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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 20961-2018

Replacing GB/T 20961-2007

Single-rope drum mine hoists

单绳缠绕式矿井提升机

Issued on: March 15, 2018

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Quarantine;
Standardization Administration of the PRC**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 20961-2007 "Single-wound Mine Hoist", compared with GB/T 20961-2007, except for editoriaity. Changes in the main technical content outside the scope of changes are as follows:

--- Modify the scope of application only for non-explosion-proof environment (see Chapter 1, Chapter 1 of the.2007 edition);

--- Modify the product model representation (see 3.2,.2007 version 3.2);

--- Modified basic parameter list (see

3.3.1 and 3.3.2,

--- Modify the technical requirements of some parts and components (see Chapter 4, Chapter 4 of the.2007 edition);

--- Modified test methods and inspection rules (see Chapters 5 and 6, Chapter 5 of the.2007 edition);

--- Increased storage and maintenance requirements (see 7.8). This standard is proposed by China Machinery Industry Federation. This standard is under the jurisdiction of the National Mining Machinery Standardization Technical Committee (SAC/TC88). This standard is drafted by: Luoyang Mining Machinery Engineering Design & Research Institute Co., Ltd. Participated in the drafting of this standard. CITIC Heavy Industry Machinery Co., Ltd., Shanxi Xinfusheng Machinery Manufacturing Co., Ltd., Jinzhou Mining Machine (Group) Co., Ltd., Xiang Coal Rieter Mining Equipment Co., Ltd., Sichuan Mining Machinery (Group) Co., Ltd., Shandong Taishan Tiandun Mining Machinery Co., Ltd. The main drafters of this standard are. Du Bo, Zhang Bubin, Zhang Lanjun, Wang Shuang, Liu Tongxin, Zhang Hao, Chen Yong, Hu Xiuhai, An Qin, and Hu Xilei. The previous versions of the standard replaced by this standard are.

--- GB/T 20961-2007. Single rope winding type mine hoist

1 Scope

China's national standard for single-rope drum mine hoists. It specifies the types and basic parameters, the technical requirements, the test methods, the inspection rules, and the marking, packaging, transport and storage, and it applies to single-rope drum hoists for vertical and inclined shafts in non-gassy coal mines, metal mines and non-metallic mines, for men and materials. A mine hoist is the only way in and out of a shaft, and it is the machine on which the lives of everyone underground depend. In a drum hoist the rope is wound onto and off a drum, which means the effective radius changes as the rope layers build, the whole weight of the rope and the load is carried by one rope, and there is no counterweight in the friction sense - the machine holds the load by brake and by gearing rather than by rope traction. That construction is simple and robust and it puts every safety requirement onto a small number of components, which is why they are specified as tightly as they are. The braking system carries most of that weight: it must be capable of holding and of stopping a fully loaded conveyance descending at full speed, it must apply automatically on loss of power or of control, and its deceleration must be within limits that do not throw the occupants or allow rope slack. Around it sit the overwind protection, the overspeed protection, the depth indicator and its independent verification, the rope attachment and its safety factor, the drum and its grooving and flange, the gearing and the shaft, and the control and interlock system. The standard sets those requirements and the tests by which each is demonstrated. Issued on 15 March 2018 and in force since 1 October 2018, it replaces GB/T 20961-2007.

This standard specifies the type and basic parameters, technical requirements, test methods, inspection rules, signs, and packages for single rope winding type mine hoists. Loading, transportation and storage. This standard applies to the single rope winding of vertical shafts or inclined shafts for coal mines (non-explosion-proof), metal mines, and non-metallic mines, materials and equipment. Mine hoist (hereinafter referred to as hoist).

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. For undated references, the latest version (including all amendments) applies to this document.

GB/T 191 packaging, storage and transportation logo

GB/T 4879 rust-proof packaging

GB/T 8923.1-2011 Preparation of steel substrates before application of paints. Visual assessment of surface cleanliness. Part 1. Uncoated Steel surface and full removal of the original coating steel surface corrosion rating and processing level

GB/T 10095.1 Accuracy for cylindrical gears - Part 1. Definitions and permissible values for

deviations of gear teeth on the same side

GB/T 10095.2 Accuracy for cylindrical gears - Part 2. Definitions and permissible values for radial synthetic deviation and radial runout

GB/T 11345-2013 Non-destructive testing of welds Ultrasonic testing technology, testing grades and assessment GB/T 13306 signage

GB/T 13325 Noise emitted by machinery and equipment. Basic criteria for operator's position noise measurement (engineering level)

GB/T 13384 general technical conditions for mechanical and electrical product packaging

GB 16423 metal non-metallic mine safety regulations Safety Requirements for GB .20181 Mine Hoist and Mining Hoist

GB/T 25706 Mining Machinery Product Modeling Method

JB/T 1581 Ultrasonic Testing Method for Steam Turbine, Turbogenerator Rotor and Spindle Forgings

JB/T 3277 Mine Hoist and Mine Hoist Hydraulic Station

JB/T 3721 mining hoist and mining hoist winch disc brake shoe Disc springs for

3 Types and basic parameters

3.1 Type Hoist type is divided into single cylinder winding type, double cylinder winding type two.