
Underground power station generator

What is the geological structure of the underground powerhouse?

The geological structure of the main underground powerhouse is simple and there are no regional faults and large-scale faults passing through the study area. According to the statistics of exploring caves in the underground powerhouse area, the main structural planes are rock layers and joint cracks.

What is the lithology of underground powerhouse?

The main conclusions are as follows. The lithology of the underground powerhouse is mainly composed of sandstone, conglomerate, and Siltstone. The rock masses have geological conditions for cave formation, and the overall stability of the surrounding rock mass is good.

Why do we need a support system for underground powerhouses?

The support system can effectively reduce the deformation and plastic zone during the excavation of the underground powerhouse. In addition, the supporting setup has obvious effects on limiting the slippage of the soft rock layers.

How to excavate a powerhouse?

The excavation procedure is as follows. Firstly, excavate the ventilation and safety tunnel on the roof of the powerhouse, the traffic tunnel for entering, and the air inlet tunnel of the main powerhouse. After proper support, the main powerhouse and main transformer tunnel are excavated.

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The use of underground power stations combined with tunnels to transport water gives high flexibility in locating power plants and makes it possible to build efficient systems, superior to ...

The conventional FEM cannot simulate the deformation of excavation underground with many soft rock layers well. In the paper, the main powerhouse of the Panlong pumped ...

Underground power station An underground power station is a facility that utilizes a significant natural difference in elevation between two waterways, such as a waterfall or mountain lake, to ...

An underground power station is a type of hydroelectric power station constructed by excavating the major components (e.g. machine hall, penstocks, and tailrace) from rock, ...

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Learn how different kinds of geothermal power plants tap into geothermal resources--consisting of fluid,

heat, and permeability found deep underground--to create a ...

An underground power station is a type of hydroelectric power station constructed by excavating the major components (e.g. machine hall, penstocks, and tailrace) from rock, rather than the ...

1 Introduction The main structure of pumped storage power station is located deep underground and has tall building envelope. The main plant is composed of generator floor, busbar floor, ...

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