

Title (en)

METHOD FOR PRODUCING A FUEL FOR INTERNAL COMBUSTION ENGINES

Title (de)

VERFAHREN ZUR ERZEUGUNG EINES KRAFTSTOFFS FÜR VERBRENNUNGSKRAFTMASCHINEN

Title (fr)

PROCÉDÉ DE FABRICATION D'UN CARBURANT POUR MOTEURS À COMBUSTION INTERNE

Publication

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Application

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Abstract (en)

[origin: WO2012110339A1] The method according to the invention for producing a fuel (14, 15, 16) for internal combustion engines comprises the following steps: a) providing carbon dioxide (CO<sub>2</sub>) (6); b) providing hydrogen (H<sub>2</sub>) (11) from water (H<sub>2</sub>O) (9); and c) synthesizing methanol (CH<sub>3</sub>OH) (12) from the provided carbon dioxide (6) and hydrogen (11). The method according to the invention is characterized in that the carbon dioxide (6) provided in step a) is provided from the flue gas (4) of the combustion of a fuel (2). A further method step d) of a process (13, 17) for converting the methanol (12) into a fuel (14, 15, 16, 18) is preferably carried out subsequent to step c); particularly preferably said process is a methanol-to-gasoline (MTG) process (13). The method according to the invention advantageously permits the reprocessing of carbon dioxide (6) from the flue gas (4) from power plants (1) and the use thereof for synthesizing fuels (14, 15, 16), in particular gasoline fuel (14), for operating internal combustion engines, such as Otto engines in automobiles. The method according to the invention can thus be particularly advantageously used for processing the flue gases (4) of power plants (1) from fossil fuels (2), which occur in great volumes. Alternatively, the methanol (12) can also be converted to dimethylether (18) as diesel fuel.

IPC 8 full level

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**C07C 29/1518** + **C07C 31/04**

Citation (search report)

See references of WO 2012110339A1

Citation (examination)

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- RAPHAEL IDEM ET AL: "Pilot Plant Studies of the CO<sub>2</sub> Capture Performance of Aqueous MEA and Mixed MEA/MDEA Solvents at the University of Regina CO<sub>2</sub> Capture Technology Development Plant and the Boundary Dam CO<sub>2</sub> Capture Demonstration Plant", INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH., vol. 45, no. 8, 1 April 2006 (2006-04-01), US, pages 2414 - 2420, XP055421821, ISSN: 0888-5885, DOI: 10.1021/ie050569e
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