

Battery pack squeeze





Overview

How does squeezing pressure affect the temperature of a battery?

The higher the squeezing pressure, the tighter the battery jelly roll structure, and the faster the reaction; thus, the more gas is generated per unit time, and the more violent the jetting. The resulting intense exothermic reaction increases the TR temperature of the squeezed battery.

How can a battery pack be stabilized in an EV?

In order to prevent this, a compressive force is usually applied to the top surface of the battery packs through tensioning bolts and retainer frame. US Patent 7507499 illustrates one such design for stabilising a battery pack in EVs by using a cover-pad-tray retention arrangement.

What happens if a battery is heated in a squeezed state?

Heating the battery in a squeezed state causes thermal runaway (TR). The initial temperature of the TR under the squeeze state is reduced. The TR in the squeezed state is accompanied by violent injection. The danger of the battery TR in a squeezed state increase. 1. Introduction.

How does a car battery pack work?

A tray that could be bolted to a part of the vehicle structure provides the support to the battery pack. Tensioning bolts are fastened after assembling the frame so that the beams are drawn against the corner pads in the longitudinal and lateral directions to periph-erally squeeze the battery modules of the battery pack towards one another.



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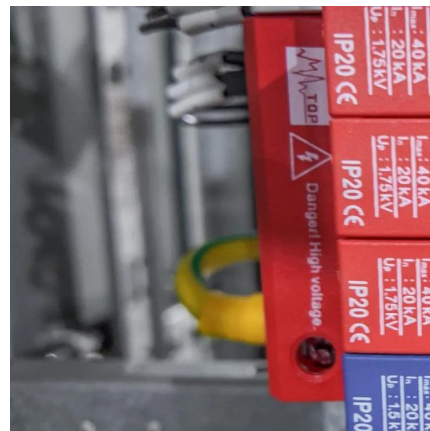


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Effect of mechanical extrusion force on thermal runaway of ...

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