

Title (en)

BIPOLAR PLATE FOR IMPROVING THE EFFICIENCY OF A PROTON-EXCHANGE MEMBRANE FUEL CELL

Title (de)

BIPOLARE PLATTE ZUR VERBESSERUNG DER EFFIZIENZ EINER PROTONENAUSTAUSCHMEMBRAN-BRENNSTOFFZELLE

Title (fr)

PLAQUE BIPOLAIRE POUR AMELIORER LE RENDEMENT D'UNE PILE A COMBUSTIBLE A MEMBRANE ECHANGEUSE DE PROTONS

Publication

**EP 3662529 A1 20200610 (FR)**

Application

**EP 18773527 A 20180724**

Priority

- FR 1757528 A 20170804
- FR 2018051892 W 20180724

Abstract (en)

[origin: WO2019025701A1] The invention concerns a bipolar plate (5) for a proton-exchange membrane fuel cell (113), comprising: - an oxidiser inlet manifold and an oxidiser outlet manifold; - oxidiser flow channels (541) of an active area (54); - an inlet homogenisation area (52); - an exhaust homogenisation area; for a Reynolds number of the flow of oxidiser in the exhaust homogenisation area of between 1000 and 2000: - linear head losses through the exhaust homogenisation area make up more than 80% of the head losses dP2 between the active area (54) and the oxidiser outlet manifold; - the value dP2/dP1 is at least equal to 2, dP1 being the head losses between the oxidiser inlet manifold and the active area (54).

IPC 8 full level

**H01M 8/0267** (2016.01); **H01M 8/0258** (2016.01); **H01M 8/026** (2016.01); **H01M 8/0265** (2016.01); **H01M 8/1018** (2016.01)

CPC (source: EP)

**H01M 8/026** (2013.01); **H01M 8/0265** (2013.01); **H01M 8/0267** (2013.01); **H01M 2008/1095** (2013.01); **Y02E 60/50** (2013.01)

Citation (search report)

See references of WO 2019025701A1

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

DOCDB simple family (publication)

**WO 2019025701 A1 20190207**; CN 111052469 A 20200421; CN 111052469 B 20230915; EP 3662529 A1 20200610; FR 3069961 A1 20190208; FR 3069961 B1 20220708

DOCDB simple family (application)

**FR 2018051892 W 20180724**; CN 201880058216 A 20180724; EP 18773527 A 20180724; FR 1757528 A 20170804