

Title (en)

PROCESS FOR PRODUCING HYDROGEN FROM A HYDROGEN-RICH GAS

Title (de)

VERFAHREN ZUR GEWINNUNG VON WASSERSTOFF AUS EINEM WASSERSTOFFREICHEN GAS

Title (fr)

PROCEDE DE PRODUCTION D'HYDROGÈNE A PARTIR D'UN GAZ RICHE EN HYDROGÈNE

Publication

**EP 2121166 A1 20091125 (FR)**

Application

**EP 07858699 A 20071115**

Priority

- FR 2007052343 W 20071115
- FR 0655386 A 20061208

Abstract (en)

[origin: WO2008068436A1] The invention relates to a process for producing hydrogen from a hydrogen-rich gas, in which N adsorbers are used, which each follow, in a standard manner, a cycle where phases of adsorption, of regeneration, of elution and of repressurization follow one another and in which at least part of the stream or streams exiting the adsorber or adsorbers in the regeneration phase is recycled, by compressing said recycled part to the high cycle pressure and by supplying at least one of the adsorbers in the adsorption phase with said recycled part. The regeneration phase comprises a depressurization substep that is composed of a substep of co-current depressurization with partial equilibration. The equilibration ratio  $N_{eq}$  is between  $1.8\ln P_{high}/P_{low} - 3.5$  and  $0.6\ln P_{high}/P_{low} - 1.8$ ,  $P_{high}/P_{low}$  representing the value of the high cycle pressure.

IPC 8 full level

**B01D 53/047** (2006.01); **C01B 3/56** (2006.01)

CPC (source: EP)

**B01D 53/047** (2013.01); **C01B 3/56** (2013.01); **B01D 2256/16** (2013.01); **B01D 2259/40018** (2013.01); **B01D 2259/40033** (2013.01); **B01D 2259/40049** (2013.01); **B01D 2259/40054** (2013.01); **B01D 2259/40075** (2013.01); **B01D 2259/4063** (2013.01); **C01B 2203/043** (2013.01)

Citation (search report)

See references of WO 2008068436A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2008068436 A1 20080612**; CN 101573170 A 20091104; EP 2121166 A1 20091125; FR 2909570 A1 20080613

DOCDB simple family (application)

**FR 2007052343 W 20071115**; CN 200780049331 A 20071115; EP 07858699 A 20071115; FR 0655386 A 20061208