

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;

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Application

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Priority

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Abstract (en)

[origin: WO2014012629A2] The invention relates to a method for producing an H₂ product 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').

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