Title (en)

MULTILAYER STRUCTURE FOR TRANSPORTING OR STORING HYDROGEN

Title (de)

MEHRSCHICHTSTRUKTUR ZUM TRANSPORT ODER ZUR SPEICHERUNG VON WASSERSTOFF

Title (fr)

STRUCTURE MULTICOUCHE POUR LE TRANSPORT OU LE STOCKAGE DE L'HYDROGENE

Publication

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Application

EP 20757388 A 20200728

Priority

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Abstract (en)

[origin: WO2021019181A1] The present invention relates to a multilayer structure selected from a reservoir, a pipe or a tube, for transporting, distributing or storing hydrogen, comprising, from the inside to the outside, at least one sealing layer and at least one composite reinforcing layer, said innermost composite reinforcing layer being welded to said outermost adjacent sealing layer, said sealing layers consisting of a composition predominantly comprising at least one semi-crystalline thermoplastic polymer P1i (i = 1 to n, n being the number of sealing layers), the Tf of which, as measured according to ISO 11357-3: 2013, is less than 280 °C, in particular less than 265 °C, wherein the at least one thermoplastic polymer of each sealing layer may be the same or different, and at least one of said composite reinforcing layers consisting of a fibrous material in the form of continuous fibers impregnated with a composition predominantly comprising at least one thermoplastic polymer P2j, (j = 1 to m, m being the number of reinforcing layers), which is in particular semi-crystalline, said thermoplastic polymer P2j having a Tg, as measured according to ISO 11357-3: 2013, greater than the maximum temperature of use of said structure (Tu), with Tg ≥ Tu + 20 °C, Tu being greater than 50 °C, in particular greater than 100 °C.

IPC 8 full level

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1. B29C 66/71 + B29K 2077/00
2. B29C 66/7212 + B29K 2309/08
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WO 2021019181 A1 20210204; CN 114174066 A 20220311; EP 4003721 A1 20220601; FR 3099409 A1 20210205; FR 3099409 B1 20211001; JP 2022542263 A 20220930; KR 20220040485 A 20220330; US 2022258446 A1 20220818

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