

Title (en)

COMPOSITE PRESSURE VESSEL FOR HYDROGEN STORAGE

Title (de)

KOMPOSITDRUCKBEHÄLTER ZUR WASSERSTOFFSPEICHERUNG

Title (fr)

RÉCIPIENT SOUS PRESSION COMPOSITE POUR LE STOCKAGE D'HYDROGÈNE

Publication

EP 3583346 A1 20191225 (EN)

Application

EP 18706224 A 20180212

Priority

- GB 201702362 A 20170214
- EP 2018053384 W 20180212

Abstract (en)

[origin: WO2018149772A1] A composite pressure vessel comprising an inner normally gas impermeable liner that becomes gas permeable at a predetermined temperature, a load bearing intermediate layer configured to withstand the internal pressure exerted by the compressed gas to be stored in the vessel, and a thermally protective outer layer formed from a material having a lower thermal conductivity than the intermediate layer, whereby the thermally protective outer layer has a greater temperature gradient across its thickness than the intermediate layer when the vessel is exposed to fire.

IPC 8 full level

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CPC (source: EP)

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Citation (examination)

- QUANG DAO D ET AL: "Polyamide 6 and Polyurethane Used as Liner for Hydrogen Composite Cylinder: An Estimation of Fire Behaviours", FIRE TECHNOLOGY, SPRINGER US, BOSTON, vol. 52, no. 2, 11 July 2014 (2014-07-11), pages 397 - 420, XP035830367, ISSN: 0015-2684, [retrieved on 20140711], DOI: 10.1007/S10694-014-0423-4
- BUSTAMANTE VALENCIA L ET AL: "Thermal History Resulting in the Failure of Lightweight Fully-Wrapped Composite Pressure Vessel for Hydrogen in a Fire Experimental Facility", FIRE TECHNOLOGY, SPRINGER US, BOSTON, vol. 52, no. 2, 4 August 2015 (2015-08-04), pages 421 - 442, XP035641373, ISSN: 0015-2684, [retrieved on 20150804], DOI: 10.1007/S10694-015-0513-Y
- See also references of WO 2018149772A1

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