

Title (en)
APPARATUS AND METHOD FOR GENERATING HYDROGEN AND OXYGEN

Title (de)
VORRICHTUNG UND VERFAHREN ZUR ERZEUGUNG VON WASSERSTOFF UND SAUERSTOFF

Title (fr)
APPAREIL ET PROCÉDÉ DE GÉNÉRATION D'HYDROGÈNE ET D'OXYGÈNE

Publication
EP 2925908 A1 20151007 (EN)

Application
EP 12812389 A 20121128

Priority
IB 2012056801 W 20121128

Abstract (en)
[origin: WO2014083385A1] An apparatus for generating hydrogen and oxygen comprises; - a container (2) made of electrically insulating material and defining an internal volume (20), - a casing (3) made of electrically conductive metal material, inserted into said internal volume (20), - side plate means (4, 5) made of zinc and/or cadmium metal alloy and fixed in contact with opposite sides (16, 17) of central plate means (6) made of metal alloy containing one or more transition metals, in particular iron and/or nickel, said side plate means (4, 5) and said central plate means (6) being housed inside said casing (3), said side plate means (4, 5) being in electrical connection with the latter; - a reaction solution (S) arranged for filling said internal volume (20) until it covers completely said casing (3) and arranged for interacting with said side plate means (4, 5) and said central plate means (6) to generate hydrogen and oxygen in gaseous form, said reaction solution comprising water, a non ionic surfactant containing hydrochloric acid (HCl), titanium dioxide (TiO₂) in powder form, a phosphoric acid solution (H₃PO₄) and an acid solution containing sulphuric acid (H₂SO₄).

IPC 8 full level
C25B 11/04 (2006.01); **B01J 7/02** (2006.01); **C01B 3/08** (2006.01); **C25B 1/04** (2006.01); **C25B 9/00** (2006.01)

CPC (source: EP)
C01B 3/08 (2013.01); **C01B 13/0207** (2013.01); **C25B 1/04** (2013.01); **C25B 9/00** (2013.01); **C25B 11/04** (2013.01); **Y02E 60/36** (2013.01)

Citation (search report)
See references of WO 2014083385A1

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 2014083385 A1 20140605; EP 2925908 A1 20151007

DOCDB simple family (application)
IB 2012056801 W 20121128; EP 12812389 A 20121128