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(54) Title: A METHANOL, OLEFIN, AND HYDROCARBON SYNTHESIS PROCESS

(57) Abstract: An improved method for the production of methanol and hydrocarbons from a methane-containing gas, such as natural gas. The improved method integrates a hydrocarbon synthesis unit with a methanol synthesis unit without the need to recycle unreacted syngas exiting the methanol synthesis reactor. The invention combines a syngas stream and additional carbon dioxide from the hydrocarbon synthesis unit to form an optimal syngas composition for methanol and hydrocarbon synthesis. The invention also integrates other process parameters and process components of a methanol and hydrocarbon synthesis process plant to effectively convert most of the carbon in the natural gas to commercial-value products. The invention is also directed to a method of making olefin from the methanol produced by the process of the invention.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07C29/151 C07C1/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 092 172 A (SHELL INTERNATIONALE RESEARCH) 11 August 1982 (1982-08-11) cited in the application the whole document	1
A	EP 0 640 559 A (SNAM PROGETTI) 1 March 1995 (1995-03-01) page 2; claim 1; examples 1,2	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	English, R

INTERNATIONAL SEARCH REPORT

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