Power battery box pack structure design

These findings provide theoretical and practical significance and can provide a reference for the structural design and optimisation of battery boxes.

Firstly, structural improvement design and light alloy material replacement for high-strength steel battery pack of a pure electric vehicle were carried out, which improvd the safety and heat dissipation ...

Provide the ability to Isolate all High Voltage exiting the pack. Provide a structure that contains the cells, relays, fuse and BPS. Here we see the compression of the copper tabs using Aluminum plates with 4 ...

In this work, the structure of the new energy vehicle is optimized by a finite element model, and the side crashworthiness applied to the electric vehicle is analyzed by means of a rigid column.

2.1 Basic Structure of BEV2.2 Structural Analysis of Target Vehicles3.2 Finite Element Model Analysis of Battery Pack Box4 ConclusionThe power battery pack box is the core component of the BEV. The power battery pack provides energy for the whole vehicle, and the battery module is protected by the outer casing. The battery pack is generally fixed at the bottom of the car, below the passenger compartment, by means of bolt connections. The safety of the power battery pack is one o...See more on link.springer ASC & FSGP[PDF]Battery Pack Design - americansolarchallenge Provide the ability to Isolate all High Voltage exiting the pack. Provide a structure that contains the cells, relays, fuse and BPS. Here we see the compression of the copper tabs using Aluminum plates with 4 ...

By improving the layout of the battery pack, the structural rigidity has been significantly enhanced, and the overall safety performance of the battery pack has been improved.

uctures had large volume and complex structures. By establishing models in virtual prototypes and simulating and analyzing the performance parameters of the battery pack box structure.

The main structure of the battery pack box includes the upper-pressure cover, the upper-pressure rod, the lower box body of the battery pack, the inner frame, the lifting lug, the battery module, the single ...

Explore the latest in EV battery pack design, including structure, safety, thermal management, and integration trends driving electric vehicle performance.

Combining with the topology optimization of the internal module end plate, the weight of the power battery pack is reduced by 15.22 kg, the total weight loss ratio is 19.82%, which achieved the ...

Through weight reduction and structural optimization, an innovative power battery pack design scheme is

proposed, aiming to achieve a more efficient and lighter electric vehicle power ...

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