

Title (en)

METHOD AND DEVICE FOR PRODUCING HYDROGEN AND PYROLYTIC CARBON FROM HYDROCARBONS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR HERSTELLUNG VON WASSERSTOFF UND PYROLYSEKOHLENSTOFF AUS KOHLENWASSERSTOFFEN

Title (fr)

PROCÉDÉ ET DISPOSITIF DE PRODUCTION D'HYDROGÈNE ET DE CARBONE PYROLYTIQUE À PARTIR D'HYDROCARBURES

Publication

EP 4058403 A1 20220921 (DE)

Application

EP 20807329 A 20201112

Priority

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Abstract (en)

[origin: WO2021094464A1] The invention relates to a method for producing hydrogen and pyrolytic carbon from hydrocarbons, wherein hydrocarbons are reacted in a reactor at temperatures of 1000 °C or more to form hydrogen and carbon, and wherein the reactor has two electrodes spaced apart from one another in the flow direction of the hydrocarbons, wherein an inert gas component is supplied over the entire reactor cross section in the region of the reactor between the electrodes, and wherein the reactor contains carbon particles in the region between the two electrodes. By introducing an inert gas component over the entire reactor cross section, a deposition of carbon in this region of the reactor internal wall is prevented, such that the formation of reactivity bridges on the reactor internal wall is effectively suppressed. The invention also relates to a corresponding device which is designed for carrying out the proposed method.

IPC 8 full level

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CPC (source: CN EP US)

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Citation (search report)

See references of WO 2021094464A1

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