

Title (en)

METHOD AND DEVICE FOR GENERATING HYDROGEN AND OXYGEN

Title (de)

VERFAHREN UND VORRICHTUNG ZUR ERZEUGUNG VON WASSERSTOFF UND SAUERSTOFF

Title (fr)

PROCÉDÉ ET DISPOSITIF DE PRODUCTION D'HYDROGÈNE ET D'OXYGÈNE

Publication

EP 2459773 A1 20120606 (DE)

Application

EP 10739322 A 20100721

Priority

- DE 102009035440 A 20090731
- EP 2010060520 W 20100721

Abstract (en)

[origin: WO2011012507A1] The generation of gases using electrolysis is known, wherein in the prior art the electrical energy therefor is taken from the grid. According to the invention, the electrolysis occurs as a high-pressure electrolyzer, oxygen being produced on one side and hydrogen on the other side, with corresponding pressure. Said gases may optionally be stored without additional compression. The PEM fuel cell process is used in reverse for the process. It is advantageous that excess energy may be used by wind power plants. In the associated device, a high-pressure electrolyzer (1) is present which is operated using environmentally friendly air power. Due to the improved operating point of the high-pressure electrolyzer, improved economy results for the generation process compared to the prior art, in particular for hydrogen as an energy storage means.

IPC 8 full level

C25B 1/12 (2006.01); **C25B 9/19** (2021.01)

CPC (source: EP US)

C25B 1/04 (2013.01 - EP US); **C25B 9/05** (2021.01 - EP US); **Y02E 60/36** (2013.01 - EP US); **Y02E 60/50** (2013.01 - US); **Y02P 20/133** (2015.11 - EP US)

Citation (search report)

See references of WO 2011012507A1

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 SE SI SK SM TR

DOCDB simple family (publication)

DE 102009035440 A1 20110203; EP 2459773 A1 20120606; US 2012125779 A1 20120524; WO 2011012507 A1 20110203

DOCDB simple family (application)

DE 102009035440 A 20090731; EP 10739322 A 20100721; EP 2010060520 W 20100721; US 201013388269 A 20100721