and ZJ-40, ZJ-50 and ZJK-60 grades were added (see Chapter 4 and Chapter 5,.2008 Chapter 3 and Chapter 4 of the edition);
- d) The technical indicators of anti-burst temperature have been added, and some technical indicators have been revised (see Table 1, Table 1 of the.2008 edition);

e) Modified the sampling and qualification rules (see 7.2, 6.2 of the.2008 edition). Please note that some of the contents of this document may involve patents. The issuing agency of this document is not responsible for identifying patents. This document was proposed and managed by the National Refractory Standardization Technical Committee (SAC/TC193). Drafting organizations of this document. Henan University of Technology, Puyang Pu High Temperature Materials (Group) Co., Ltd., Jiaozuo Jinxin Hengtuo New Materials Co., Ltd. Co., Ltd., Henan Gengsheng New Material Co., Ltd., Beijing Lier High Temperature Material Co., Ltd., Wuhan Weilin Technology Co., Ltd., Beijing Ruipu Tongchuang Technology Development Co., Ltd., Tangshan Guoliang Special Refractories Co., Ltd., Chongqing Shijin Refractories Co., Ltd., Beijing Union Rongda Engineering Materials Co., Ltd. The main drafters of this document. Shi Kai, Xu Deting, Wang Cheng, Xia Yi, Zhang Hao, Liu Li, Li Wenfeng, Qian Xueying,

Zhang Junbo, Wang Yilong, Huang Xiaofeng, Xue Hongyan, Deng Lerui, Fan Junling, Zhang Guangfu, Zhang Xiaobo, Feng Guang, Jiang Le, Zhang Hongjin, Huang Yanchao, Wang Siyan. The previous versions of this document and the documents replaced are as follows:

---In.2008, it was first published as GB/T 22590-2008;

---This is the first revision. Refractory castable for steel rolling heating furnace

1 Scope

GB/T 22590-2021 is the Chinese national standard on refractory castables for rolling mill reheating furnace, in the field of glass and ceramics industries. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 20 August 2021 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2022. Classification: ICS 81.080, CCS Q 46. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document specifies the classification and designation of refractory castables for steel rolling furnaces, technical requirements, test methods, quality assessment procedures, packaging, Marking, transportation, storage and quality certificate. This document is applicable to refractory castables for working linings and thermal insulation linings of steel rolling furnaces.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. Among them, dated quotations Only the version corresponding to that date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to This document.

GB/T 4513.2 Unshaped refractory materials Part

3 Terms and definitions

There are no terms and definitions that need to be defined in this document.

4 Classification and grades

Refractory castables for steel rolling heating furnaces are divided into refractory castables

for working linings and refractory castables for thermal insulation linings according to their use positions. Refractory castables for working linings are divided into ZJ-40, ZJ-50, ZJ-60, ZJK-60, ZJ-65, ZJS-65, ZJ-70 seven grades; refractory castables for thermal insulation lining are divided into ZJQ-0.6, ZJQ-0.8, ZJQ-1.0, ZJQ-1.3, Five grades of ZJQ-1.5. Among them, Z, J, K, S, and Q are the first characters of the first Chinese pinyin of "rolling heating furnace", "casting material", "anti-burst", "water-cooled pipe" and "light". Mother; the number after ZJ, ZJK, ZJS represents the mass fraction of the product alumina, the number after ZJQ represents the volume density of the product.

5 Technical requirements

5.1 The physical and chemical performance indexes of the refractory castable for the working lining of the steel rolling heating furnace should meet the requirements of Table 1.

5.2 The physical and chemical performance indexes of the refractory castable for the heat insulation lining of the steel rolling heating furnace should meet the requirements of Table 2.

6 Determination of physical properties

GB/T 6900 Aluminium-silicon refractory chemical analysis method

GB/T 15545 General provisions for packaging, marking, transportation, storage and quality certificates of unshaped refractory materials

GB/T 21114 Refractory material X-ray fluorescence spectroscopy chemical analysis method of molten cast glass sheet

GB/T 30873 Test method for thermal shock resistance of refractories

GB/T 36134 Unshaped refractory material burst resistance test method YB/T 4130 Test method for thermal conductivity of refractory materials (water flow plate method)