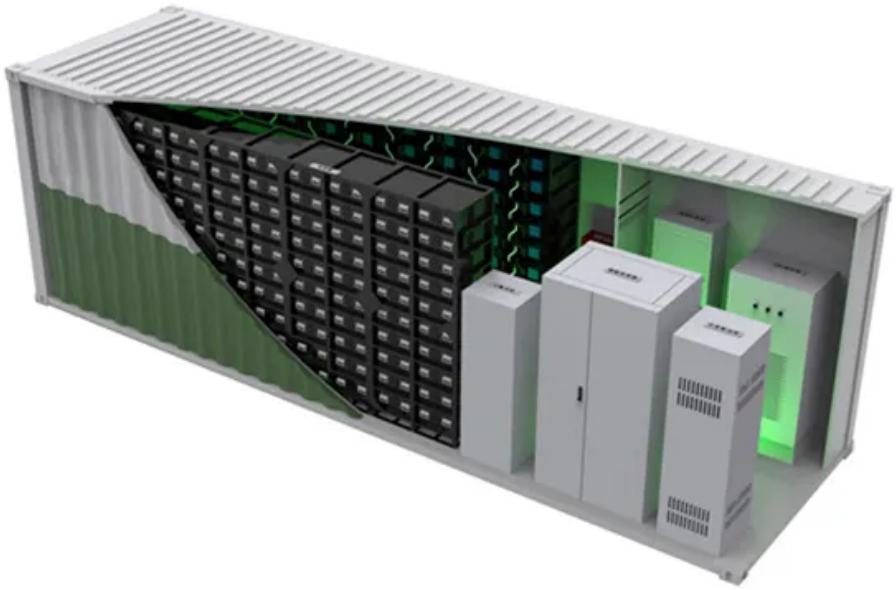
SolarTech Power Solutions

Swiss coal-to-electricity energy storage products



Overview

Can molten salt thermal energy storage be integrated with coal-fired power plants?

Although coal-fired power plant has been coupled with thermal energy storage to enhance their operational flexibility, studies on retrofitting coal-fired power plants for grid energy storage is lacking. In this work, molten salt thermal energy storage is integrated with supercritical coal-fired power plant by replacing the boiler.

What is E2s power thermal energy storage technology?

The E2S Power thermal energy storage technology has been validated in the E2S demonstration facility in Belgrade and enables the transformation of the coal power plants into green energy storage facilities and producers of CO2 free electricity.

Can coal-fired power plants be retrofitted for grid energy storage?

Grid energy storage is key to the development of renewable energies for addressing the global warming challenge. Although coal-fired power plant has been coupled with thermal energy storage to enhance their operational flexibility, studies on retrofitting coal-fired power plants for grid energy storage is lacking.

What is Twest energy storage?

A novel energy storage system, TWEST (Travelling Wave Energy Storage Technology) – simple, compact and self-contained – is at the heart of the E2S power plant conversion concept. TWEST consists of three key components: 1 – electric radiant heaters; 2 – MGA storage blocks; and 3 – steam generators in an insulated enclosure.

What is a traveling wave energy storage technology (Twest TM)?

The implementation of the solution for the existing coal power plants would

involve the installation of the Traveling Wave Energy Storage Technology (TWEST TM) system that includes in one module the following: electric radiating heaters, MGA storage blocks, and steam generators.

What are energy storage materials?

Energy storage materials are based on Miscibility Gap Alloys (MGA) which have been developed by Australian partner MGA Thermal. These blocks consist of graphite and aluminium, the materials that have a long life, are abundant, safe and recyclable.

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