How is the evaluation of Guinea rock drill

How does a rock drilling jumbo record the drilling parameters?
During the drilling process,the rock drilling jumbo real-timely records the drilling parameters by using distance-sampling method,such as the drilling distance (s,mm),the drilling time (t,s),the propelling pressure (pt,MPa),the percussive pressure (pi,MPa),the rotary speed (n,rev/min),and the torque (T,N·m).

How to evaluate the drilling efficiency of a percussive drill rig?
Evaluation of drilling efficiency by coupling v and eThe drilling rate and the specific energy are two indexes to evaluate the drilling efficiency. The optimal drilling efficiency of the percussive drill rig corresponds to the maximum drilling rate and the minimum specific energy.

Why do drilling operators need a new index based on rock properties?
However,drilling operators always change drilling parameters to achieve higher drilling efficiency. Hence,a new index that is only related to rock properties and can be successfully applied under different drilling conditions should be developed to define rock properties.

Is in-tunnel drilling effective in predicting fracture zones?
Employing the MWDTS system, we performed an in-tunnel drilling test in a mountain tunnel. The objective of this study was to evaluate the efficacy of I d for real-time assessment of rock strength and prediction of fracture zones under diverse drilling conditions. The following conclusions can be drawn:

Does rotary non-percussive drilling cause rock failure?
According to the analysis on the SE values at different drilling conditions in rotary non-percussive drilling,the rock failure before the bit is more related to rotary shear than the axial force. Table 2. Calculation of SE based on different drilling parameters in the field test.

What are the input parameters of a percussive drill rig?
The input parameters consist of the weight on bit (WOB),the rotary speed (RPM),the flow rate (Q),and so on. Some of these parameters are similar to those of the rock drilling jumbo,whereas some are different. Therefore,a prediction model of the drilling rate is required for the percussive drill rig.

In this study, a rock drilling jumbo with percussive drilling rigs and the MWD system was used to conduct the rock drilling tests on a rock block. The drilling parameters were ...

This part of ISO 28927 specifies a laboratory method for measuring hand-transmitted vibration emission at the handles of hand-held power driven percussive machines with and without ...

<p>The real-time response characteristics of drilling tools contain important engineering geological

information. By interpreting the drilling data, the rock mass integrity can be ...

In this study, drilling rate index (DRI) is attempted to predict based on UCS and Brazilian tensile strength (BTS) of rocks. Simple and multiple ...

ABSTRACT:. Based on the automatic mineral analysis technology of drill cuttings, the evaluation of rock mechanical parameters of drill cuttings in complex ultra-deep wells is ...

Abstract Performance evaluation of drill bit is very vital to obtain the efficiency of drill bit in mining and oil and gas operation. However, it is paramount to evaluate the performance of drill bits ...

The evaluation of hand-arm vibration in hand-held pneumatic tools (Rock drills) used in the lashotor stone mines in Isfahan by the method of Pneurop Cagi (compressed air and gas ...

Synopsis The rock brittleness is one of the most important rock properties that affect the drill-ability of rocks. It is supposed that the increase in rock brittleness causes the increase in ...

This study focus on evaluating the effect of rock properties and drill parameters on drill bit penetration rate, specific energy, and index of rotational energy.

ABSTRACT: Traditional assessment approach of rock drillability is limited in deep geothermal drilling, especially in Hot Dry Rock (HDR), due to the ultra-high abrasive resistance and ...

Drill Bit Operating Parameters o Weight on Bit (WOB) is the force need in order to drill through a rock. It is provided by drill collars and is applied ...

Abstract This paper develops a rock drillability index to determine rock strength by interpreting percussive pressure, penetration rate and rotary speed etc. drilling performance ...

Rock drillability evaluation is a basic task for oil, gas, and geothermal drilling engineering design that includes bit design, bit selection, and drilling parameter optimization.

This paper evaluates the fragmentation of in-situ rock blasting, and further introduces a unique approach to evaluate rock fragmentation on the ROM pad and the impact ...

In this study, a field-drilling test is performed using a rotary non-percussive drilling machine equipped with a new drilling-monitoring system to investigate the effects of drilling ...

The standard method of physical information acquisition is the measurement of acoustic emission in rocks during drilling. In this process, it is possible to control the dynamic ...

Preparation of a JORC Code compliant resource statement based on an evaluation of historical data - a case study from the Panguna Deposit, Bougainville, Papua New Guinea, in ...

The drill rigs automatically collect the drilling parameters by measurements while drilling (MWD), which are recognised in the construction industry to correlate with the ...

Proper knowledge of the rocks and properties of rock will allow proper selection of the bit and speed of rotation of the drill for fast penetration and reduce the cost of drilling. Since the rock ...

The rock brittleness is one of the most important rock properties that affect the drill-ability of rocks. It is supposed that the increase in rock brittleness causes the increase in ...

In the present work, the excavation of two large tunnels was studied, aiming to obtain correlations between the rock mass properties and the parameters obtained by the ...

Thus the project focusses on the identification of skills needs, applicable for mining modernisation, for rock drill operators (RDOs), winch operators and shaft timber-persons. This study makes ...

The objective of this study is to systematically examine the drilling efficiency and performance of various core drill bits in lunar rock formation using the discrete element method ...

Regression analyses were performed to predict the penetration rate and specific energy of drilling from geo-mechanical properties of rocks. The ...

Abstract Thirteen ExxonMobil operated gas development wells were drilled from 2012 to 2015 at the onshore Hides and Angore fields, Southern Highlands, Papua-New ...

Oni, A.O. and Adebayo, B., Evaluation of the Effect of Rock Strength on Drilling Penetration Rate and Index of Rotation Energy-A Case Study, Brilliant Engineering, 4 (2022), 4713.

Researchers from different countries have been striving to optimize fracture conditions in rock drilling in various geological and geotechnical conditions for many decades.

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

This research overviews the hydrocarbon generation potential of the source rock accessed by drill, subjecting the samples to organic geochemical techniques. Rock-eval VI ...

How is the evaluation of Guinea rock drill

This report documents the evaluation procedure and the evaluation performed by NIOSH on a SECO S215 rock drill and a SECO S215 rock drill with noise controls developed by CSIR ...

Financial evaluation of the electric rock drill The primary objective of the implementation of electric rock drills is to improve the drilling cycle in terms of safety, eliminate dependence on ...

Web: https://www.kwa-andries.co.za