

Title (en)

HIGH EFFICIENCY ELECTROCHEMICAL INSTALLATION AND RELATED PROCESS

Title (de)

ELEKTROCHEMISCHE ANLAGE MIT HOHEM WIRKUNGSGRAD UND ZUGEHÖRIGES VERFAHREN

Title (fr)

INSTALLATION ELECTROCHIMIQUE A HAUT RENDEMENT ET PROCEDE ASSOCIE

Publication

EP 4379094 A1 20240605 (EN)

Application

EP 22306761 A 20221130

Priority

EP 22306761 A 20221130

Abstract (en)

The installation (10), comprises- an electrochemical unit (12) configured to carry out a high temperature electrochemical reaction, the unit (12) having a purified steam inlet (40), and at least a product outlet (44; 46); and- a purified steam production unit (14), directly connected to the steam inlet (40), the purified steam production unit (14) comprising a first inlet (80) receiving a heating stream (60) from an industrial latent heat source (16), and a second inlet (82) receiving raw water (72) from a source (70) of raw water. The purified steam production unit (14) comprises a heat exchange zone (76), configured to place the raw water (72) in heat exchange with the heating stream (60) and to evaporate the raw water (72) to produce the purified steam (24), at a purified steam outlet (84) connected to the purified steam inlet (40) without passing through a steam condensing unit.

IPC 8 full level

C25B 1/042 (2021.01); **C25B 9/70** (2021.01); **C25B 15/08** (2006.01)

CPC (source: EP)

C25B 1/042 (2021.01); **C25B 9/70** (2021.01); **C25B 15/083** (2021.01); **C25B 15/087** (2021.01)

Citation (search report)

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- [X] US 2014194539 A1 20140710 - HAMMAD AHMAD D [SA], et al
- [X] US 5312843 A 19940517 - YAMAUCHI YASUHIRO [JP], et al
- [X] BANIASADI EHSAN ED - LI BAIZHAN ET AL: "Concurrent hydrogen and water production from brine water based on solar spectrum splitting: Process design and thermoeconomic analysis", RENEWABLE ENERGY, vol. 102, 19 October 2016 (2016-10-19), pages 50 - 64, XP029822424, ISSN: 0960-1481, DOI: 10.1016/J.RENENE.2016.10.042

Designated contracting state (EPC)

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Designated extension state (EPC)

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Designated validation state (EPC)

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DOCDB simple family (publication)

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DOCDB simple family (application)

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