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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 26566-2011

Test method for the burnability of cement raw meal

水泥生料易烧性试验方法

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. The standard proposed by China Building Materials Federation. This standard by the National Standardization Technical Committee cement (SAC/TC184) centralized. This standard is drafted by: Tianjin Cement Industry Design and Research Institute Limited. The main drafters of this standard. Nixiang Ping, THE STAFF Wangzhong Chun, Ji-open, white wave, Chen Dongming. Test method cement raw meal Burnability

1 Scope

China's national test method for the burnability of cement raw meal. It specifies the apparatus, the specimens, the procedure and the expression of results for determining how readily a raw meal converts to clinker on firing. Burnability is the property that decides what a cement kiln costs to run. The raw meal - limestone with clay, shale, sand and iron correctives - has to be heated until the lime combines with the silica, alumina and iron oxide to form the clinker minerals, and the measure of burnability is how much free lime remains uncombined at a given temperature after a given time. Free lime is the direct indicator: if it is high the reaction has not gone to completion, and the plant's response is to burn harder, which costs fuel, shortens the refractory life, increases the nitrogen oxide emissions and reduces the kiln's output. A raw meal that is a few tens of degrees harder to burn than another is a permanent difference in the operating cost of the works. What makes one meal harder than another is not obvious from the chemistry alone. The lime saturation factor and the silica ratio matter, but so does the size of the coarsest quartz and calcite particles, since the reaction is diffusion-limited and a large silica grain will still be reacting long after the fine material has finished; and so do the minor constituents, some of which act as fluxes. So burnability has to be measured rather than calculated, and the value of a standard method is comparability: the result depends heavily on the firing schedule, the specimen preparation and the grinding fineness, and only a fixed procedure lets one meal, or one quarry face, be compared with another. Issued on 16 June 2011 and in force since 1

February 2012.

This standard specifies the cement raw meal Burnability test terms and definitions, principle of the method, test equipment and appliances, specimen preparation, test temperature Degrees, test procedures and test results indicate so on. This standard is applicable to Portland cement raw meal burning test.

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 176 chemical analysis of cement

GB/T 1345 cement fineness test methods

GB/T 6003.1 Test sieves of metal wire cloth

GB/T 26567 Test method for grinding cement raw material easily (Bond Act)

3 Terms and Definitions

The following terms and definitions apply to this document.

3.1 Burnability burnability Raw material for cement clinker formation of the degree of difficulty by calcination.

4 Principle of the method

According to a certain system after calcination calcined cement raw meal, free calcium oxide content was determined by free calcium oxide content expressed raw materials Burnability. The lower free lime, Burnability better.

5 Test equipment and appliances

5.1 mill In line with GB T grindability test methods and easy (Bond Act) provisions/26567 cement raw materials.

5.2 high temperature furnaces for calcining Rated temperature not lower than 1000 °C, temperature control accuracy of 1.0%.

5.3 high-temperature furnace for burning Rated temperature not lower than 1600 °C, temperature control accuracy of 0.5%. Heating elements are arranged symmetrically and not exposed to the hearth; thermocouple endpoint is located within the central third of the furnace side area.