

Espay Solar Energy S.L.

Finnish industrial energy storage device



Overview

Finnish cleantech startup TheStorage has developed a solution that could cut energy costs by up to 70% and carbon emissions by up to 90%. The system converts renewable electricity into heat, stores it in sand, and delivers it for on-demand industrial heating. This operational pilot. The Finnish start-up says its sand battery technology is scalable from 20 to 500 MWh with charging power from 1 to 20 MW, depending on industrial needs. Polar Night Energy is attracting worldwide attention for their innovative thermal sand battery. If you have ever walked barefoot along a beach at. History was made in Pornainen on 25 August 2025, when Finland's Minister of Climate and the Environment, Sari Multala, officially inaugurated the world's largest sand-based thermal storage, also known as a sand battery.

Finnish industrial energy storage device

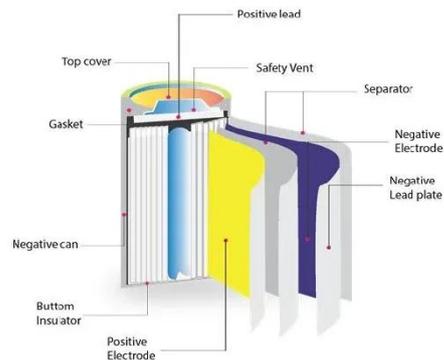


Finnish company creates an innovative sand battery

Finnish company creates an innovative sand battery Polar Night Energy has developed a thermal energy storage system which supplements renewable energy sources and reduces our ...

Finland's Sand-Based Heat Storage System Offers Path to Industrial

A Finnish startup's sand-based thermal storage system, now in industrial pilot, converts cheap renewable electricity into on-demand heat, potentially slashing energy costs and carbon ...



A scalding hot 'sand battery' is now heating a small Finnish town

By channelling excess energy from the grid and locally produced solar and wind energy to heat up sand to a whopping 842 degrees Fahrenheit (450 degrees Celsius), this new sand battery ...

TheStorage launches its first industrial-scale sand-based heat

storage

Finnish cleantech startup TheStorage says that its thermal storage technology could reduce industrial energy costs by up to 70% and cut carbon emissions by as much as 90%. The ...



Finnish startup uses sand to slash industrial heat emissions by 90%

Finland is leading the race to decarbonise industrial heat emissions, using sand to produce fossil-free steam.

World's largest Sand Battery now in operation in Finland

The Sand Battery is a high-temperature thermal energy storage system that stores clean and affordable electricity as heat in sand or similar solid materials. It can be used to produce heat for ...



Power Conversion System

- Single-stage three-level modularization
- Multi-branch input to reduce battery series and parallels connection

Hot sand for a cooler climate: scalable sand-based heat storage cuts

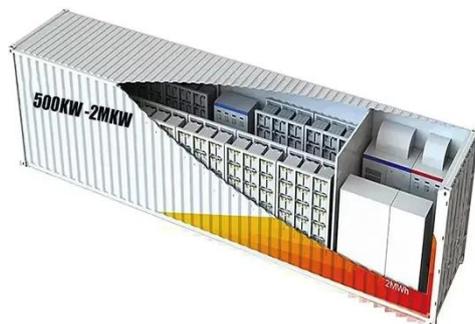
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emissions by up to 90%. The system converts renewable electricity into heat, stores it in ...



Finnish Company Launches Industrial-Scale Sand-Based Thermal ...

Finnish clean-tech startup TheStorage recently launched its first industrial-scale sand-based thermal storage system. This technology can convert renewable energy into thermal energy stored in ...



New 'sand-in-motion' battery offers 10x more heat transfer efficiency

Finnish startup launches a "sand-in-motion" pilot, delivering fossil-free steam to a brewery and cutting industrial energy costs.

Finnish innovation - the world's largest sand-based thermal storage

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