

Title (en)

Thermoelectric energy storage system and method for storing thermoelectric energy

Title (de)

Thermoelektrisches Energiespeichersystem und Verfahren zur Speicherung von thermoelektrischer Energie

Title (fr)

Système de stockage d'énergie thermoélectrique et procédé de stockage d'énergie thermoélectrique

Publication

EP 2182179 A1 20100505 (EN)

Application

EP 08160520 A 20080716

Priority

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Abstract (en)

A system and method for thermoelectric energy storage is described. A thermoelectric energy storage system having at least one hot storage unit (x, y, z) is described. In a preferred embodiment each hot storage unit (x, y, z) comprises a hot tank and a cold tank connected via a heat exchanger and containing a thermal storage medium. The thermoelectric energy storage system (10) also comprises a working fluid circuit for circulating working fluid through each heat exchanger (24, 30, 36, 38, 40) for heat transfer with the thermal storage medium. Improved roundtrip efficiency is achieved by minimizing the temperature difference between the working fluid and the thermal storage medium in each heat exchanger (24, 30, 36, 38, 40) during heat transfer. This is realized through modification of thermal storage media parameters.

IPC 8 full level

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CPC (source: EP US)

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Citation (applicant)

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