

Title (en)
HYDROGEN STORAGE DEVICE

Title (de)
WASSERSTOFFSPEICHERVORRICHTUNG

Title (fr)
DISPOSITIF DE STOCKAGE D'HYDROGÈNE

Publication
EP 3999770 A2 20220525 (EN)

Application
EP 20751203 A 20200717

Priority
• GB 201910411 A 20190719
• GB 2020051726 W 20200717

Abstract (en)
[origin: WO2021014135A2] A hydrogen storage device (100A) comprises: a pressure vessel (230A), having a first fluid inlet (210A) and/or a first fluid outlet (220A), having therein a thermally conducting network (240A) optionally thermally coupled to a first heater and/or a first cooler; wherein the pressure vessel (230A) is arranged to receive therein a hydrogen storage material in thermal contact, at least in part, with the thermally conducting network (240A); wherein the thermally conducting network (240A) preferably has a lattice geometry, a gyroidal geometry and/or a fractal geometry in two and/or three dimensions, comprising a plurality of nodes, having thermally conducting arms therebetween, with voids between the arms; and wherein the thermally conducting network (240A) comprises fluidically interconnected passageways therein, for example within the arms and/or the nodes thereof, for flow therethrough of a fluid.

IPC 8 full level
F17C 11/00 (2006.01)

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