

A. G. B.
W. G. York

SINCLAIR REFINING COMPANY

Translation Book #154
Reel 45, Bag 3441-91
Frame 00206

1764

June 10, 1948

Avoiding Wax Formation

August 19, 1936

S-96

At low reaction temperatures, a higher percentage of higher boiling hydrocarbons is obtained, most of them in the form of solid paraffin; these solid paraffins can be degraded by a hydrogenating treatment with hydrogen in the presence of a catalyst. The individual working periods are substantially shortened in low-temperature operations, when more paraffin is accumulated. With respect to the production of motor oil, it is by no means desirable that large amounts of paraffin be produced simultaneously, and inevitably.

It may be assumed that a larger accumulation of paraffin in low temperature operations could be avoided by the device of operating with an excess of hydrogen instead of with the normal CO:hydrogen ratio of 1:2. A gas of higher hydrogen content would ever again attack the accumulated paraffin and convert it into oil during the very synthesis gas operation. In this manner, we might succeed in increasing the output of oil, reducing the output of paraffin and lengthening the life of the catalyst.

inevitably result from an attack of hydrogen upon the hard paraffin previously formed, or whether in the presence of CO, resp. in "statu nascendi," the methane formation can be suppressed.

The exit gas would correspondingly turn out to be richer in hydrogen; it would have to be worked up in a second stage after the admixture of water gas.

M. Beth
5-25-48

MD:op