

ICS 73.100.30
CCS D 92



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

GB/T 33933.1-2017

**Natural stone mining equipment - Safety requirements - Part 1:
Disk sawing machines**

天然石开采设备 安全要求 第1部分：圆盘式锯切机

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**

Table of Contents

- 1 Scope
- 2 Normative reference documents
- 3 Major hazard list
- 4.1 General requirements

Foreword

GB/T 33933 "natural stone mining equipment safety requirements" is divided into the following three parts. - Part 1. Disc sawing machine; - Part 2. Diamond string saws; Part 3. Arm Sawing Machine. This part is part 1 of GB/T 33933. This part is drafted in accordance with the rules given in GB/T 1.1-2009. This part is made by the China Machinery Industry Federation. This part of the National Mining Machinery Standardization Technical Committee (SAC/TC88) centralized. This part of the drafting unit. Fujian Hualong Machinery Co., Ltd., Luoyang Mining Machinery Engineering Design and Research Institute Co., Ltd., Fujian Province VIA Machinery Development Co., Ltd., Huaqiao University. The main drafters of this part. Lin Tianhua, Yang Xianli, Xiao Yiran, Fang Qianshan, Wu Zhisong, Wang Yadong, Yu Leiping, Qiu Wenhuan. Natural stone mining equipment - Safety requirements Part 1. Disc sawing machines

1 Scope

Part 1 of China's national safety standard for natural stone quarrying equipment, covering disk sawing machines. It gives the significant hazard list, the safety requirements and the protective measures for disk saws used in stone quarrying, defined by their physical characteristics and intended use, and the requirements apply to the hazards arising through the stages of the machine's life. A quarry disk saw is a large diamond-tipped blade, often two or three metres across, mounted on a carriage that runs along a rail to cut a slot several metres deep into a rock face. It is one of the more dangerous machines in industrial use: the blade stores an enormous amount of rotational energy, it cuts a material that fractures unpredictably, it runs flooded with water in an environment full of dust and slurry, and the operator works beside a face that may itself move. The standard follows the machinery safety convention of listing the hazards first and then requiring that each be designed out, guarded against, or warned about, in that order.

This part of GB/T 33933 specifies a significant list of hazards, safety requirements and/or protection measures for disc saws for natural stone mining Certification, safety requirements and/or protection measures. This part is a limitation on the use of disc saws

for natural stone mining from physical properties and intended use. As provided in this section Safety requirements apply to the hazards arising from the various stages of the machine life period specified in

5.4 of GB/T 15706-2012. This section applies to the use of disc-type diamond saw blades on natural stone mines for the development of circular saws (hereinafter referred to as "discs saw").

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 2894 Safety signs and guidelines for their use

GB/T 4208-2008 enclosure protection class (IP code) Mechanical electrical safety machinery - Electrical equipment - Part 1. General technical requirements

GB 5226.1-2008 General rules for the use of industrial products GB/T 9969 GB/T 13306 signs

GB/T 13325 Radiation noise of machines and equipment Radiation operator Basic criteria for position noise measurement (engineering grade)

GB/T 15706-2012 General principles of mechanical safety design Risk assessment and risk reduction Mechanical safety emergency stop design principles GB/T 16754-2008

GB/T 16855.1-2008 Mechanical safety control systems - Safety components - Part 1. Design general rules

GB/T 18209.1 Mechanical electrical safety instructions, marking and handling - Part 1. Requirements for visual, auditory and tactile signals

GB/T 18831-2010 Interlocking device design and selection principles for mechanical safety belt protection devices

GB/T 19670 mechanical safety to prevent accidental start Safety of machinery - Safety distance of upper and lower limbs to reach dangerous areas GB/T 23821-2009

3 Major hazard list

The list of significant hazards that may occur in the life of the disk saw in Table 1. 4 safety requirements and/or protective measures

4.1 General requirements

4.1.1 Circular saws shall comply with the safety requirements and/or protective measures in

this chapter. In addition, it is not related to the circular saw but not in this part Involving the major risk, the design of circular saw should be consistent with the principles of GB/T 15706-2012.

chinastandards.org · PREVIEW