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Battery energy storage for mining vehicles

Overview

Can battery electric vehicles be used in underground mining?

EXECUTIVE SUMMARY This guideline describes recommended practices for the use of battery electric vehicles (BEVs) in underground mining. Its intent is to provide guidance and an overall discussion about the benefits, drawbacks, and planning needed to design and implement a BEV fleet within an existing or new mine. BUSINESS CASE.

Can a hybrid energy storage system be used for electric mining trucks?

However, since it is difficult for a single battery system to satisfy both the energy and peak power requirements of an electric mining truck, proposes a hybrid energy storage system (HESS) using battery and supercapacitor (SC) to provide enough energy to meet the power requirement under heavier loads and higher driving speeds.

Why is battery technology important in mining?

In the past four decades, the drive for smaller, lighter, more efficient, less expensive, and more energy-dense storage systems has driven innovation in battery technologies. These needs are even more critical in mining applications because BEVs are large, heavy, and have high energy demands.

What is a mining energy storage system (Bev)?

It is similar to any utility distribution system used in fixed industrial or commercial applications. Given the typical capac - ity of the energy storage system on-board a mining BEV, the available electrical energy can be comparable to portions of a fixed plant distribution system.

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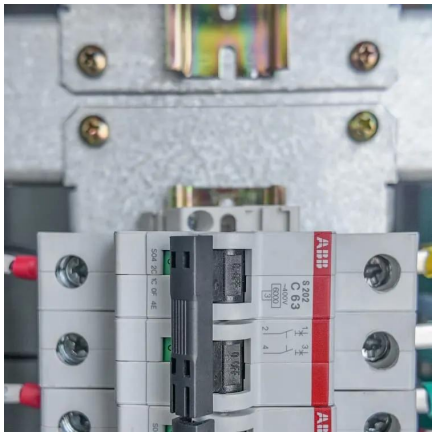

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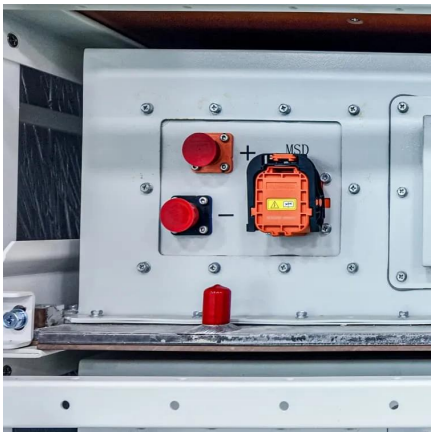

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