New energy battery bracket model

Can 3D printing be used to design a battery bracket?

As a consequence,it is particularly imperative to undertake lightweight design optimization for the battery bracket of new energy vehicles by applying 3D printing technology. To actualize this goal,Rhino softwarewas initially employed for 3D modeling to design the battery bracket system for a pure electric vehicle in China.

What is a battery bracket?

It stands as the most significant large component of new energy vehicles, occupying a pivotal position within the battery pack system1. Currently, enterprises utilize aluminum alloy battery brackets, which are severely limited by their heavy weight and high cost. Furthermore, these bat-tery brackets endure heavy loads.

How RHINO software is used to design a battery bracket system?

To actualize this goal,Rhino software was initially employed for 3D modelingto design the battery bracket system for a pure electric vehicle in China. Subsequently,topology optimization design of the battery bracket was carried out by adopting Altair Inspire software.

How to improve battery pack performance for new energy electric vehicles?

Certainly,to strengthen the all-round performance of the battery pack system for new energy electric vehicles,further experimentsare essential. These may include 3D printing of high-performance cooling water circuits for batteries,assessing the impact resistance of battery systems,and other relevant studies.

What are light-weighting strategies for battery pack brackets?

For the time being,light-weighting strategies for battery pack brackets predominantly involve the application of lightweight materials and the implementation of lightweight structural designs. Lightweight material applications for battery pack brackets include the utilization of aluminum alloy,high-strength steel,and composite materi-als.

How is a battery bracket made?

The geometrically reconstructed battery bracket exhibits a clear structure. The lower part of the bracket can be manufactured by stamping,while the lugs can be produced through milling or stamping processes. Welding can be utilized for connecting the bracket with the lugs,thus fulfilling the requirements for mass production within the enterprise.

The utility model relates to the technical field of battery installation, in particular to a new ...

The utility model relates to the technical field of new energy vehicles, in particular to a new ...

The utility model discloses a new energy automobile battery bracket, which comprises a base, ...

Nowadays, what captures consumers" primary attention is how to purchase electric vehicles with long range and desirable price. Lightweight construction stands as one of the most effective ...

The utility model discloses a new energy automobile battery bracket, which comprises a base, a first fixing frame, a second fixing frame and an inner mounting seat, wherein the inner groove...

This study takes a new energy vehicle as the research object, establishing a three-dimensional model of the battery box based on CATIA software, importing it into ANSYS ...

As a consequence, it is particularly imperative to undertake lightweight design optimization for the battery bracket of new energy vehicles by applying 3D printing technology. ...

The application of the digital twin approach was demonstrated through a case study for the battery bracket of a new energy commercial vehicle: The DTMAR model for the ...

A battery pack structure model is imported into ANSYS for structural optimization under sharp acceleration, sharp turn and sharp deceleration turn conditions on ...

As a consequence, it is particularly imperative to undertake lightweight design ...

Taking the structural performance for the battery bracket of new energy commercial vehicles as an example, this paper builds a unit-level digital twin model--DTMAR. ...

In an effort to broaden the design possibilities of the lower bracket of the ...

lightweight design optimization for the battery bracket of new energy vehicles by applying 3D printing technology. To actualize this goal, Rhino software was initially employed ...

With the intensification of national policy support and the enhancement of new energy vehicle technology, new energy vehicles have been widely used and promoted. In ...

The utility model discloses a new energy automobile battery bracket, comprising a base plate, the bottom plate upper end is fixed with the base to the standing groove has been seted up in...

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The utility model relates to the technical field of new energy vehicles, in particular to a new energy vehicle battery bracket, which solves the problem of low fixity and bearing capacity of the...

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