Coal mine explosion-proof energy storage battery patent

Can lithium battery pack be used in underground coal mining?
In coal mining industry,specifically in underground coal mining,the requirements on lithium battery pack applications are very stringent with various engineering constraints imposed on them,which,in most cases,make the application of lithium technology in such an environment unfeasible or impractical.

Are underground coal mines dangerous?
Underground coal mines are generally classified as environmentally sensitive areas with the potential build-up of explosive or flammable gases,such as methane,carbon monoxide,coal dust and other gases.

What are explosion-protection techniques?
Explosion-protection techniques (also called type of protection or explosion-protected apparatus) are classed under a generic term,which describes the use of particular techniques for constructing electrical apparatus for use in hazardous areas.

Are explosion-proof cells safe?
While the cells enclosed in an explosion-proof box are considered to be safe,there are reports that the thermal runaway propagation from a single cell will ignite the space within the enclosure to a pressure far beyond its limit [12,18,19].

The utility model relates to a travelling device used for an anti-explosion special storage battery electric locomotive of a coal mine. The travelling device comprises a motor and a speed ...

Requirements for individual batteries and battery packs in coal When the rated energy of the battery pack is greater than 200Wh, the battery pack should be placed separately in an ...

The invention relates to a mine dry-type side-by-side explosion-proof cover for a vertical ventilating shaft, belonging to a ventilation safety facility for a coal mine. The side-by-side ...

The utility model relates to an isolation cabinet for explosion protection and escape in a mine, comprising a casing, an access door, an oxygen generator, a power supply device, a moving ...

The lithium-ion battery (LIB) has the advantages of high energy density, low self-discharge rate, long cycle life, fast charging rate and low maintenance costs. It is one of the ...

In order to carry out the explosion-proof design for coal mine robots reasonably, based on the analysis of coal mine robots and their explosion-proof design, the explosion-proof types for ...

technical field [0001] The invention belongs to the field of coal, in particular to an underground explosion-proof method for coal mines. Background technique [0002] Coal is the main energy ...

The application relates to an explosion-proof wireless charging device, including wireless connection"s the transmitting terminal that charges and the receiving terminal that charges, it is ...

The purpose of this utility model provides a kind of coal mine explosion-proof special type storage battery and heavily joins the formula electric locomotive, and the tractive force of locomotive is ...

Analysis of explosion shock characteristics of battery in flameproof chamber Power batteries for coal mine robots generally have large capacity, and need to be built in a ...

Description technical field [0001] The invention relates to a coal mine explosion-proof lithium battery starting power supply. Background technique [0002] At present, the starting power ...

The invention relates to the technical field of explosion-proof electric locomotives for coal mines, in particular to a hydraulic direct-pushing brake device for an explosion-proof storage battery ...

The utility model relates to the technical field of circuit breakers, in particular to a high-voltage vacuum circuit breaker special for a coal mine explosion-proof cabinet.

An on-line type mining explosive-proof lithium - ion storage battery uninterrupted DC (Direct Current) power source and a control method thereof, which are suitable for the use under a ...

Is your mine still using 20th-century tech in 2025"s challenging environment? The transition to safe, efficient energy storage isn"t coming - it"s already here. With global coal demand ...

The invention provides a method for calculating the underground charging electric quantity of an explosion-proof electric vehicle for a coal mine, which is characterized in that the initial ...

technical field [0001] The invention belongs to the technical field of underground trackless auxiliary transport equipment in coal mines, and in particular relates to an explosion-proof lithium-ion ...

The beneficial effects of the invention are: the application of the lithium battery in the underground coal mine is ensured, the oxygen is isolated by using inert gas when the lithium battery is on ...

The existing energy endowment structure makes coal account for about 70% of my country"s primary energy consumption structure. Because of the special environment of coal mining, the ...

Traditional power systems using lead-acid batteries and diesel generators simply can"t meet modern safety

requirements. But what if we told you explosion-proof lithium-ion systems could ...

The invention relates to an explosion-proof dynamo van for a coal mine. The main structure consists of a tractor, a van seat, a front wheel, a rear wheel, a diesel engineer, an oil tank, a ...

The present invention relates to a kind of explosion-proof pure electric vehicle for coal mine operation, it comprises H type vehicle frame, be fastenedly connected the drive axle in vehicle ...

The energy storage battery for the coal mine and the battery core thereof have the advantages of being large in specific storage density, high in charging and discharging efficiency,...

The lithium-ion battery (LIB) has the advantages of high energy density, low self-discharge rate, long cycle life, fast charging rate and low ...

The invention belongs to the technical field of power control of an explosion-proof vehicle in an underground coal mine, particularly relates to an automatic control device for a power switch of ...

Lithium-ion batteries, the powerhouses behind electric vehicles and renewable energy storage, are now finding their way into coal mines. This integration, however, comes ...

The embodiment of the invention discloses an energy storage battery shell with an explosion-proof function, which comprises a bottom plate, a shell main body and an explosion-proof ...

The invention discloses an explosion-proof storage battery electric locomotive for a coal mine and a walking device with a hydraulic braking mechanism, which comprises wheels, an electric ...

The explosion-proof inspection robot for the underground coal mine comprises a vehicle body, an electric telescopic rod, a camera mechanism, a display screen, a lighting lamp, a storage ...

This article analyzes the design principles of lithium-ion batteries used in coal mines, focusing on the prevention and control strategies for faults such as overcharging, over discharging, short ...

The utility model relates to an explosion-proof pure electric loader frame for a coal mine and a loader, and belongs to the technical field of loader frame production. The anti-collision device ...

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Explosion-proof battery for underground coal mine Explosion-proof battery explosion-pr}x}F battery is a kind of battery used in the environment where there may be explosive gases (such ...

Coal mine explosion-proof energy storage battery patent

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