LLSE CONTAINERS

Liquid Cooling Energy Storage Framework

Overview

What is a 5MWh liquid-cooling energy storage system?

The 5MWh liquid-cooling energy storage system comprises cells, BMS, a 20’GP container, thermal management system, firefighting system, bus unit, power distribution unit, wiring harness, and more. And, the container offers a protective capability and serves as a transportable workspace for equipment operation.

What is a hierarchical framework for liquid cooling?

A hierarchical framework was developed that acknowledges that there are multiple paths to follow to achieve liquid cooling from computer room air handlers (CRAHs), to in-row coolers, to in-rack solutions such as rear door heat exchangers, to cooling at the server or chip level, to immersion cooling.

What are the functions of the energy storage system?

The energy storage system supports functions such as grid peak shaving, frequency regulation, backup power, valley filling, demand response, emergency power support, and reactive power compensation. The 2.5MW/5.016MWh battery compartment utilizes a battery cluster with a rated voltage of 1331.2V DC and a design of 0.5C charge-discharge rate.

Where is the liquid cooling unit located?

The liquid cooling unit, firefighting system, confluence chamber, and power distribution room are located at one end of the cabin, with the liquid cooling unit taking up the majority of the space. The liquid cooling piping runs along the bottom of the cabin, while the firefighting piping and wiring are laid out at the top.

Liquid Cooling Energy Storage Framework

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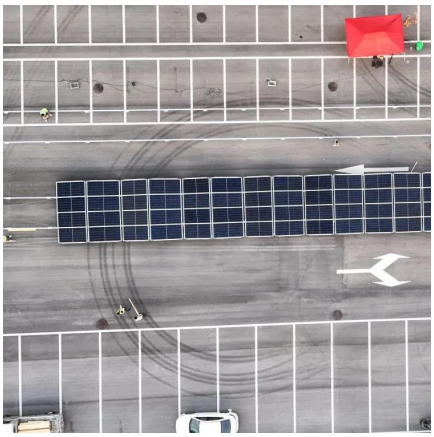

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