SOLAR Pro.

Battery box production plant for mining dump trucks

What is a battery dump truck?

The battery dump truck represents the future, not only for the Hitachi Construction Machinery Group but for the mining industry as a whole, and we are pleased to establish this proving ground on an active mine site and work with First Quantum on advancing this zero emission solution."

Why did Hitachi develop a full battery dump truck?

To meet the high customer demand for the electrification of dump trucks in particular, which are operated in large numbers at mining sites, Hitachi Construction Machinery began collaborating with ABB in June 2021 to develop the full battery dump truck.

Will Hitachi build a fully electric dump truck for heavy duty mining?

The collaboration between Hitachi Construction Machinery and ABB's Traction division to create a fully electric dump truck for heavy duty mining operations has reached a key stage with the completion of the first prototype.

Are Hitachi construction machinery trucks powered by a battery?

Utilizing ABB's innovative battery technology and highly energy-efficient DC/DC converters, Hitachi Construction Machinery trucks are being transformed from diesel to full electric battery operation.

Can a full battery dump truck be used as a test machine?

Hitachi Construction Machinery completed the test machine version of a full battery dump truck, and on January 20,2024, this test machine was shipped to First Quantum. The assembly of the test unit was recently completed in Zambia, and the technological feasibility trial began now that the basic operation has been confirmed.

How does a dump truck work?

In operation on level ground the dump truck will run on its internal battery. While traveling uphill,it will draw power from the external trolley supply. Travelling downhill the truck will use energy recovered from regenerative braking to recharge the battery. This creates a virtuous circle that reduces the energy used by the dump truck.

Sandvik TH550B is a fully battery-powered dump truck for underground mining with a 50-tonne capacity. The 3rd generation Battery Electric Vehicle (BEV) is designed around the Artisan® battery pack with a safe and proven lithium-iron ...

First Quantum's Director Mining, John Gregory, stated "Battery zero emissions development with little to no impact on payload, production, and fleet size is achievable with ...

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Tokyo, June 27, 2024 -Hitachi Construction Machinery Co., Ltd. (TSE: 6305, President and Executive Officer: Masafumi Senzaki; "Hitachi Construction Machinery") is pleased to ...

In December 2022, Epiroc prototyped the world"s first underground battery-electric mine truck (the Minetruck MT42 SG) with a dump box made of fossil-free steel, in partnership with SSAB. The ...

The full battery dump truck was jointly developed with ABB Ltd. ("ABB"), a technology leader in electrification and automation. Based on Hitachi Construction Machinery's extensive ...

Heavy-duty dump trucks: This is the most common type of mining truck, mainly used for rock and earth stripping and ore transportation in open-pit mines. They use ...

The Kansanshi mine provides Hitachi with the infrastructure and facilities that are needed to test a full-battery dump truck, says the OEM, including overhead dynamic ...

Tokyo, 23 June 2021 --Hitachi Construction Machinery (TSE: 6305; "Hitachi Construction Machinery") and ABB today announce that they have signed a collaboration agreement to ...

Rigid Mining Dump Truck. The installation of accurate and easy-to-view Millenium 5 weighing solution and production monitoring enable fleet operators to control loads moved, driving down ...

Hitachi has initiated a trial of the first ultra-large full battery dump truck at First Quantum's Kansanshi mine in Zambia. ... First Quantum's Director Mining, John Gregory, ...

Based on Hitachi Construction Machinery's extensive experience with dump trucks equipped with trolley dynamic charging systems, the full battery dump truck is able to ...

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