

Title (en)
ENERGY STORAGE DEVICE AND THERMAL ENERGY STORAGE METHOD

Title (de)
ENERGIESPEICHERVORRICHTUNG SOWIE VERFAHREN ZUR SPEICHERUNG VON ENERGIE

Title (fr)
DISPOSITIF DE STOCKAGE D'ÉNERGIE ET PROCÉDÉ DE STOCKAGE D'ÉNERGIE THERMIQUE

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Application
EP 16722795 A 20160419

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Abstract (en)
[origin: WO2016169928A1] The energy storage device (1) for storing energy comprises: – a high-temperature regenerator (120) containing a storage material and a working gas (A) as heat transfer medium for the purpose of exchanging heat between the storage material and the traversing working gas (A), – a closed charging circuit (100) for the working gas (A), comprising a first compressor (110), a first expander (140), a first recuperator (130) having a first and a second heat exchange duct (130a, 130b), the high-temperature regenerator (120) and a pre-heater (151), wherein the first compressor (110) is coupled to the first expander (140) by means of a shaft (114), – a discharging circuit (200) for the working gas (A), and comprising – a switching means (400, 401) that selectively connects the high-temperature regenerator (120) to either the charging circuit (100) or the discharging circuit (200), such that the circuit containing the high-temperature regenerator (120) forms a closed circuit.

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