

How a battery design is developed?

The design solutions are assessed from an assembly, disassembly and modularity point of view to establish what solutions are of interest. Based on the evaluation, an "ideal" battery is developed with focus on the hardware, hence the housing, attachment of modules and wires, thermal system and battery management box.

What happens after a battery module is assembled?

After the battery module is assembled, it needs to be placed into the battery tray. As this tray is a key structural component of the vehicle as well as integral in protecting the battery cells, it needs to be of the highest strength and stability.

What is a battery module?

At the heart of every EV lies a remarkable technological innovation - the battery module. These compact, powerful energy storage units are revolutionizing the automotive industry and have become the backbone of sustainable transportation. Central to the development of high-performance EVs is the design and engineering of the battery module.

How does a battery tray assembly work?

The battery tray assembly consists of several production steps. Depending on the battery design and manufacturing processes, manual tightening with bolt positioning and process control, or flow drill fastening with K-Flow technology can bring the needed process quality, productivity and flexibility.

How a battery can be modularised?

A battery has several ways to implement modularisation and among these are design of the housing and modules as well as concerning the management of its environment.

How are internal and external batteries benchmarked?

Thereafter, benchmarking of internal and external batteries is performed by using the functions as guidelines, resulting in a variety of design solutions. The design solutions are assessed from an assembly, disassembly and modularity point of view to establish what solutions are of interest.

With the rapid growth in new energy vehicle industry, more and more new energy vehicle battery packs catch fire or even explode due to the internal short circuit. Comparing with traditional ...

Download scientific diagram | Schematic representation of a battery system and different battery components to illustrate the possible levels of assembly. Drawing from [8] adapted and...

The equipment is mainly an automatic assembly line for new energy power batteries: after decompressing the complete set of drawings, there are more than 300 MB, and the bus has ...

New energy battery assembly drawings

Every company, new or old, that is in the field of renewables or electric vehicles, is looking for even more reliable and affordable storage technology. Battery energy storage provides several valuable services and advantages in stationary, renewable grid services and electric mobility. In stationary storage and renewable grid service battery energy storage provides for frequency ...

To become more environmental friendly, Volvo wants to exchange the combustion engines with electrical engines and replace the liquid fuel with batteries. Adding a part to a vehicle means it must be assembled as well as disassembled which results in a need for a product that is optimal for an assembly-line.

The document is part of the automated assembly line for new energy power batteries. It is mainly used for the automated unpacking and online delivery of power battery cells. The main equipment is an ABB six-axis articulated robot, an AGV trolley, a powered roller conveyor line, and an unpowered roller conveyor line.

After recycling the batteries, the raw material can be utilized to create new batteries for electric vehicles, telephones, computers, and other electronic devices.

The invention discloses a new energy automobile battery assembling process which comprises an installation plate, wherein a battery outer box is installed on the top side of the...

As an important part of lithium-ion batteries, the cathode material can directly affect the performance of lithium-ion batteries. However, with the increasing demand for high-energy and high-power ...

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We have outlined a complete battery assembly process for prismatic cells - from the single cell to the finished battery pack. We help our customers develop unique joining processes and select the technologies that best fit the individual requirements and challenges of ...

Assembling the battery tray involves several complex and coordinated production steps--all representing different challenges and opportunities. Battery tray assembly includes many process stages, including tightening, applying the ...

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New energy battery assembly drawings

We have outlined a complete battery assembly process for prismatic cells - from the single cell to the finished battery pack. We help our customers develop unique joining processes and select ...

The equipment is mainly an automatic assembly line for new energy power batteries: after decompressing the complete set of drawings, there are more than 300 MB, and the bus has more than 1,000 parts. In the feeding conveyor belt, the manipulator grabs the lower bracket and enters the tooling plate of the double-speed chain.

The invention discloses a new energy battery box body assembly structure which comprises side profile materials, end surface profile materials, water cooling profile materials and a...

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