

Title (en)

PROCESS AND REACTOR SYSTEM FOR SYNTHESIS OF METHANOL WITH CYCLE GAS AND PURGE GAS RECYCLING

Title (de)

VERFAHREN UND REAKTORANLAGE ZUR SYNTHESE VON METHANOL MIT KREISGAS- UND PURGEGASRÜCKFÜHRUNG

Title (fr)

PROCÉDÉ ET SYSTÈME DE RÉACTEUR DE SYNTHÈSE DE MÉTHANOL AVEC RECYCLAGE DU GAZ CIRCULANT ET DU GAZ DE PURGE

Publication

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Application

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Abstract (en)

[origin: WO2014173452A1] The invention relates to a reactor system (50) for synthesis of methanol-containing product (108) using a starting material (SM1) comprising a gas having a carbon content (101) and hydrogen content (103). The reactor (10) has a gas inlet (21) and a product outlet (23), with a process stage (200) designed for separating a product gas mixture (PGM) into a proportion of the methanol-containing product (108) and a cycle gas component (CG) disposed at the product outlet (23). This also provides a purge gas component (PG). The reactor system (50) further comprises a cycle gas recycling system (262), in order to be able to recycle the cycle gas component (CG) in the direction of the gas inlet (21). A recycle line (250) is provided, and is connected to the process stage (200) and an inlet stage (253) such that at least a portion of the purge gas component (PG) can be recycled to the inlet stage (253), in order to be conducted back through the reactor (10). A measuring device (254) designed to ascertain the current carbon content is used. A control device (110, 255) serves to set the ratio of the carbon content and the hydrogen content.

IPC 8 full level

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