APPLICATION VOID.
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PATENT SPECIFICATION

Convention Date (Germany): July 3, 1936.

502,880

Application Date (in United Kingdom): June 18, 1937. No. 17027/37.

Application for Patent of Addition to No. 486,928 [Germany] Dec. 10, 1935.

Specification not Accepted

2926

COMPLETE SPECIFICATION

Process for the Catalytic Conversion of Oxides of Carbon into Higher Hydrocarbons by means of Hydrogen

We, RUHRCHEMIE AKTIENGESELLSCHAFT, of Oberhausen-Holten, Germany, a Body Corporate organised and existing under the Laws of the German State, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

It is known that when producing hydrocarbons synthetically from carbon monoxide and hydrogen by the use of catalysts, the effectiveness of the catalysts is reduced by reason of the fact that paraffin-like substances having a high boiling point separate out in them. It has also been observed that the catalysts whose effectiveness has been reduced can be restored to their original effectiveness if the high-boiling paraffin hydrocarbons produced during synthesis are removed, for example by extraction.

The specification that has been filed on the Applications Nos. 33814/36, 33815/36 and 33816/36 relates to a process for regenerating catalysts employed in benzine synthesis from carbon monoxide and hydrogen, in which the catalysts are regenerated before there is any appreciable drop in the yield of benzine and oil. To regenerate the catalysts they are either treated in the synthesis furnace with hydrogen at synthesis temperature or extracted with a suitable solvent. The paraffin is then removed from the solutions in the usual manner.

It has been found, in benzine synthesis from carbon monoxide and hydrogen, that the yield particularly of paraffins can be increased by removing the high-boiling paraffins from the catalyst in larger quantities than is necessary for the regeneration of the catalyst so that after each removal of the high-boiling paraffins there sets in an intensified formation of paraffins.

It has further been found that the use of benzine as a solvent of paraffins is not advantageous at all atmospheric temperatures, as when the temperature of the atmosphere is low the paraffins flocculate in the benzine. It has been found that this objectionable feature is avoided if the benzine employed as solvent has added to it certain quantities of the hydrocarbon oils which boil at a higher temperature than benzine and which are produced by the hydrocarbon synthesis.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A modification of the process according to the specification filed on Applications Nos. 33814/36, 33815/36 and 33816/36, having for its purpose the recovery of large quantities of paraffins when producing hydrocarbons synthetically from carbon monoxide and hydrogen by the use of catalysts, characterised in that for the purpose of increasing the yield of paraffins, the high-boiling paraffins are removed by extraction from the catalysts in larger quantities than is necessary for regeneration.

2. A process according to claim 1, characterised in that the solvent for the high-boiling paraffins consists of a mixture of benzine and hydrocarbons which boil at a higher temperature than benzine.

Dated this 18th day of June, 1937.

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Agents for the Applicants.

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