

Title (en)
PROCESS FOR THE PRODUCTION OF HYDROGEN AND THE USE THEREOF AND A PROCESS FOR THE OPERATION OF A INTERNAL COMBUSTION ENGINE

Title (de)
VERFAHREN ZUR ERZEUGUNG VON WASSERSTOFF UND VERWENDUNG DAVON UND VERFAHREN ZUM BETRIEB EINES VERBRENNUNGSMOTORS

Title (fr)
PROCÉDÉ DE PRODUCTION D'HYDROGÈNE ET SON UTILISATION ET PROCÉDÉ DE FONCTIONNEMENT D'UN MOTEUR À COMBUSTION INTERNE

Publication
EP 2081866 A1 20090729 (EN)

Application
EP 07822071 A 20071031

Priority

- EP 2007061722 W 20071031
- EP 06123280 A 20061031
- EP 07822071 A 20071031

Abstract (en)
[origin: WO2008053006A1] The present invention provides a process for the production of hydrogen, wherein during a first time interval a hydrocarbonaceous feedstock (3) is converted to a hydrogen-comprising gas (5) by mixing the feedstock with an amount of molecular oxygen (4) to form a first mixture comprising feedstock and molecular oxygen with an overall oxygen-to-carbon ratio in the range of from 0.3 to 0.8 and contacting the first mixture with a partial oxidation catalyst (6) and interrupting the contacting of such first mixture with the partial oxidation catalyst during a second time interval, wherein from the start and during at least part of the second time interval no hydrocarbonaceous feedstock or molecular oxygen is supplied to the partial oxidation catalyst, in which process the ratio of the first time interval over the second time interval is in the range of from 0.05 to 5. The invention further provides a process for operating an internal combustion engine and use of the produced hydrogen for reducing NOx to molecular nitrogen and water.

IPC 8 full level
C01B 3/38 (2006.01); **B01D 53/79** (2006.01); **B01D 53/86** (2006.01); **B01D 53/90** (2006.01); **B01D 53/94** (2006.01); **F01N 3/08** (2006.01); **F01N 3/20** (2006.01)

CPC (source: EP)
B01D 53/9409 (2013.01); **B01J 8/0221** (2013.01); **C01B 3/386** (2013.01); **F01N 3/0814** (2013.01); **F01N 3/0842** (2013.01); **F01N 3/206** (2013.01); **B01D 2251/202** (2013.01); **B01J 2208/00716** (2013.01); **C01B 2203/0261** (2013.01); **C01B 2203/0283** (2013.01); **C01B 2203/044** (2013.01); **C01B 2203/047** (2013.01); **C01B 2203/0485** (2013.01); **C01B 2203/1047** (2013.01); **C01B 2203/1247** (2013.01); **C01B 2203/1276** (2013.01); **C01B 2203/1288** (2013.01); **F01N 2610/04** (2013.01)

Citation (search report)
See references of WO 2008053006A1

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 2008053006 A1 20080508; EP 2081866 A1 20090729

DOCDB simple family (application)
EP 2007061722 W 20071031; EP 07822071 A 20071031