

Title (en)

METHOD AND SYSTEM FOR PRODUCING HYDROCARBONS

Title (de)

VERFAHREN UND ANLAGE ZUM HERSTELLEN VON KOHLENWASSERSTOFFEN

Title (fr)

PROCÉDÉ ET SYSTÈME DE PRODUCTION D'HYDROCARBURES

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Application

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Abstract (en)

[origin: WO2022228793A1] The invention relates to a method for producing hydrocarbons (6), having the steps of: a) carrying out an electrolysis (3) of water, whereby hydrogen and oxygen are produced; b) generating a carbon source which has carbon dioxide and/or carbon monoxide or substantially consists of carbon dioxide and/or carbon monoxide; c) producing (5) the hydrocarbons (6) from the hydrogen produced in step a) and the carbon dioxide produced in step b), wherein at least some of the produced hydrocarbons are provided in the form of liquid hydrocarbons and an exhaust gas is formed together with the hydrocarbons (6), said exhaust gas having hydrogen, carbon dioxide, and/or carbon monoxide; d) separating the exhaust gas from the liquid hydrocarbons (6); and e) recycling (8) exhaust gas in that a reaction of the exhaust gas with the oxygen and/or water produced in step a) is carried out, whereby recycled products are formed which have carbon dioxide and/or carbon monoxide, water, and optionally hydrogen. The method is particularly advantageous for producing hydrocarbons with methanol as a preferred product from a methanol synthesis (13). The methanol can be further used as a starting material (reactant) or intermediate product for producing (19) additional high-quality liquid hydrocarbons.

IPC 8 full level

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