

Title (en)

METHOD FOR PURIFYING HYDROGEN-BASED GAS MIXTURES USING A CALCIUM X-ZEOLITE

Title (de)

VERFAHREN ZUR REINIGUNG EINER AUF WASSERSTOFF BASIERENDEN GASMISCHUNG MITTELS EINES KALZIUM ENTHALTENDEN ZEOLITHS

Title (fr)

PROCEDE POUR LA PURIFICATION DE MELANGES GAZEUX A BASE D'HYDROGENE UTILISANT UNE ZEOLITE X AU CALCIUM

Publication

**EP 1309388 A1 20030514 (FR)**

Application

**EP 01949612 A 20010702**

Priority

- FR 0102115 W 20010702
- FR 0008905 A 20000707

Abstract (en)

[origin: WO0204096A1] The invention concerns a method for purifying PSA-type gaseous hydrogen polluted with CO and N<sub>2</sub> which consists in passing the gas stream through an adsorption zone comprising at least an adsorbent based on 5A-zeolite and an adsorbent based on a calcium-exchanged X-zeolite. Said method is particularly efficient in terms of productivity and yield in purified hydrogen at moderate production price.

IPC 1-7

**B01D 53/047; C01B 3/56**

IPC 8 full level

**B01D 53/04** (2006.01); **B01D 53/02** (2006.01); **B01D 53/047** (2006.01); **B01J 20/18** (2006.01); **C01B 3/56** (2006.01)

CPC (source: EP KR US)

**B01D 53/047** (2013.01 - EP US); **C01B 3/56** (2013.01 - EP KR US); **B01D 53/261** (2013.01 - EP US); **B01D 2253/102** (2013.01 - EP US); **B01D 2253/104** (2013.01 - EP US); **B01D 2253/106** (2013.01 - EP US); **B01D 2253/108** (2013.01 - EP US); **B01D 2253/1085** (2013.01 - EP US); **B01D 2253/25** (2013.01 - EP US); **B01D 2257/102** (2013.01 - EP US); **B01D 2257/502** (2013.01 - EP US); **B01D 2257/504** (2013.01 - EP US); **B01D 2257/702** (2013.01 - EP US); **B01D 2257/7025** (2013.01 - EP US); **B01D 2257/80** (2013.01 - EP US); **B01D 2259/40052** (2013.01 - EP US); **B01D 2259/40062** (2013.01 - EP US); **B01D 2259/40081** (2013.01 - EP US); **B01D 2259/404** (2013.01 - EP US); **B01D 2259/4068** (2013.01 - EP US); **B01D 2259/4146** (2013.01 - EP US); **C01B 2203/043** (2013.01 - EP US); **C01B 2203/0465** (2013.01 - EP US); **C01B 2203/047** (2013.01 - EP US); **C01B 2203/0475** (2013.01 - EP US); **C01B 2203/048** (2013.01 - EP US); **C01B 2203/0495** (2013.01 - EP US); **Y02C 20/20** (2013.01 - EP US); **Y02C 20/40** (2020.08 - EP US); **Y02P 20/151** (2015.11 - EP US); **Y02P 20/156** (2015.11 - EP US)

Citation (search report)

See references of WO 0204096A1

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

**WO 0204096 A1 20020117**; AU 7073601 A 20020121; CA 2415412 A1 20020117; EP 1309388 A1 20030514; FR 2811241 A1 20020111; FR 2811241 B1 20021213; JP 2004502525 A 20040129; KR 20030038652 A 20030516; US 2003172808 A1 20030918; US 6849106 B2 20050201; ZA 200210397 B 20031105

DOCDB simple family (application)

**FR 0102115 W 20010702**; AU 7073601 A 20010702; CA 2415412 A 20010702; EP 01949612 A 20010702; FR 0008905 A 20000707; JP 2002508546 A 20010702; KR 20037000068 A 20030103; US 33234903 A 20030519; ZA 200210397 A 20021220