

Title (en)

AIR INDEPENDENT PROPULSION SYSTEM FOR SUBMARINES BASED ON PHOSPHORIC ACID FUEL CELL WITH ONBOARD HYDROGEN GENERATOR

Title (de)

LUFTUNABHÄNGIGES ANTRIEBSSYSTEM FÜR U-BOOTE AUF BASIS VON PHOSPHORSÄURE-BRENNSTOFFZELLE MIT BORDEIGENEM WASSERSTOFFGENERATOR

Title (fr)

SYSTÈME DE PROPULSION ANAÉROBIE POUR SOUS-MARINS À BASE DE PILE À COMBUSTIBLE À ACIDE PHOSPHORIQUE AVEC GÉNÉRATEUR D'HYDROGÈNE EMBARQUÉ

Publication

**EP 3419928 A4 20200108 (EN)**

Application

**EP 17755920 A 20170222**

Priority

- IN 201611006254 A 20160223
- IN 201611014687 A 20160427
- IN 201611024746 A 20160719
- IN 201611033369 A 20160929
- IN 201711006186 A 20170221
- IB 2017051007 W 20170222

Abstract (en)

[origin: WO2017145068A1] The present invention relates to an air independent propulsion (AIP) system. The present invention more particularly relates to Air Independent Propulsion System for Submarines based on Phosphoric Acid fuel Cell (PAFC) with onboard hydrogen generator and power conditioning system. The present invention also relates to method of increasing to increase life and performance of PAFC stacks. The major technology block of AIP system of the present invention is shown schematically in figure 1.

IPC 8 full level

**C01B 3/06** (2006.01); **H01M 8/0293** (2016.01); **H01M 8/04007** (2016.01); **H01M 8/04313** (2016.01); **H01M 8/04828** (2016.01); **H01M 8/06** (2016.01); **H01M 8/0656** (2016.01); **H01M 8/086** (2016.01)

CPC (source: EP)

**C01B 3/065** (2013.01); **H01M 8/0293** (2013.01); **H01M 8/04074** (2013.01); **H01M 8/04313** (2013.01); **H01M 8/0494** (2013.01); **H01M 8/0656** (2013.01); **H01M 8/086** (2013.01); **H01M 2250/20** (2013.01); **Y02E 60/36** (2013.01); **Y02T 90/40** (2013.01)

Citation (search report)

- [Y] WO 2006091954 A2 20060831 - BIC SOC [FR], et al
- [Y] EP 2775189 A1 20140910 - SOCIÉTÉ BIC [FR]
- [Y] US 2007084115 A1 20070419 - BERRY GRANT [US], et al
- See also references of WO 2017145068A1

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

DOCDB simple family (publication)

**WO 2017145068 A1 20170831**; AU 2017223239 A1 20180927; AU 2021221860 A1 20210930; AU 2021221860 B2 20230928; BR 112018017308 A2 20190102; BR 112018017308 B1 20231219; CN 109071214 A 20181221; CN 109071214 B 20220826; EP 3419928 A1 20190102; EP 3419928 A4 20200108; JP 2019509246 A 20190404; JP 2021142978 A 20210924; JP 2023121754 A 20230831; JP 6943869 B2 20211006

DOCDB simple family (application)

**IB 2017051007 W 20170222**; AU 2017223239 A 20170222; AU 2021221860 A 20210826; BR 112018017308 A 20170222; CN 201780025122 A 20170222; EP 17755920 A 20170222; JP 2018545384 A 20170222; JP 2021076154 A 20210428; JP 2023093526 A 20230606