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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

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High chrome bricks

高铬砖

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Standardization Administration of the PRC

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. 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., Sinosteel Refractory Co., Ltd., Sinopec Nanjing Wave Technology Research Institute Co., Ltd., Henan Boma Co., Ltd., Luoyang Refractories Co., Montreal, East China Ruitai Technology Co., the company. The main drafters of this standard. Geng Keming, Dan, Liu Huilin, Kang Wan Zhong, Wang Han, Sun Honggang, Guo Yuan, Niu Zhi Wang, Zhang Yadong, Lu has held, Deng Junjie.

Coal chemical gasification technology is the leading technology, common technology and key technologies, coal-water slurry gasification technology because proven in nearly 20 years Has been the rapid development of key high chrome lined with refractory brick amount increases every year, develop appropriate standards to regulate the production and use. High chrome brick

1 Scope

China's national product standard for high chrome refractory bricks. It specifies the definition, the grades, the technical requirements, the test methods, the quality assessment procedure, and the packaging, marking, transport, storage and quality certificate for these bricks, and it applies to the working lining of coal water slurry gasifiers and of other reducing-atmosphere furnaces in related industries. A high chrome brick is defined here as a shaped refractory made from industrial grade chromium oxide and aluminium oxide, with a small addition of zirconium oxide in some grades, sintered at high temperature, containing not less than 75 per cent chromium trioxide and not less than 98 per cent chromium oxide, aluminium oxide and zirconia combined. That composition exists for one purpose: to survive the inside of a coal gasifier. The environment there is close to the worst any refractory faces - molten coal slag flowing continuously over the lining, temperatures around fourteen hundred degrees Celsius, a strongly reducing atmosphere of carbon monoxide and hydrogen at high pressure, and thermal cycling on every shutdown. Almost every other

refractory oxide is either dissolved by the slag or reduced by the atmosphere; chromia resists both, and the brick's service life is what determines how long a gasifier can run between relines. Since a reline means taking a plant that may be feeding an entire chemical complex out of service for weeks, the quality of these bricks is a plant availability question rather than a materials one. The standard was written as coal water slurry gasification technology matured and the quantity of high chrome lining used began to rise year on year, in order to regulate their production and use. Issued on 9 June 2014 and in force since 1 December 2014.

This standard specifies the definition of high chrome brick, grade, technical requirements, test methods, quality assessment procedures, packaging, labeling, transportation, storage and quality Amount certificate. This standard applies to coal slurry gasifier and other related industries reducing atmosphere furnace with a high chrome brick lining work.

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 2997 Dense shaped refractory products bulk density, apparent porosity and true porosity test methods

GB/T 5070 Methods for chemical analysis of chromium-containing refractories

GB/T 5072 Refractory cold crushing strength

GB/T 7321 sample preparation method shaped refractory products

GB/T 10325, shaped refractory products acceptance sampling inspection rules Inspection method

GB/T 10326 Refractory products - size, appearance and section

GB/T 16546 refractory shaped packaging, labeling, transportation and storage

GB/T 18930 refractory term

GB/T 21114 refractory X-ray fluorescence spectroscopy for chemical analysis of cast glass method

3 Terms and Definitions

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

3.1 Industrial-grade chromium oxide and aluminum oxide as the main raw material, or the introduction of a small amount of zirconium oxide, high temperature sintering prepared containing chromium trioxide The amount of not less than 75% chromium oxide, aluminum

oxide and zirconium alloy is not less than 98% of the shaped refractory products. Grade

4 High chrome brick by chromium oxide content is divided into four grades. GGZ-75, GGZ-85, GGZ-90, GGZ-95. Grades in G, G, Z points Do not be high, chrome, Pinyin initials brick, digits of chromium oxide mass fraction.

5 Technical requirements

5.1 high chrome brick physical and chemical indicators comply with Table 1.

5.2 high chrome brick appearance and size tolerances shall comply with the provisions of Table 2.

5.3 Special technical requirements for implementation of the agreement by both parties.