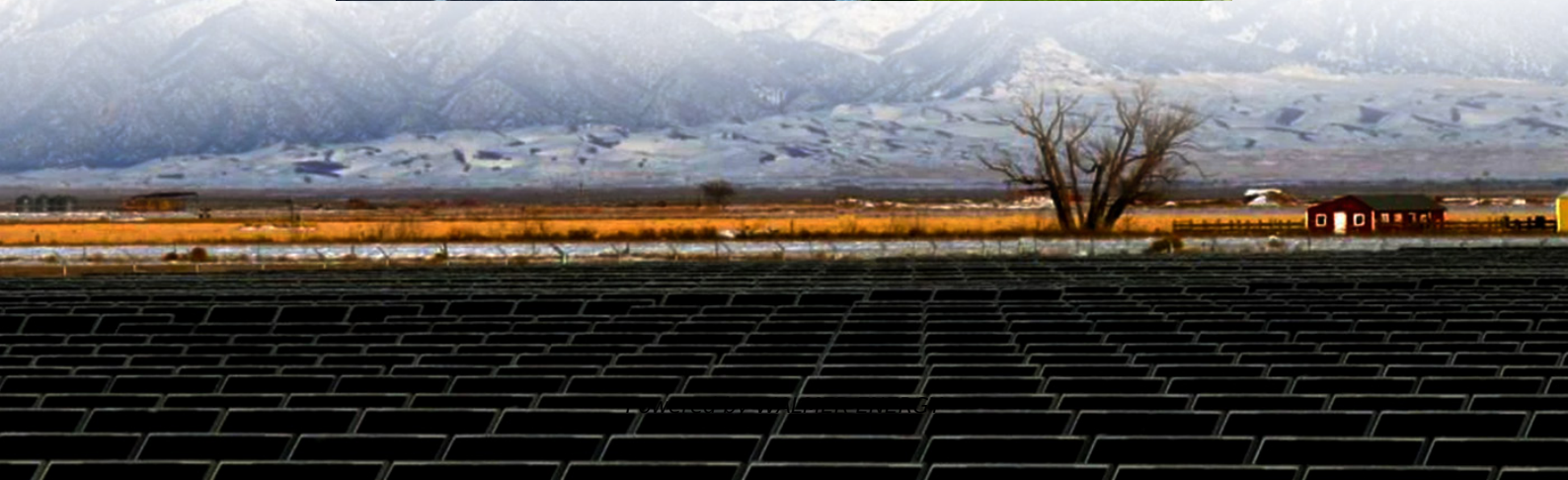


Corrosion-resistant energy storage containers for field operations





Overview

Why is corrosion resistance important for macro packaging?

For macro packaging, ensuring the corrosion resistance of packaging materials in the TES system has become its main problem, because it is not only related to the safety of food in the transportation process but also related to the long-term use and complete function of the entire energy storage system , .

What is corrosion inhibitor technology?

The corrosion inhibitor molecules are adsorbed on the surface of the container to form a protective layer, which greatly reduces the corrosion rate of the container in an acidic environment. At present, corrosion inhibitor technology is also developing in the field of energy storage.

Can PCM be used in thermal energy storage units?

Some researchers have studied the addition of PCM in different thermal energy storage units. In all the possible applications PCM are normally encapsulated in containers, therefore the main interest remains on designing a lightweight, non-corrosive, high conductive and low cost container , , , .

What are thermal energy storage systems?

To accomplish these aims, new technologies such as thermal energy storage (TES) systems have been designed to be implemented in applications such as cold storage systems, solar power plants or comfort building services , , , , , .



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Corrosion of metal containers for use in PCM energy storage

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Review of research progress on corrosion and anti-corrosion ...

Jul 1, 2023 · Review Article Review of research progress on corrosion and anti-corrosion of phase change materials in thermal energy storage systems Mingshun Liu, Xuelai Zhang, Jun Ji, ...

Anti-corrosion measures for energy storage containers

Adding corrosion inhibitors has become one of the main anti-corrosion methods. The technology is used in many production processes, including the production of petroleum products. At ...

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