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(54) Title: METHODS FOR REDUCING FOULING IN TAR UPGRADING PROCESSES

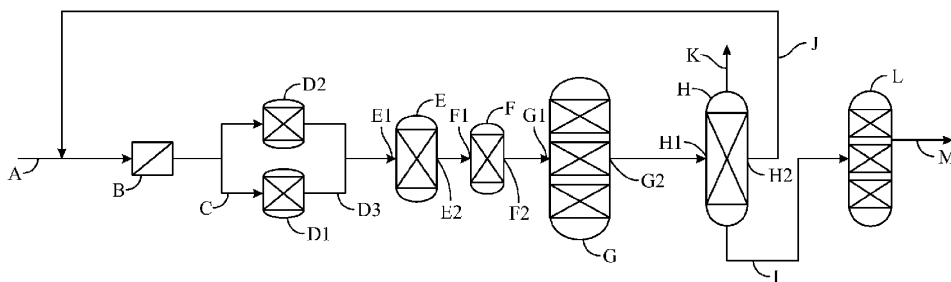


FIG. 1

(57) Abstract: The present disclosure generally relates to methods for reducing fouling in tar upgrading processes and to apparatus for carrying out such processes. In some embodiments, a method is provided that includes providing a first tar stream, combining the first tar stream with a utility fluid to form a first process stream having a viscosity lower than that of the first tar stream, and heating the first process stream in a pre-heater under liquid phase conditions without feeding molecular hydrogen gas into the pre-heater to form a second process stream exiting the pre-heater.

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