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(54) Title: SELF-SULFIDING OF GUARD REACTOR CATALYST FOR SOLVENT ASSISTED TAR CONVERSION PROCESSES

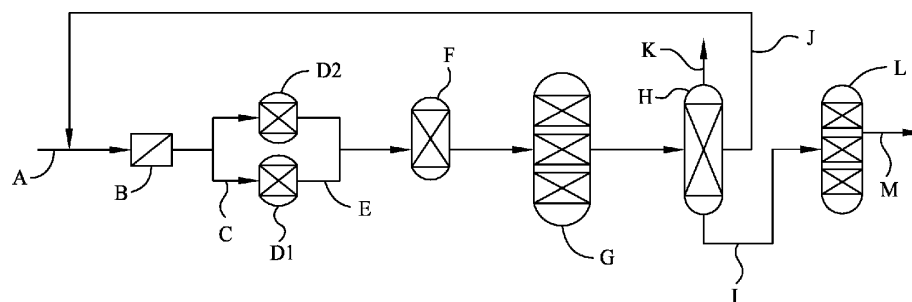


FIG. 1

(57) Abstract: The present disclosure provides methods for hydroprocessing of heavy oils, such as pyrolysis tars. For example, a process for preparing a liquid hydrocarbon product includes providing a first process stream comprising a reduced reactivity tar, and blending the first process stream with a utility fluid to produce a second process stream comprising solids and a reduced reactivity, lower viscosity tar. The method can include introducing the second process stream into a guard reactor without sulfiding the guard reactor catalyst(s) prior to introducing the second process stream into the guard reactor. The method includes hydroprocessing the second process stream in the guard reactor under mild hydroprocessing conditions to produce a third process stream. The method includes hydroprocessing the third process stream to produce a fourth process stream having a bromine number (BN) lower than 12 and comprising the liquid hydrocarbon product and the utility fluid.

[Continued on next page]



Declarations under Rule 4.17:

- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

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