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Ball mills, rod mills, semi-autogenous and autogenous mills

矿用智能筒式磨机 技术要求

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part

1.Structure and drafting rules for standardization documents" Drafting. Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents. This document was proposed by the China Machinery Industry Federation. This document is under the jurisdiction of the National Technical Committee for Standardization of Mining Machinery (SAC/TC88). This document was drafted by: Luoyang Mining Machinery Engineering Design and Research Institute Co., Ltd., CITIC Heavy Industries Machinery Co., Ltd., Tongling Nonferrous Xingtong Electromechanical Manufacturing Co., Ltd., Shanxi Energy University, Henan University of Science and Technology, and Guochuang Intelligent Mining Equipment Research Institute (Luoyang) Co., Ltd. The main drafters of this document are. Liu Jun, Du Zibin, Tang Biliang, Dai Xiaobing, Ren Xiaoxia, Xue Yujun, Guo Wugang, Tao Wenjia, Zhou Weiliang, Guo Maimai and Wang Xiao. Technical requirements for intelligent drum mills for mining

1 Scope

China's national standard for ball mills, rod mills, semi-autogenous and autogenous mills. These are the tumbling mills that do the fine grinding in every mineral processing plant, and they are the largest single consumers of energy in mining - a single semi-autogenous mill in a copper concentrator may draw twenty megawatts continuously. Their differences are in the grinding medium: a ball mill uses steel balls, a rod mill uses steel rods that grind more selectively along their length, an autogenous mill uses the ore itself, and a semi-autogenous mill uses the ore with a ball charge added. Which is right depends on the ore, and the choice sets the plant's whole flowsheet. The standard specifies the types, technical requirements, test methods, inspection rules, marking, packaging, transport and storage for these machines, which is what allows a plant to be specified and a mill to be procured against defined performance rather than a supplier's claims.

2 Normative references

The contents of the following documents constitute the essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 3797-2016 Electrical control equipment

GB/T 7251.1-2023 Low-voltage switchgear and controlgear Part

GB/T 13384 General technical requirements for packaging of electromechanical products

GB/T 25708 Ball mill and rod mill

GB/T 25709 Autogenous and semi-autogenous grinding mills

GB/T 26804.1-2011 Industrial control computer system function module template Part

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Ball mills, rod mills, semi-autogenous mills and autogenous mills for grinding ores, rocks and other suitable materials of various hardness in wet processes.

3.2 Mining drum mill equipped with intelligent control system.

3.3 By formalizing or simulating human intelligence such as intuitive reasoning and trial and error, and using them for control system analysis and design, The design makes it possible to realize the intelligence of the control system to a certain extent, with the characteristics of self-adaptation, self-organization, self-learning and self-coordination. An automatic control system that can autonomously drive a machine to achieve its goals without human intervention.

3.4 Designed specifically for use in industrial environments, it uses programmable memory to store and execute logical operations,