

Kongres Container

Air-cooled energy storage battery structure



Overview

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There are a number of well-liked, innovative air-cooled techniques that improve cooling performance without compromising cost, including the placement of ducts, fins, battery pack (BP).

This paper focuses on the thermal management of lithium-ion battery packs. Firstly, a square-shaped lithium iron phosphate/carbon power battery is selected, and a battery pack composed of 12 series-connected modules is constructed, adopting a parallel ventilation and forced air-cooling mechanism.

In this article, simulation is carried out for the design of air-cooled battery packs with aligned, equally spaced staggered, and nonequally spaced staggered arrangements, based on experimental validation.

Tutorial model of an air-cooled battery energy storage system (BESS). The model includes conjugate heat transfer with turbulent flow, fan curves, internal screens, and grilles. It features several interesting aspects:

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