

ICS 73.100.30

CCS D 92



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

GB/T 42082-2022

**Rock drill rigs and rock reinforcement rigs for mining - Safety
requirements**

Issued on: December 30, 2022

Implemented on: July 1, 2023

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Preface	
Introduction	
1 Scope	1
2 Normative references	1
3 Terms and Definitions	7
4 Safety Requirements	7
4.1 General requirements	7
4.1.1 General	7
4.1.2 Ergonomics	7
4.1.3 Hot and cold surfaces and sharp edges	7
4.1.4 Hoses, pipes and fittings under pressure	7
4.1.5 Handling of drilling rig and its components	7
4.1.6 Maneuvering and maintenance access	8
4.1.7 Cut off the external power supply	8
4.1.8 Prevention of accidental startup	8
4.2 Driving, walking and operating positions	8
4.2.1 General	8
4.2.2 Operator's position	8

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.

This document is equivalent to ISO 18758-2:2018 "Mining and earth-moving machinery rock drilling rigs and rock reinforcement drilling rigs Part 2. Safety Require".

The following minimal editorial changes have been made to this document.

--- In order to coordinate with existing standards, change the name of the standard to "Safety Requirements for Mining Rock Drilling Rigs and Anchor Drilling Rigs";

--- Added "Note" in Table 1;

--- Include ISO 21507, which is normatively referenced in 4.12.1, in Chapter 2.

Please note that some contents of this document may refer to patents. The issuing agency of this document assumes no responsibility for identifying patents.

Introduction

This document is a Class C standard specified in GB/T 15706-2012.

On the issue of machinery safety, this document is of particular importance to the following stakeholder groups representing market participants.

--- machine manufacturer;

---Mining Company;

---Health and safety agencies (regulatory agencies, accident prevention organizations, market surveillance, etc.).

The level of machinery safety achieved by the above stakeholder groups using this document may affect others, including.

--- machine operator;

---Service providers, such as maintenance;

---Third-party system and technology providers.

The relevant machinery and the extent of the hazards, hazardous situations or hazardous events involved are described in this document.

When the requirements of category C standards are different from those specified in category A or category B standards, for rocks designed and manufactured according to the requirements of category C standards,

For stone drilling rigs and anchor drilling rigs, the requirements of this category C standard take precedence over those of other standards. This made the following assumptions at the time of writing this document.

a) The operator of the machine is a well-trained professional and understands the potential risks of the working environment [see ISO /IEC GUIDE51.

2014 6.1a)];

b) The machine is operated in accordance with the instructions provided by the manufacturer, such as operating instructions (see 7.4.2.2 in ISO /IEC GUIDE51.2014);

c) In order to prevent unauthorized personnel from entering the machine working area, administrative controls are implemented (see ISO /IEC GUIDE51.2014

6.2.2 and notes).

Safety requirements for mining rock drilling rigs and anchor drilling rigs

1 Scope

This document specifies the safety requirements for rock drilling rigs and anchor drilling rigs designed for the following underground or surface operations.

- a) blast drilling;
- b) rock anchoring;
- c) Secondary crushing drilling;
- d) Weishi drilling rig;
- e) mineral exploration, such as by core drilling or reverse circulation;
- f) drainage and gas drilling;
- g) Raise drilling.

NOTE. Drilling rigs can be designed for multiple operations as described above. See ISO 18758-1 for the vocabulary.

This document also applies to earth-moving machinery defined in ISO 6165, modified to become a rock drilling rig or anchor drilling rig.

This document does not apply to the following machines. soil and rock mixture drilling rigs; [geothermal drilling rigs, water well drilling rigs, water jet drilling rigs, micropile drilling rigs machines; surface level directional drilling rigs (HDD) as defined in ISO 21467], Kjeldahl drilling rigs (and casing drivers); wireline tool drilling rigs; advance plus

Solid drilling rigs; sonic drilling rigs; sinking drilling rigs; crane-attached drilling rigs; drilling rigs on derricks; prying drilling rigs.

This document deals with rock drilling rigs and anchor drilling rigs (see ISO 18758-1) listed in Appendix E

significant hazards, hazardous conditions or hazardous occurrences encountered under reasonably foreseeable conditions of misuse.

This document does not apply to rigs manufactured before the date of publication.

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text. Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document.

GB/T 3767-2016 Acoustic sound pressure method Determination of sound power level of noise source and sound energy level Approximate free field above the reflecting surface

Process method (ISO 3744.2010, IDT)

GB/T 15706-2012 Risk Assessment and Risk Reduction of Machinery Safety Design General Principles (ISO 12100.2010, IDT)

GB/T 16937-2020 Earth-moving machinery driver vision test method and performance criteria (ISO 5006.2017, IDT)

GB/T 17248.2-2018 Noise emitted by acoustic machines and equipment is close to a reflective surface with negligible environmental correction

Emission sound pressure level at working position and other designated positions in similar free field (ISO 11201.2010, IDT)

GB/T 21152-2018 Performance requirements and test methods for braking systems of wheeled or high-speed rubber tracked machines for earth-moving machinery

(ISO 3450.2011, MOD)

Note. There is no technical difference between the referenced content of GB/T 21152-2018 and the referenced content of ISO 3450.2011.

GB/T 25607-2010 Definition and Requirements for Protective Devices of Earth-moving Machinery (ISO 3457.2003, IDT)

GB/T 25610-2010 Earth-moving machinery dump truck carriage support device and cab tilt support device (ISO 13333.1994,

IDT)

GB/T 25622-2010 Contents and Format of Driver's Manual for Earth-moving Machinery (ISO 6750.2005, IDT)

ISO 2631-1 Mechanical vibration and shock Evaluation of human exposure to whole-body vibration Part 1.General requirements (Mechanicalvi-