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

GB/T 5070.1-2002

Replacing GB/T 5070-2007

**Chemical analysis of refractories containing chrome
(English Translation)**

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard replaces GB/T 5070-2007 "chromium-containing refractories chemical analysis method", compared with the GB/T 5070-2007, the main technical Surgery changes are as follows.

--- Increased zirconium (hafnium), phosphorus pentoxide test items (see Chapter 1);

- Increasing zirconia (hafnium), phosphorus pentoxide allowable difference value analysis (see Table 2);
- Increased potassium hydroxide, sodium hydroxide flame photometric detection method (see 15.2);
- Increased the determination of low content elements by ICP-AES method (see Chapter 18);
- Increased EDTA volumetric method zirconium (hafnium) method (see Chapter 17) was measured;
- Increase the informative appendix provides reference plasma emission spectrometer working conditions (see Appendix B).

Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents.

This standard by the National Standardization Technical Committee Refractories (SAC/TC193) and focal points.

This standard was drafted. Sinosteel Luoyang Institute of Refractories Co., Ltd., Wuhan, China Metallurgical Metallurgical Construction Research Institute Co., Beijing Lier High Temperature Materials Co., Ltd. Zhejiang independence, Shanxi Province refractories Quality Supervision, Inspection Station.

1 Scope

This standard specifies the chemical analysis of chromium-containing refractories. Analysis of this standard are as follows.

- a) loss on ignition (LOI);
- b) silica (of SiO_2);
- c) iron oxide (of Fe_2O_3);
- d) alumina (of Al_2O_3);
- e) Titanium dioxide (- TiO_2);
- f) calcium oxide (of CaO);
- g) magnesium oxide (of MgO);
- h) chromium oxide (Cr_2O_3 as);
- i) potassium oxide (K_2O);
- j) sodium oxide (of Na_2O);

- k) manganese oxide (of MnO);
- l) phosphorus pentoxide (P₂O₅);
- m) zirconium (hafnium) [Zr (Hf) O₂].

This standard applies to elemental analysis measurement range shown in Table 1.

Table 1 Measuring range

Analysis Project Scope (mass fraction) /% Analysis Project Scope (mass fraction) /% LOI -
 K₂O ≤2 SiO₂ ≤10 Na₂O ≤1 Al₂O₃ 2 ~ 97 MnO ≤3 Fe₂O₃ ≤30 Cr₂O₃ ≥1 TiO₂ ≤5
 P₂O₅ ≤5 CaO 0.5 ~ 15 Zr (Hf) O₂ ≤5 MgO 10 ~ 96

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 4984 Chemical analysis of zirconium-containing refractories GB/T 7728 metallurgical products for chemical analysis by flame atomic absorption spectrometry General GB/T 8170 repair value expressed about the rules and limit values and judgment GB/T 10325, shaped refractory products acceptance sampling inspection rules