Cr-promoted Co catalyst, and the 3rd stage comprising hydrotreating the high-boiling portion of the middle distillate

consumption and yields distillates having considerably lower

pour points than those obtd. by conventional, direct Fischer-

(II) is prepd. from an aq. reaction mixt. comprising

alkali metal (M), Al and Si sources (such that after drying at

120°C and calcining at 500°C a product having a SiO₂ content

of > 90 wt.% is obtained) and one or more quat. alkylammonium

Hydrotreating can be effected with very low H₂

fraction of the second-stage reaction prod.

Tropsch synthesis.

PREPARATION

EP-111951-A+

E19 H04 SHELL INT RES MIJ BY

a catalyst compsn. comprising a mixt. of

84-159978/26

organic cpds., and

Al₂O₃ ratio is 100-250.

17.12.82-NL-004884 (27.06.84) C07c-01/04

Prodn. of hydrocarbon mixts. from synthesis gas - using catalyst mixt. contg. one crystalline aluminosilicate

C84-067468 | D/S:BE DE FR GB IT NL

CLAIMED HYDROCARBON PRODUCTION

Synthesis gas is contacted at 200-500 (pref. 300-450) °C

and 1-150(5-100)bar and at a GHSV of 50-5000 (300-3000)with

(i) a catalyst (I) facilitating the formation of oxygenated

*EP -111-951-A

(ii) a crystalline aluminosilicate (II) having a specified X-ray powder diffraction pattern and a compsn. (after cal-

cining, are pressed in moles of oxides) in which the SiO2/ The catalyst mixt. pref. contains 2.5-12.5 pbw (I) per pbw

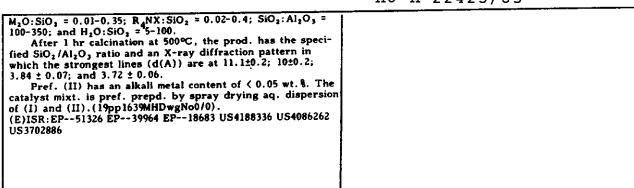
halides (in which the alkyl gps. are pref. 3-4C and are pref. the same and the halogen is pref. Br), the mixt. being maintained at elevated temps. until crystallisation takes place. The mole ratios of oxides in the mixt. are:

(II), (I) pref. contg. Zn and additionally Cr(prefd), Cu and/or Al.

USES/ADVANTAGES In one specific embodiment, the process is used as the first stage of a two-stage process, the second stage compris-

ing contacting the first stage effluent with a catalyst comprising Co. Ni and/or Ru and facilitating the formation of paraff-

inic hydrocarbons. In an alternative embodiment, the process is used as the first stage of a three-stage process, the second stage comprising contact with a silica-supported, Zr-, Ti- or



ER-111951-A