

07864 K/04

E18 H06

SHEL 17.07.81

E(10-J2D) H(4-E5, 4-F2E) N(6-B)

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\*GB 2102-022

17.07.81-FR-014008 (26.01.83) C07c-01/04

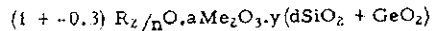
Prod'n. of gasoline-boiling range hydrocarbon(s) from synthesis gas - using catalyst comprising crystalline silicate zeolite and metal components

Partic. suitable silicates are "Silicalite" (US4061724) and/or ZSM-5 (US3702886). The prefd. metal components are Fe, Ni, Co and/or Ru, and esp. prefd. catalysts contain 0.1-10 wt % Ru and/or 0.05-10 wt % Fe-gp metals together with 1-50 wt % (based on the wt. of the Fe-gp metals) promoters.

C83-007788

Conversion of synthesis gas ( $\text{CO} + \text{H}_2$ ) into acyclic hydrocarbons is effected at 125-400 (pref. 175-275) °C and 1-150 (5-100) bars in the presence of a catalyst consisting of a crystalline silicate zeolite having, in the dehydrated form, the compsn. (expressed in moles of oxides)

The prefd.  $\text{H}_2:\text{CO}$  mole ratio is 0.25-6 (esp. 1.25-2.25). fixed or fluid bed catalysts may be used, or a suspension of the catalyst in a hydrocarbon oil may be employed. (6pp920).



(where R is one or more mono- or divalent cations; M is at least one trivalent metal; a is 0-1, y is  $>12$ , d is  $\geq 0.1$ , e is  $>0$ , d + e = 1, and n is the valency of R) and a specified X-ray diffraction pattern, the metal components having been combined with the carrier by ion exchange, washing, drying and calcining.

USES/ADVANTAGES

Predominantly 5-12C hydrocarbons are produced with high conversion rates.

DETAILS

GB2102022