Disassembly and processing of new energy storage charging piles

How to design a battery disassembly system?
The design of the disassembly system must consider the analysis of potentially explosive atmospheres (ATEX) 1 of the area around the battery pack and, if necessary, adopt tools enabled to work in the corresponding ATEX zone.

Is the void of battery design regulation a challenge to automatic disassembly?
It is well known that the current void of battery design regulation created a heterogeneous ensemble of design solutions that represent a challenge to automatic disassembly . New EU battery regulation defines requirements on sustainability, safety, labelling and information on the batteries marketed and put on service in the EU.

Are battery pack designs a key obstacle to automated disassembly?
As identified in various studies,a key obstacle is the significant variation in battery pack designs,which complicates the automation process . Thompson et al. highlighted that the diversity in battery pack designs,along with the use of various fixtures and adhesives,impedes automated disassembly.

Why do manufacturers need to provide detailed information about battery disassembly?
The obligation for the manufacturers to provide detailed information on the disassembly sequence,fastening methods,and SoX enables overcoming the lack of information from the original equipment manufacturers(OEMs) regarding battery disassembly .

Can EV Lib disassembly be automated?
To address this issue, Hellmuth et al. introduced a method for the automated assessment of EV LIB disassembly. The method comprises two evaluation categories, where the first pertains to the feasibility of automating disassembly operations, and the second focuses on determining the necessity of automation.

What is pack-to-module disassembly?
Most of the literature papers are focused on pack-to-module disassembly . Disassembling the pack-to-module is a crucial step in EVB disassembly,initiating the repurposing,recycling or reusing process by separating modules from other EVB components such as the mounting frames,wirings,hoses,and printed circuit boards.

Energy Storage Technology Development Under the Demand-Side Response: Taking the Charging Pile Energy Storage ... 4 Conclusion In the context of demand response, electric vehicles have obtained a more flexible development environment, which has become an important measure for the diversifi-cation of the energy supply and reduction ...

Analysis of emerging concepts focusing on robotised Electric Vehicle Battery (EVB) disassembly. Gaps and

challenges of robotised disassembly are reviewed, and future ...

Circular industry energy storage charging pile disassembly plan. Abstract: With the construction of the new power system, a large number of new elements such as distributed photovoltaic, ...

First, based on a detailed analysis of major challenges incurred by large-scale EoL LIBs, two technical pillars to uphold LIB disassembly technology, i.e., artificial intelligence ...

In this paper, the battery energy storage technology is applied to the traditional EV (electric vehicle) charging piles to build a new EV charging pile with integrated charging,...

The invention discloses a charging pile disassembly and recovery processing method, which adopts a robot with a visual recognition system, wherein the robot is provided with a mechanical...

In view of the above situation, in the Section2of this paper, energy storage technology is applied to the design of a new type charging pile that integrates charging, discharging, and storage ...

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