Title (en)

DEVICE FOR THE GENERATION OF HYDROGEN

Title (de)

VORRICHTUNG ZUR ERZEUGUNG VON WASSERSTOFF

Title (fr)

DISPOSITIF DE PRODUCTION D'HYDROGENE

Publication

EP 1704113 A2 20060927 (DE)

Application

EP 05700977 A 20050117

Priority

- EP 2005000401 W 20050117
- DE 102004002477 A 20040116

Abstract (en)

[origin: WO2005068354A2] The invention relates to a device which is used to generate hydrogen, containing a. a heated steam reformation stage (1) with a reformer catalyst for the conversion of gaseous or vaporizable hydrocarbons and water into hydrogen, carbon monoxide and further reformation products, b. at least one stage which is arranged downstream from the steam reformation stage, for catalytically converting the mixture of hydrogen, carbon monoxide and excess steam emanating from the steam reformation stage (shift step) and c. a fine purification stage (3) which is arranged downstream from the conversion stage(s) for catalytic reduction of residual carbon monoxide content in conversion products by selective methanization. The invention is characterized in that the conversion stage (2) and the fine purification stage (3) are each embodied as a hollow body (exothermal catalyst stage).

IPC 8 full level

B01J 8/02 (2006.01); **B01D 53/86** (2006.01); **B01J 8/04** (2006.01); **B01J 19/00** (2006.01); **B01J 19/24** (2006.01); **B01J 23/656** (2006.01); **B01J 29/22** (2006.01); **B01J 35/00** (2006.01); **B01J 35/04** (2006.01); **C01B 3/38** (2006.01); **C01B 3/48** (2006.01); **C01B 3/58** (2006.01); B01J 37/02 (2006.01)

CPC (source: EP US)

B01D 53/864 (2013.01 - EP US); **B01J 8/0434** (2013.01 - EP US); **B01J 8/0496** (2013.01 - EP US); **B01J 19/0013** (2013.01 - EP US); **B01J 19/2485** (2013.01 - EP US); **B01J 23/6567** (2013.01 - EP US); **B01J 29/22** (2013.01 - EP US); **B01J 35/19** (2024.01 - EP US); **C01B 3/384** (2013.01 - EP US); **C01B 3/48** (2013.01 - EP US); B01J 37/0225 (2013.01 - EP US); B01J 37/0246 (2013.01 - EP US); B01J 2208/00504 (2013.01 - EP US); B01J 2208/0053 (2013.01 - EP US); B01J 2219/00157 (2013.01 - EP US); B01J 2219/00159 (2013.01 - EP US); C01B 2203/0233 (2013.01 - EP US); C01B 2203/0288 (2013.01 - EP US); C01B 2203/0445 (2013.01 - EP US); C01B 2203/047 (2013.01 - EP US); C01B 2203/0816 (2013.01 - EP US); C01B 2203/0894 (2013.01 - EP US); C01B 2203/1029 (2013.01 - EP US); C01B 2203/1294 (2013.01 - EP US); Y02P 20/52 (2015.11 - EP US)

Citation (search report)

See references of WO 2005068354A2

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 MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR LV MK YU

DOCDB simple family (publication)

WO 2005068354 A2 20050728; **WO 2005068354 A3 20071101**; DE 102004002477 A1 20050811; EP 1704113 A2 20060927; JP 2007534583 A 20071129; JP 4668927 B2 20110413; US 2007172401 A1 20070726; US 7632778 B2 20091215

DOCDB simple family (application)

EP 2005000401 W 20050117; DE 102004002477 A 20040116; EP 05700977 A 20050117; JP 2006548282 A 20050117; US 58632005 A 20050117