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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 27976-2011

Tube mill equipment for the cement industry

水泥工业管磨装备

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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. The standard proposed by China Building Materials Federation. The standard building materials and equipment by the National Standardization Technical Committee (SAC/TC465) centralized. This standard is drafted by: China National Materials Equipment Group Co., Ltd., China National Building Material Equipment Co., Ltd. Participated in the drafting of this standard. China National Materials International, Inc., New Shanghai Heavy Machinery Co., Ltd., Shenyang cement machinery have Ltd., Jiangsu Construction Corporation, Chaoyang heavy machinery Co., Ltd., CITIC Heavy Machinery Co., Ltd., Chengdu Building Materials Engineering Design and Research Institute Co., Ltd., Xuzhou Sinoma Heavy Machinery Equipment Co., Ltd. Jiangsu Pengfei Group Co., Ltd., Tangshan Sinoma heavy Machinery Co., Sinoma Zibo Heavy Machinery Co., Ltd., Shanghai Road and Bridge Construction Machinery Co., Ltd., Nanchang Haida building materials bearing limited Ltd., Tangshan shield stone Machinery Manufacturing Co., Ltd. The main drafters of this standard. Li Xiongbo, Wang Yumin, Yun Jing Zhong, Ni Shilin, Ran Dongsheng, Yangming You, Yang Ping, Lu Yuchun, Du Qiang, Yan Zhirong, Ma filial straight, Wang Xiangming, Xuyou Juan, Mr Stephen whole, Lichuan Sheng, Yan Jun-ho, Luomin Xu, Cao Jianguo. Tube mill cement industry equipment

1 Scope

China's national standard for the tube mill equipment used in the cement industry. It specifies the product classification, the model designation and basic parameters, the technical requirements, the test methods, the inspection rules and the marking, packaging, transport and storage of the tube mills that grind cement raw material and clinker. A tube mill is the largest and the least efficient machine in a cement works, and it is where the

plant's electricity goes. It is a horizontal steel cylinder several metres in diameter and several times as long, lined with wear plates, charged with steel balls and rotated slowly on trunnions or on slide shoes while material passes through it from end to end. The balls cascade and fall, the material is broken between them, and almost all of the energy put in becomes heat and noise - only a few per cent creates the new surface that is the point of the exercise. Comminution accounts for the majority of a cement plant's power consumption, and the finish mill accounts for most of that. The consequence is that a tube mill is bought and sold on its specific energy consumption, and a small difference is a very large sum over a mill's life. What the standard specifies is the machine that determines it: the shell and its manufacture, the heads and trunnions, the bearings, the girth gear and drive, the liners and their attachment, the diaphragms that divide the chambers, the charge and the operating speed as a fraction of the critical speed, and the capacity and power draw. It also has to specify what can be verified on a machine that cannot be run at full load in the works where it is built. Issued on 30 December 2011 and in force since 1 October 2012.

This standard specifies the cement industry pipe mill equipment (hereinafter referred to as the tube mill equipment) product classification, marking and basic parameters of the model, to technology Requirements, test methods, inspection rules, marking, packaging, transportation and storage. This standard applies to the cement industry pipe mill equipment.

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 699-1999 quality carbon structural steel

GB/T 700-2006 carbon structural steel

GB/T 1174-1992 bearing alloy casting

GB/T 1184-1996 shape and position tolerances without individual tolerance value

GB/T 1348-2009 ductile iron castings (GPS) with limits and tolerances and fits select

GB/T 1801-2009 Geometrical product specifications

GB/T 1804-2000 General tolerances Tolerances for linear and angular dimensions without individual tolerance

GB/T 2970-2004 steel plate ultrasonic inspection

GB 5903-1995 industrial enclosed gear oil

GB/T 9439-2010 Gray Iron Castings

GB/T 9443-2007 steel castings penetrant testing

GB/T 9444-2007 steel castings - Magnetic particle testing

GB/T 10095.1-2008 Cylindrical gear accuracy system - Part 1. Definitions tooth surface deviation and ipsilateral tooth allowable value