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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 10604-2017

Replacing GB/T 10604-2008

Electric mining rope shovels

矿用机械正铲式挖掘机

Issued on: July 12, 2017 **Implemented on: February 1, 2018**

Issued by: General Administration of Quality Supervision, Inspection and Quarantine;
Standardization Administration of the PRC

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Foreword

This standard is drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 10604-2008 "Mining machinery". This standard compared with GB/T 10604-2008, except Editorial changes to the main technical changes are as follows:

--- modified the drive type (see 4.1,.2008 version 4.1); In Table 1, some technical parameters have been modified to add the new specifications WK-15, WK-45 and WK-75 and the "rated load" parameters. In addition to the "drive type" and "power supply rated voltage" parameters;

--- modified the minimum difference between inside and outside the shed (see 5.1.1.5,.2008 version of 5.4.7); - modified the conditions under which special measures were required for special design (see 5.2.3.3,

--- Modification of the DC drive voltage fluctuation range (see 5.3.1,.2008 version 5.3.1);

--- increased the use of 60Hz three-phase AC power performance requirements (see 5.3.2); - modified safety and health requirements (see 5.4,.2008, version 5.4); - modified the pressure drop in the airway system (see

6.3.2.2 of the year.2002); - Increased requirements for grease filling or lubricating oil (see 6.1.3.2.3); - modified the distance and angle of the brake adjustment requirements (see 6.1.4,.2008 version 6.3.4); - modified the track travel test method (see 6.4.4,.2008 6.4.4); - modified type test items (see

6.2.3 in version 3.1.3,.2008). This standard is proposed by the China Machinery Industry Federation. This standard by the National Mining Machinery Standardization Technical Committee (SAC/TC88) centralized. The drafting unit. Taiyuan Heavy Machinery Group Co., Ltd., Sinosteel Hengyang Heavy Machinery Co., Ltd. The main drafters of this standard. Wang Xiaoming, Li Aifeng, Cui Changqun, Yang Jiali, Zhang Yanping, Li Guang This standard replaced the previous version of the standard release. GB/T 10604-1989, GB/T 10604-2003, GB/T 10604-2008. Mining machinery is a shovel excavator

1 Scope

China's national standard for electric mining rope shovels - the largest excavating machines used in open pit mining, standing on crawlers, fed by a trailing high voltage cable, and loading a haul truck in three or four passes of a dipper that holds tens of cubic metres. A rope shovel is not a large hydraulic excavator: the dipper is hoisted on wire rope over a boom and crowded forward on a rack, which is a slower motion but one that develops enormous breakout force and, unlike hydraulics, does not lose capability as the machine ages. It specifies the terms and definitions, the types and basic parameters, the technical requirements, the test methods, the inspection rules, and the marking, packaging, transport and storage of electric mining rope shovels. The basic parameters clause is the operative one: the nominal dipper capacity, the rated suspended load, the working ranges of digging and dumping radius and height, the crowd and hoist forces, the propel speed and gradeability, and the total mass - the figures on which a mine matches a shovel to its haul trucks and to its bench height. The technical requirements then cover the structure of the boom, dipper handle and revolving frame, the hoist, crowd, swing and propel machinery with their motors and brakes, the ropes and their attachments, the electrical system with the trailing cable and the high voltage distribution on board, the lubrication, and the operator's cab with its visibility, noise and vibration. The safety provisions are those of a machine that swings a very large mass over ground where people and vehicles work: the swing limits and warnings, the boom support, the access and walkways, the emergency stops, and the earthing of a machine dragging a high voltage cable across a wet pit floor. Issued on 12 July 2017 and in force since 1 February 2018, it replaces GB/T 10604-2008.

This standard specifies the terms and definitions, type and basic parameters, technical requirements, test methods, inspection regulations Then, mark, pack, transport and store. This standard applies to mining machinery reel excavator (hereinafter referred to as "excavator"). On its basis variant of the product, in addition to the basic parameters And the main operating range, but also refer to the use.

2 Normative reference documents

The following documents are indispensable for the application of this document. For dated references, only the dated edition applies to this article Pieces. For undated references, the latest edition (including all modifications) applies to this document.

GB/T 755 Rotating motor quota and performance Anti - rust packaging

GB/T 4879-2016 Mining machinery - Part 2. Loading equipment GB/T

GB/T 13306 signs Safety requirements for dry excavators for mining machinery GB 25523

JB/T 5000 (all parts) General specification for heavy machinery

JB/T 8291 earthwork machinery excavator bucket capacity calibration

3 Terms and definitions

The terms and definitions defined in GB/T 7679.2 apply to this document.

4 Type and basic parameters

4.1 Applicable to open-air mine operations, bucket standard bucket capacity of not less than 4m3, driven by the motor, through the mechanical transmission to turntable in the 360 ° range Any rotation of the machine, by the shovel work device to achieve mineral excavation, lifting, rotation and discharge of the periodic operation, in the machine itself any operation There is no need to move the body in the cycle, the crawler-type walking mechanism to achieve the shift of the self-propelled single bucket excavator. Push the main way to push the gear rack Pressure and wire rope push two types, drive type with DC drive and AC drive. Product structure type shown in Figure 1.