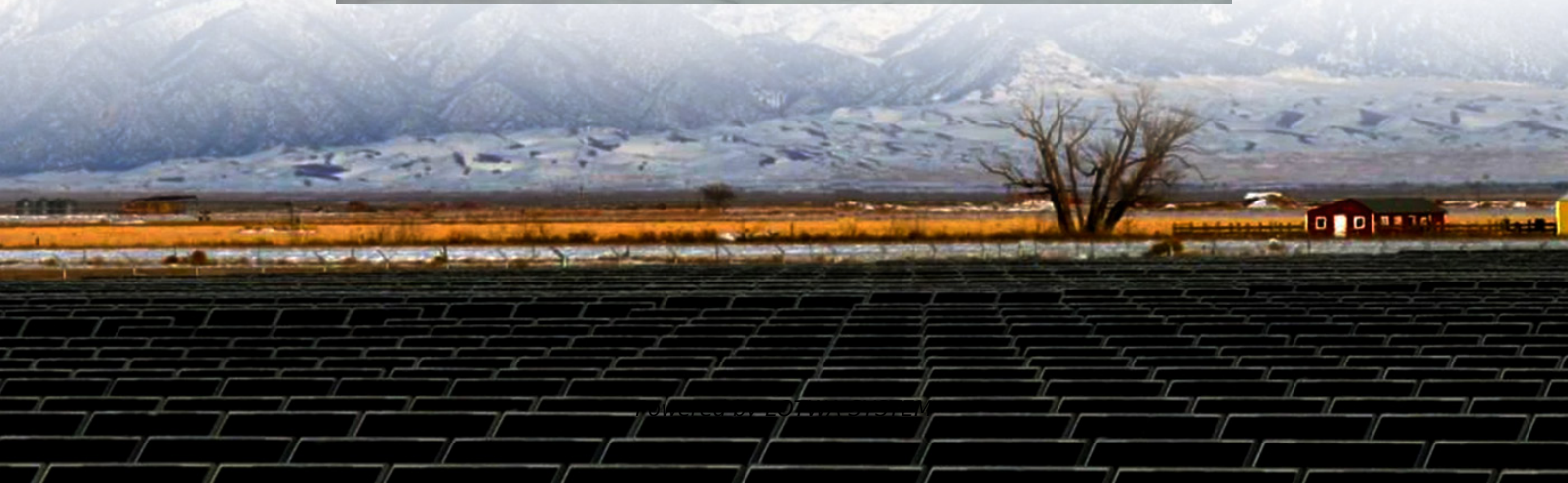


Corrosion-resistant energy storage containers used by energy companies





Overview

In recent years, thermal energy storage (TES) systems using phase change materials (PCM) have been widely studied and developed to be applied as solar energy storage units for residential heating and c.

Which energy storage and conversion devices are most promising?

Electrochemical energy storage and conversion (EESC) devices, including fuel cells, batteries and supercapacitors (Figure 1), are most promising for various applications, including electric/hybrid vehicles, portable electronics, and space/stationary power stations.

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 , , , , , .

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 , , , .

Which stainless steel can be used as a sp21e container?

Stainless steel 304 and stainless steel 316 are resistant to all the tested PCM. Aluminium should be avoided as an SP21E container. Copper is corroded by both fatty acid eutectics. 1. Introduction Energy policies are nowadays focused on using solar energy and reusing the waste heat of the industry to use them as a primary energy source.



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