

Title (en)
HYDROGEN PURIFICATION DEVICES

Title (de)
WASSERSTOFFREINIGUNGSVORRICHTUNGEN

Title (fr)
DISPOSITIFS DE PURIFICATION D'HYDROGÈNE

Publication
EP 4204356 A1 20230705 (EN)

Application
EP 21862790 A 20210827

Priority
• US 202063071139 P 20200827
• US 202117412581 A 20210826
• US 2021047866 W 20210827

Abstract (en)
[origin: WO2022047106A1] Hydrogen purification devices and their components are disclosed. In some embodiments, the devices may include at least one foil-microscreen assembly disposed between and secured to first and second end frames. The at least one foil- microscreen assembly may include at least one hydrogen-selective membrane and at least one microscreen structure including a non-porous planar sheet having a plurality of apertures forming a plurality of fluid passages. The planar sheet may include generally opposed planar surfaces configured to provide support to the permeate side. The plurality of fluid passages may extend between the opposed surfaces. The at least one hydrogen-selective membrane may be metallurgically bonded to the at least one microscreen structure.

IPC 8 full level
C01B 3/50 (2006.01); **B01D 53/22** (2006.01); **B01D 69/10** (2006.01); **B01D 71/02** (2006.01); **C01B 3/56** (2006.01)

CPC (source: EP KR US)
B01D 69/02 (2013.01 - EP KR); **B01D 69/10** (2013.01 - EP KR US); **B01D 71/02** (2013.01 - EP KR US); **C01B 3/501** (2013.01 - EP KR); **B01D 2053/222** (2013.01 - EP KR); **B01D 2256/16** (2013.01 - EP KR); **B01D 2257/20** (2013.01 - KR); **B01D 2257/502** (2013.01 - EP KR); **B01D 2257/504** (2013.01 - EP KR); **B01D 2257/7025** (2013.01 - EP KR); **B01D 2257/80** (2013.01 - EP KR); **B01D 2325/20** (2013.01 - EP); **C01B 2203/0233** (2013.01 - EP KR); **C01B 2203/0445** (2013.01 - EP KR); **C01B 2203/0811** (2013.01 - EP KR); **C01B 2203/1223** (2013.01 - EP KR); **C01B 2203/1294** (2013.01 - EP KR); **C01B 2203/146** (2013.01 - EP KR); **C01B 2203/1614** (2013.01 - EP KR); **Y02E 60/36** (2013.01 - EP KR); **Y02E 60/50** (2013.01 - EP)

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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2022047106 A1 20220303; AU 2021333791 A1 20220915; AU 2021333791 B2 20240321; BR 112023003147 A2 20230404; CN 116390800 A 20230704; EP 4204356 A1 20230705; EP 4204356 A4 20240828; JP 2023540237 A 20230922; KR 20230056032 A 20230426; MX 2023002218 A 20230307

DOCDB simple family (application)
US 2021047866 W 20210827; AU 2021333791 A 20210827; BR 112023003147 A 20210827; CN 202180072521 A 20210827; EP 21862790 A 20210827; JP 2023513482 A 20210827; KR 20237009787 A 20210827; MX 2023002218 A 20210827