

Title (en)

ENERGY CELL, DEVICE AND METHOD FOR CONVERTING HEAT INTO HYDRAULIC ENERGY

Title (de)

ENERGIEZELLE, VORRICHTUNG UND VERFAHREN ZUR UMWANDLUNG VON WÄRME IN HYDRAULISCHE ENERGIE

Title (fr)

CELLULE ÉNERGÉTIQUE, DISPOSITIF ET PROCÉDÉ DE CONVERSION DE CHALEUR EN ÉNERGIE HYDRAULIQUE

Publication

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Application

EP 21712906 A 20210315

Priority

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- IB 2021052122 W 20210315

Abstract (en)

[origin: WO2021214565A1] An energy cell (1) for converting heat into hydraulic energy, provided with a pressure vessel (2), wherein the pressure vessel (2) comprises two chambers separated by an impermeable and elastic membrane (5), respectively a first chamber (6) filled with a phase change material (23), and a second chamber (7) filled with a hydraulic fluid (24), wherein the energy cell (1) is provided with a shell and tube heat exchanger (16) for alternately heating and cooling of the phase change material (23) to switch the phase change material (23) alternately from the solidified to the molten phase and vice versa, such that a volume of the first chamber (6) increases and decreases alternately, wherein a wall of the pressure vessel (2) is provided with a passage (26) configured to permit, at a volume increase and/or a volume decrease of the first chamber (6), a flow of hydraulic fluid (24) respectively from and/or into the second chamber (7), wherein the shell and tube heat exchanger (16) comprise a number of straight tubes (17), characterized in that the tubes(17) have an external diameter with a maximum of 3.0 millimeters.

IPC 8 full level

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