significant effect on the course of the process. However when the pressure was reduced from 600 to 100 atm at 450°, the rate of condensate formation decreased and the proportion of unsaturates increased (experiments 4,6 and 12).

Increasing the space velocity of the mixture across the catalyst from 2.6 to 4.0 increases the proportion of heptane fraction in the condensate, decreases the unsaturates in the latter, and reduces the quantity of high-boiling products (experiments 4,5 and 6).

Reducing the propylene concentration in the feed mixture has no significant effect on the proportion of unsaturates in the condensate, but it does lead to an increase in the quantity of the heptane fraction, and to a decrease in the quantity of high-boiling products. Thus when the feed mixture contains 17% propylene, heptane constitutes 33% of the product, and the residue boiling above 175° is only 24% of the total. Analogous results were obtained with 10% propylene in the feed mixture (Expt. 9).

Table 1

(key)

1) Expt. No.

2) Temp. (°C)

3) Pressure (atm)

4) Space velocity

5) Properties of condensate fractions

6) Vol. % in catalyzate