Tunnel support hydraulic rock

The rock support design for such opening depends upon the rock mass strength. In this study a proposed Kathmandu University Geo-Lab tunnel ...

Download Citation | On Feb 10, 2023, Y. J. Liu and others published Mechanical Analysis of Point Anchored Rock Bolt and Double Linings Support in Circular Hydraulic Tunnel | Find, read and ...

The so-called "Non-Deformable Support System" and "Yielding Support System" have been used in tunnel ground support designs in squeezing rock conditions. According to ...

Table 1 gives pres ent use of the three types of primary support systems for rock tunnels in various rock conditions. Each of the three support systems can be used under a wide range of ...

Based on the engineering background of the large-span hard rock shallow buried tunnel of the underground excavation station of Qingdao Metro, the current use of ...

This study focuses on the design and stability analysis of underground structures in the Lesser Himalayan Region of Nepal. The rock support design for such opening depends upon the rock ...

In this paper, we used two empirical rock classification systems of rock mass rating (RMR) and rock quality tunnelling index (Q-system) for the support design of a tunnel in ...

The tunnel displacement and support pressure during the entire process of support-surrounding rock interaction are obtained, which are in agreement with the 3D ...

The compatibility equations of tunnel displacement and support pressure are established accounting for the tunnel displacement prior to support installation. Using the ...

The diversion tunnel of a hydropower station is characterized by low quality surrounding rock and weak structural planes. During excavation, ...

Optimization of the support used when constructing tunnels in soft surrounding rock has long been a hotspot in engineering. To control the deformation of soft rock and ...

In this tunnel, an unexpected portion of 70 linear m of the tunnel consisted of sedimentary deposits of glacial origin (tills) and a weathered, soil-like rock mass. In the ...

Tunnels and underground excavations - Tunneling techniques: Tunnels are generally grouped in four broad

categories, depending on the material through ...

Selecting and designing the most suitable support systems are crucial for securing underground openings, limiting their deformation and ...

A methodology for designing a tunnel support system according to the actual ground conditions and the critical behaviour types is analysed in ...

Currently applied underground space technology support of steel materials and concrete materials which generally have low strength, poor ductility and other characteristics, ...

Using rock mass classifications and equivalent dimension of the tunnel, which is defined as ratio of dimension of tunnel and ESR (Excavation Support Ratio), Barton et al. (1974) proposed a ...

Hard rock formations with layered, anisotropic geological structures are rather common in Norway. The design of tunnel rock support under such ground conditions has been ...

Therefore, a model is put forward to analyze the mechanical behavior of a deeply buried circular hydraulic tunnel jointly supported by double-linings and point anchored rock ...

For example, Sinorock offers these duplex coating rock bolts. Rock bolts with anti-corrosion surface treatment can be used for permanent ...

The rock support design for such opening depends upon the rock mass strength. In this study a proposed Kathmandu University Geo-Lab tunnel and cavern, which passes ...

In order to clarify the impact mechanism of shallow buried soft rock tunnel excavation on the upper existing highway, as well as the mechanism of pipe shed ...

Aiming at the large deformation of surrounding rock during tunnel construction under high ground stresses, this paper takes a high ground stress soft rock tunnel project in ...

Understanding the time-dependent performance changes in tunnel supports through the monitoring data is crucial to predict the long-term stability of deep hydraulic ...

Due to the extremely complex load distribution form and evolution law of soft-rock tunnels under high geo-stress, there has been a long-term lack of theoretical support for ...

Abstract Aiming at the large deformation of sur-rounding rock during tunnel construction under high ground stresses, this paper takes a high ground stress soft rock tunnel project in Yunnan ...

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The stability of an underground tunnel is affected by several factors, such as rock mass properties, in situ stresses, geological conditions, blasting-induced dynamic loading, and ...

This brochure has content on the Hydraulic Attachment Tools such as hydraulic breakers and drum cutters that are used in underground operations. The first hydraulic breaker was ...

This paper presents new valuable field data and a comprehensive approach to the determination of the rock mass classification and tunnel ...

So as to efficiently address the distortion of surrounding rock in tunnels constructed utilizing ADECO-RS, it is crucial to define suitable ...

The design of support for tunnels in weak rock is an iterative process. A good starting point is essential to the process and facilitates safe and economic design. Support design for tunnels ...

The evaluation is based on the use of actually recorded rock mass quality of the headrace tunnel during construction and rock support principle used at the comparable Khimti ...

Engineering Classification of Rock Masses for the Design of Tunnel Support An analysis of some 200 tunnel case records has revealed a useful ...

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