

ContainerPower Energy Solutions

Battery Cabinet Base Station Energy Heat Shrinking Process



Overview

For the lithium iron phosphate lithium ion battery system cabinet: A numerical model of the battery system is constructed and the temperature field and airflow organization in the battery cabinet are obtained, the experimental results verify the rationality of the model; The influences of inlet velocity, single battery spacing and battery pack spacing on the heat dissipation performance of the battery cabinet are studied, the results can support the design, operation and management of the energy storage cabinet; The results show that the battery cabinet can be cooled by natural convection under low-rate operation, and forced air cooling is required under high-rate operation; the maximum temperature and maximum temperature difference of the cabinet show a trend of first decreasing and then increasing with the increase of the battery spacing; the battery pack spacing does not have a significant impact on the heat dissipation performance of the battery cabinet, so the installation space can be saved by reducing the battery pack spacing. What is lithium-ion battery energy storage cabin?

Lithium-ion battery energy storage cabin has been widely used today. Due to the thermal characteristics of lithium-ion batteries, safety accidents like fire and explosion will happen under extreme conditions. Effective thermal management can inhibit the accumulation and spread of battery heat.

Does guide plate influence air cooling heat dissipation of lithium-ion batteries?

Due to the thermal characteristics of lithium-ion batteries, safety accidents like fire and explosion will happen under extreme conditions. Effective thermal management can inhibit the accumulation and spread of battery heat. This paper studies the air cooling heat dissipation of the battery cabin and the influence of guide plate on air cooling.

How to improve the air cooling effect of battery cabin?

The air cooling effect of battery cabin was improved by adding guide plate. There is better consistency between the modules and the modules can operate at more appropriate environment temperature. Content from this work may be used under the terms of the Creative Commons Attribution 3.0

licence.

How to simulate a battery cabin?

Firstly, a simulation model is established according to the actual battery cabin, which divided into two types: with and without guide plate. Then, at the environment temperature of 25°C, the simulation air cooling experiment of the battery cabin was carried out. The working condition of module was 1C, and the air speed was set to 4m/s.

Battery Cabinet Base Station Energy Heat Shrinking Process

Contact Us

For catalog requests, pricing, or partnerships, please visit:
<https://websparafotografos.es>