

Title (en)
THERMAL ENERGY STORAGE SYSTEM

Title (de)
WÄRMEENERGIESPEICHERSYSTEM

Title (fr)
SYSTÈME DE STOCKAGE D'ÉNERGIE THERMIQUE

Publication
EP 3933175 A1 20220105 (EN)

Application
EP 20183435 A 20200701

Priority
EP 20183435 A 20200701

Abstract (en)
A thermal energy storage system (2) is provided. The thermal energy storage system comprises an energy storage device (4) configured to store thermal energy; a charging flow path (16) configured to provide thermal energy from a heat source (6) to the energy storage device (4) via a heat transfer medium, wherein the thermal energy storage system (2) is operable in a charging mode in which the heat transfer medium is transported along the charging flow path (16); and a discharging flow path (14) configured to provide thermal energy from the energy storage device (4) to a first heat consumer (12) via the heat transfer medium and to return the heat transfer medium at least partially to the energy storage device (4). The thermal energy storage system (2) is operable in a discharging mode in which the heat transfer medium is transported along the discharging flow path (14). The thermal energy storage system (2) further includes a second heat consumer (10) arranged in the charging flow path (16) and in the discharging flow path (14) such that the heat transfer medium passes through the second heat consumer (10) both during operation in the charging mode and during operation in the discharging mode.

IPC 8 full level
F01K 3/18 (2006.01)

CPC (source: EP)
F01K 3/18 (2013.01)

Citation (applicant)
EP 3102796 A1 20161214 - SIEMENS AG [DE]

Citation (search report)
• [X] US 4094148 A 19780613 - NELSON HAZEN E
• [A] US 2014020383 A1 20140123 - YOSHIDA TAKUYA [JP], et al
• [A] US 2010251711 A1 20101007 - HOWES JONATHAN SEBASTIAN [GB], et al
• [A] GB 2537126 A 20161012 - ISENTROPIC LTD [GB]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

DOCDB simple family (publication)
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EP 20183435 A 20200701; EP 2021066932 W 20210622; EP 21739574 A 20210622