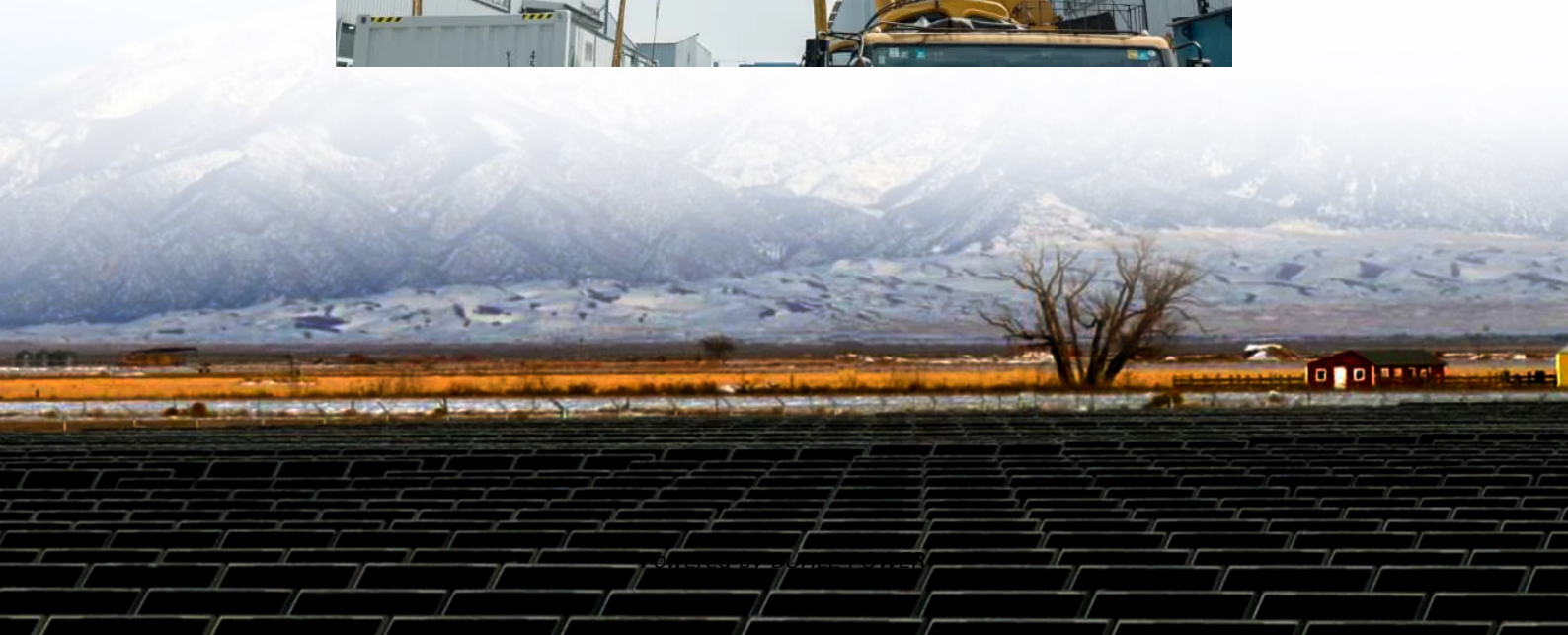


Various sodium-sulfur battery container base stations





Overview

Why are sodium-sulfur batteries used in stationary energy storage systems?

Introduction Sodium-sulfur (Na-S) batteries with sodium metal anode and elemental sulfur cathode separated by a solid-state electrolyte (e.g., beta-alumina electrolyte) membrane have been utilized practically in stationary energy storage systems because of the natural abundance and low-cost of sodium and sulfur, and long-cycling stability , .

What are sodium-sulfur batteries?

Sodium-sulfur (Na-S) batteries that utilize earth-abundant materials of Na and S have been one of the hottest topics in battery research. The low cost and high energy density make them promising candidates for next-generation storage technologies as required in the grid and renewable energy.

Who makes sodium sulfur batteries?

Utility-scale sodium-sulfur batteries are manufactured by only one company, NGK Insulators Limited (Nagoya, Japan), which currently has an annual production capacity of 90 MW . The sodium sulfur battery is a high-temperature battery. It operates at 300°C and utilizes a solid electrolyte, making it unique among the common secondary cells.

What is a standard NaS battery container?

A standard single NAS battery container has 1.45 MWh energy capacity. The containers are stackable, enabling utility scale energy storage systems. We supply containerized NAS battery systems: one standard 20-ft container has 1.45 MWh energy capacity. The compact form enables easy transportation and quick installation at our customers' sites.



Various sodium-sulfur battery container base stations

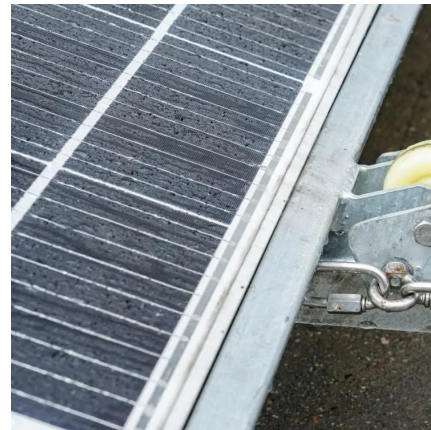


NAS Batteries

NAS battery container comprises 6 modules with 192 cells each. NAS battery cells consist of sodium as the negative electrode and sulfur as the positive one. A beta-alumina ceramic tube ...

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[BASF, NGK launch advanced sodium-sulfur \(NAS\) battery ...](#)

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[BASF and NGK release advanced type of sodium-sulfur batteries ...](#)

Jun 10, 2024 · Ludwigshafen, Germany, and Nagoya, Japan, June 10th, 2024 - BASF Stationary Energy Storage GmbH, a wholly owned subsidiary of BASF, and NGK INSULATORS, LTD.

...



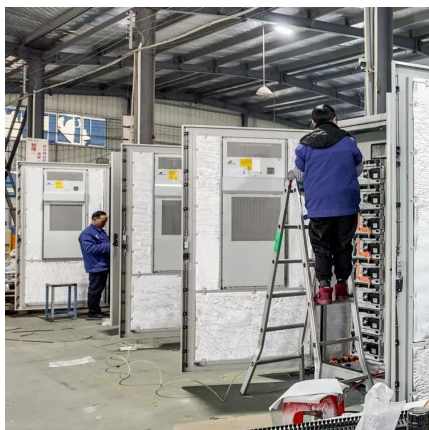
[Sodium Sulfur Battery](#)

A sodium-sulfur battery is defined as a secondary battery that utilizes molten sodium and molten sulfur as rechargeable electrodes, with a solid sodium ion-conducting oxide (beta alumina) ...



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Sodium Sulfur (NaS) Batteries were originally developed by Ford Motor Company in the 1960s and subsequently the technology was sold to the Japanese company NGK. NGK now ...



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[Global Containerised Sodium-Sulfur Battery Supply, Demand ...](#)

A containerized sodium-sulfur (NaS) battery system is a large-scale energy storage solution where sodium-sulfur batteries are housed in a shipping container or similar modular enclosure.
...



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