

ICS 81.080

CCS Q 40



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

GB/T 17732-2023

Replacing GB/T 17732-2008

**Determination of dense shaped refractory products containing
carbon**

致密定形含碳耐火制品试验方法

(English Translation)

Issued on: December 28, 2023

Implemented on: July 1, 2024

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

Table of Contents

Foreword

1 Scope

2 Normative reference documents

3 Terms and definitions

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:

This document replaces GB/T 17732-2008 "Test methods for dense shaped carbon-containing refractory products" and is consistent with GB/T 17732-2008 in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- a) Change the content of the note to the main text (see 5.1, 5:1 of the:2008 edition);
- b) Changed the description of the test furnace (see 6.2:1, 6:2:1 of the:2008 edition);
- c) The graduation value of the balance has been changed (see 6.2:2, 6:2:2 of the:2008 edition);
- d) Added equipment (see 6.2:7~6:2:9);
- e) Changed the precision of weighing (see 6.3, 6:4 and 7:3:2, 6:2, 6:4 and 7:3:2 of the:2008 edition);
- f) The furnace loading process of the sample has been changed (see 6.4, 6:4 of the:2008 edition);
- g) Increased requirements on the number of specimens (see 7.1);
- h) Increase the particle size requirements for grinding the sample after carbonization (see 7.3:1);
- i) The test process has been changed (see 7.3:2, 7:3:2 of the:2008 version);
- j) Delete the reporting requirements for residual carbon content measurement (see 7.3:3 of the:2008 version);
- k) Change the content of the note to the main text (see 7.4, 7:4 of the:2008 edition);
- l) Added provisions for the number of digits to be retained in the result (see 7.5, 8:1:6, 9:4:2);

- m) Delete the requirement to use water for testing samples containing free lime, and change the content of the note to the text (see 8.1:2, 2008 edition 8:1:2);
- n) Added measurement accuracy requirements (see 8.1:3);
- o) The size requirements for normal temperature flexural strength specimens have been changed (see 8.1:5, 2008 version of 8:1:5);
- p) Change the content of the note to the main text (see 8.2:2, 8:2:2 of the 2008 version);
- q) The principle of antioxidant test is deleted (see 9.1 of the 2008 edition);
- r) Changed the graduation value of the vernier caliper (see 9.1:5, 9:2:5 of the 2008 version);
- s) The content of the test report has been changed (see Chapter 10, Chapter 10 of the 2008 edition):

This document is modified to adopt ISO 10060:1993 "Test Methods for Carbon-Containing Products of Dense Shaped Refractory Products":

Compared with ISO 10060:1993, this document has many structural adjustments:
Comparison list of structure number changes between the two files See Appendix A:

Compared with ISO 10060:1993, this document has many technical differences: Vertical symbols are used in the outer margins of the clauses involved:

Single lines (|) are marked: A list of these technical differences and their causes is provided in Appendix B:

The following editorial changes have been made to this document:

---Deleted Note 6 of 7:3:1 and Note 12 of 8:2 in ISO 10060:1993:

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the principles, specimens, carbonization, carbonation performance determination, physical tests, and antioxidant testing methods for densely shaped carbon-containing refractory products:

Chemistry tests and test reports:

This document applies to dense shaped carbon-containing refractory products:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

GB/T 2997 Test method for volume density, apparent porosity and true porosity of dense shaped refractory products (GB/T 2997-2015, ISO 5017:2013,MOD) GB/T 3000 Test method for air permeability of dense shaped refractory products (GB/T 3000-2016, ISO 8841:1991, MOD) GB/T 3001 Test method for flexural strength of refractory materials at room temperature (GB/T 3001-2017, ISO 5014:1997, MOD) GB/T 5072 Test method for compressive strength at room temperature of refractory materials (GB/T 5072-2008, ISO 8895:2004, ISO 10059-1:1992, ISO 10059-2:2003, MOD) GB/T 8170 Numerical rounding rules and expression and determination of limit values GB/T 16555-2017 Chemical analysis methods for carbon, silicon carbide and nitride refractory materials GB/T 18930 Refractory terminology (GB/T 18930-2020, ISO 836:2001, MOD)

3 Terms and definitions

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

Pitch-bonded refractory A refractory product pressed from a mixture of granular ingredients and bitumen:

Note: "tar" can be used instead of "asphalt":

[Source: GB/T 18930-2020,2:2:61] 3.2 A refractory product bonded with bitumen and heat treated not exceeding 800°C:

[Source: GB/T 18930-2020,2:2:62] 3.3 Resin-bonded refractory A refractory product pressed from a mixture of granular ingredients and resin:

[Source: GB/T 18930-2020,2:2:63] 3.4 A resin-bonded refractory product heat-treated not exceeding 800°C: