

This article sets the stage for deeper exploration into the different types of drills, key considerations in selection, and the practical aspects necessary for effective rock drilling. ...

In the production and manufacturing process of hydraulic rock drill, there are small impact energy and low impact frequency, and a fault diagnosis method based on the internal mechanism ...

In underground engineering, understanding rock strength parameters is fundamental for rock classification and evaluation, significantly influencing the design and ...

Xu et al. (2022) proposed an on-site identification method of rock images and elemental data using deep learning. Among the above studies, ...

Percussion or Churn Drilling Percussion or churn drilling is an inexpensive method of advancing bore holes through hard consolidated soils, rock, coarse gravel deposits, or formations ...

<p>This paper investigates measurement while drilling for rock strata interface to achieve geological transparency, promote intelligence development, and address the limitations of ...

Abstract. This article proposes a method for detecting the diameter of under-ground rock drilling holes based on intelligent spatial 3D motion sensors. The three-dimensional motion sensors ...

For the phenomenon of a hydraulic rock drill based on an overlapped reversing valve, the mechanical structure of the overlapped reversing form was ...

impact mechanism of the hydraulic rock drill is mainly composed of cylinder body, impact piston, reversing valve, and high pressure accumulator [7]. e impact piston and the reversing valve ...

An experimental investigation considered four types of rock broken by a PDC drill bit with drilling weights ranging from 5 to 12.5 kN and drilling rates ranging from 64 to 128 r/min. ...

The detection method of joint opening degree based on the failure region detection criterion of the drilling parameters of hammer and rotary drilling rigs exhibits high accuracy, ...

While-drilling identification technology is a crucial part of intelligent mining development. The results provide a scientific basis for real-time adjustment of support ...

This work presents a method for on-line condition monitoring of a hydraulic rock drill, though some of the

findings can likely be applied in other applications. A fundamental difficulty ...

Then, the response mechanism of the strength deterioration rate while drilling in the fracture zone is defined, and a model for identifying fracture parameters based on drilling is ...

This article proposes a method for detecting the diameter of underground rock drilling holes based on intelligent spatial 3D motion sensors. The three-dimensional motion sensors are used to ...

Explore essential techniques and considerations for effective rock drilling! ? Learn about tools, methods, safety tips, and various applications. ?

Combined with algorithm analysis and image processing technology, the length and direction of underground rock drilling hole groups are accurately detected, and algorithms ...

Therefore, a method for testing the cutting friction coefficient of rock drilling is proposed in this paper. Based on the independently developed analytical geologic drill bit, the ...

Evolution of Rock Drilling Methods Dawn of the ADSC Age Basic drilling method selection guide for rock using noncoring methods, Littlejohn and Bruce, 1977 (adapted from McGregor 1967).

Inspired by the significant development of voiceprint recognition based on deep learning, we developed an x vectors based method for the fault classification of hydraulic rock drills.

The document provides instructions for maintaining a hydraulic rock drill. It describes how to take a new rock drill into use, including pressurizing accumulators and performing a test run. It also ...

The exploration and development of resources and energy are fundamental to human survival and development, and geological drilling is a ...

Process monitoring contributes significantly to reducing the risk of downhole faults and preventing undesirable events. This study proposes a process monitoring method based ...

Introduction Drilling into rock is a fundamental operation across multiple industries, but not all rock types--or drilling challenges--are created ...

This article proposes a method for detecting the diameter of underground rock drilling holes based on intelligent spatial 3D motion sensors. The three-dimensional motion ...

Rock Drilling Methods There are three methods of rock drilling for production holes: 1. Rotary Drilling 1) High rotational speed, low torque and thrust 2) Low rotational speed, high torque ...



Rock drill valve group detection method

Discover the future of efficient rock excavation with Sandvik's cutting-edge mining rock drill technology. Rocksan Group brings you precision

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