

Title (en)

METHOD FOR PRODUCING HYDROGEN BY PARTIAL OXIDATION OF HYDROCARBONS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON WASSERSTOFF MITTELS TEILOXIDATION VON KOHLENWASSERSTOFFEN

Title (fr)

PROCEDE DE PRODUCTION D'HYDROGENE PAR OXYDATION PARTIELLE D'HYDROCARBURES

Publication

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Application

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Abstract (en)

[origin: WO0162662A1] The invention concerns a method for producing a gas mixture containing hydrogen and carbon monoxide, and optionally nitrogen, from at least a hydrocarbon such as methane, propane, butane or LPG or natural gas, which consists in performing a partial catalytic oxidation (1) of one or several hydrocarbons, at a temperature of 500 DEG C, at a pressure of 3 to 20 bars, in the presence of oxygen or a gas containing oxygen, such as air, to produce hydrogen and carbon monoxide; then in recuperating the gas mixture which can subsequently be purified or separated, by pressure swing adsorption, temperature swing adsorption or by permeation (3), to produce hydrogen having a purity of at least 80 % and a residue gas capable of supplying a cogeneration unit. In another embodiment, the gas mixture can subsequently be purified of its water vapour impurities and carbon dioxide to obtain a thermal treatment atmosphere containing hydrogen, carbon monoxide and nitrogen.

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