

Diagram of liquid cooling system of energy storage power station

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 liquid cooling unit?

The product installs a liquid-cooling unit for thermal management of energy storage battery system. It effectively dissipates excess heat in high-temperature environments while in low temperatures, it preheats the equipment. Such measures ensure that the equipment within the cabin maintains its lifespan.

How does a grid-scale energy storage system work?

This example models a grid-scale energy storage system based on cryogenic liquid air. When there is excess power, the system liquefies ambient air based on a variation of the Claude cycle. The cold liquid air is stored in a low-pressure insulated tank until needed.

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.

What is a liquid cooling thermal management system?

The liquid cooling thermal management system for the energy storage cabin includes liquid cooling units, liquid cooling pipes, and coolant. The unit achieves cooling or heating of the coolant through thermal exchange. The coolant transports heat via thermal exchange with the cooling plates and the liquid cooling units.

How to choose an energy storage unit?

The choice of the unit should be based on the cooling and heating capacity parameters of the energy storage cabin, alongside considerations like installation, cost, and additional functionalities. 3.12.1.2 The unit must utilize a closed, circulating liquid cooling system.



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