

Title (en)
PROCESS FOR CONVERTING GASEOUS ALKANES TO LIQUID HYDROCARBONS

Title (de)
VERFAHREN ZUR UMWANDLUNG VON GASFÖRMIGEN ALKANEN IN FLÜSSIGE KOHLENWASSERSTOFFE

Title (fr)
PROCEDE DE CONVERSION D'ALCANES GAZEUX EN HYDROCARBURES LIQUIDES

Publication
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Application
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Abstract (en)
[origin: WO2005104689A2] A process for converting gaseous alkanes to liquid hydrocarbons wherein a gaseous feed containing alkanes is reacted with a dry bromine vapor to form alkyl bromides and hydrobromic acid vapor. The mixture of alkyl bromides and hydrobromic acid are then reacted over a synthetic crystalline alumino-silicate catalyst, such as a ZSM-5 zeolite, at a temperature of from about 150° C. to about 450° C. so as to form higher molecular weight hydrocarbons and hydrobromic acid vapor. Propane and butane which comprise a portion of the products may be recovered or recycled back through the process to form additional C5+ hydrocarbons. Various methods are disclosed to remove the hydrobromic acid vapor from the higher molecular weight hydrocarbons and to generate bromine from the hydrobromic acid for use in the process.

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