

★ AIRP Q52 92-293810/36 ★ EP 501831-A2  
 Methanol prodn. - by feeding synthesis gas into 1st liq. phase reactor  
 contg. solid methanol synthesis catalyst, reacting, withdrawing  
 effluent gas stream etc. (Eng)

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E17 H06 J04 (92.09.02) C07C 31/04, 29/151, F02C 3/28

92.02.21 92EP-102932 R(BE DE DK ES FR GB IT NL SE)

Prod'n. of methanol from synthesis gas feed contg. H<sub>2</sub>, CO and CO<sub>2</sub>,  
 comprises (a) introducing the synthesis gas feed into a first liq.  
 phase reactor contg. solid methanol synthesis catalyst in an inert  
 liq.; (b) reacting the synthesis gas in the presence of a catalyst to  
 produce methanol; (c) withdrawing an effluent gas stream contg.  
 methanol, H<sub>2</sub>, CO and CO<sub>2</sub> from the first liq. phase reactor and  
 introducing it into a second liq. phase contg. solid methanol  
 synthesis catalyst in an inert liq.; (d) reacting the effluent gas  
 stream to produce additional methanol; (e) removing heat from the  
 first and second liq. phase reactors to control their temps., so  
 methanol productivity is maximised; and (f) withdrawing a mixed  
 prod. stream contg. methanol, H<sub>2</sub>, CO and CO<sub>2</sub> from the second liq.  
 phase reactor.

USE/ADVANTAGE - For the prodn. of methanol from  
 synthesis gas, where catalyst inventory and activity are maintained  
 in the reactors. A significant increase in methanol prodn. per unit of  
 synthesis gas feed is obtd. and the catalyst utilisation is improved,  
 which increases the amt. of methanol produced per unit of catalyst  
 consumption. Methanol losses in the unreacted synthesis gas are  
 reduced and the methanol concn. in the final reactor effluent is high  
 which allows prod. recovery. (20pp Dwg.No.1/4)

CT: No-SR.Pub

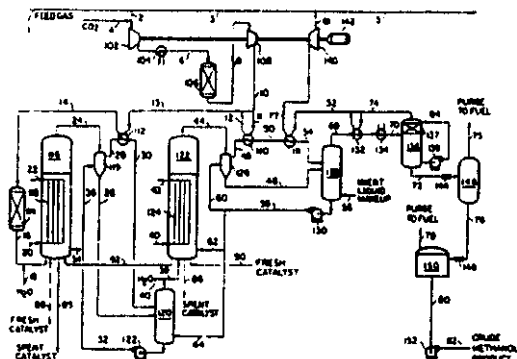
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