New Energy Battery Pack Mechanical Design

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Abstract This project offers a detailed overview of the process involved in designing a mechanical structure for an electric vehicle"s 18 kWh battery pack.

The battery pack architecture is vital in defining the gravimetric and volumetric energy densities. The cell-to-pack battery technique aims to achieve a higher power-to-weight ...

This paper takes a BEV as the target model and optimizes the lightweight design of the battery pack box and surrounding structural parts to achieve the goal of improving vehicle crash safety ...

Battery pack is a key component of electric vehicles (EVs) because it operates as the main power supply. Despite recent advancements, more improvements are needed to ...

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

Integration of numerical and geometrical CAD models to evaluate battery pack layouts in terms of thermal performance. This work proposes a multi-domain modelling ...

This paper investigates the current state of batteries and frames in new energy vehicles, summarizing and analyzing optimized design solutions that affect their performance and safety.

In this paper, the power battery case of a pure electric vehicle is taken as the research object. Based on the analysis of its structural ...