

Title (en)  
HYDROGEN PURIFICATION DEVICES

Title (de)  
VORRICHTUNGEN ZUR WASSERSTOFFREINIGUNG

Title (fr)  
DISPOSITIFS DE PURIFICATION D'HYDROGÈNE

Publication  
**EP 3735312 A4 20211020 (EN)**

Application  
**EP 19735938 A 20190103**

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Abstract (en)  
[origin: WO2019136156A1] 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. In some embodiments, the devices may include a permeate frame having at least one membrane support structure that spans at least a substantial portion of an open region and that is configured to support at least one foil-microscreen assembly.

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Citation (search report)  
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• [YA] US 2004003720 A1 20040108 - BEISSWENGER THOMAS [DE], et al  
• [A] US 2010068132 A1 20100318 - VENCILL THOMAS R [US], et al  
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**US 2019012192 W 20190103**; CN 201980007152 A 20190103; CN 202211067088 A 20190103; EP 19735938 A 20190103; JP 2020537176 A 20190103; JP 2022035221 A 20220308; JP 2023097189 A 20230613; KR 20207022167 A 20190103; KR 20227033348 A 20190103; TW 107145920 A 20181219; TW 109122254 A 20181219