

Title (en)

METHOD AND SYSTEM FOR PRODUCING AN H₂ PRODUCT FLOW AND A CO PRODUCT FLOW

Title (de)

VERFAHREN UND ANLAGE ZUR ERZEUGUNG EINES H₂-PRODUKTSTROMES UND EINES CO-PRODUKTSTROMES

Title (fr)

PROCÉDÉ ET INSTALLATION DE PRODUCTION D'UN FLUX DE PRODUIT H₂ ET D'UN FLUX DE PRODUIT CO & xA;

Publication

EP 2906502 A2 20150819 (DE)

Application

EP 13734667 A 20130704

Priority

- DE 102012014094 A 20120717
- EP 2013001972 W 20130704

Abstract (en)

[origin: WO2014012629A2] The invention relates to a method for producing an H₂product flow (P) and a CO product flow (Rho') from a supply flow (E"), comprising the steps of: feeding a supply flow (E") having H₂ and CO into a separating device (20), which is arranged more particularly in a cold box, separating the supply flow (E") in said separating device (20) into an H₂-rich, CO-containing gas fraction (G) and a CO-rich, H₂-containing condensate, wherein the condensate is separated into an H₂-rich flash gas (F) and the CO product flow (Rho'), wherein when a H₂/CO ratio of the supply flow (E") is above that or equal to a pre-definable threshold value, the gas fraction (G) for separating CO and other components (e. g. CH₄, CO₂, H₂O and inert gases) is directed through at least one adsorber of an alternating pressure adsorption device (30), and therefore these components are adsorbed onto the at least one adsorber, wherein the adsorber for cleaning the adsorber is purged with a partial current of the H₂ product flow (P), which is drawn as a purge gas (S) from the alternating pressure adsorption device (3), wherein said purge gas (S) and the flash gas (F) upstream of the separating device (2) are returned to the supply flow (E"), and wherein at a H₂/CO ratio is below said threshold value, the gas fraction (G), the flash gas (F) and, where required, at least part of the CO product flow (Rho') upstream of the separating device (20) is returned to the supply flow (E"). The invention further relates to a system for producing an H₂ product flow (P) and a CO product flow (Rho').

IPC 8 full level

C01B 3/50 (2006.01)

CPC (source: EP)

C01B 3/506 (2013.01); **C01B 3/56** (2013.01); **F25J 3/0223** (2013.01); **F25J 3/0252** (2013.01); **F25J 3/0261** (2013.01); **C01B 2203/043** (2013.01); **C01B 2203/046** (2013.01); **C01B 2203/047** (2013.01); **C01B 2203/147** (2013.01); **F25J 2205/04** (2013.01); **F25J 2205/30** (2013.01); **F25J 2205/40** (2013.01); **F25J 2205/60** (2013.01); **F25J 2205/66** (2013.01); **F25J 2210/02** (2013.01); **F25J 2210/04** (2013.01); **F25J 2210/42** (2013.01); **F25J 2220/02** (2013.01); **F25J 2230/32** (2013.01); **F25J 2245/02** (2013.01); **F25J 2270/04** (2013.01); **F25J 2270/24** (2013.01); **F25J 2280/02** (2013.01)

Citation (search report)

See references of WO 2014012629A2

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 2014012629 A2 20140123; **WO 2014012629 A3 20150702**; CN 104956171 A 20150930; DE 102012014094 A1 20140123; EP 2906502 A2 20150819; RU 2015105188 A 20160910

DOCDB simple family (application)

EP 2013001972 W 20130704; CN 201380038099 A 20130704; DE 102012014094 A 20120717; EP 13734667 A 20130704; RU 2015105188 A 20130704