

ABSTRACT

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STEAM CRACKING PROCESSES AND THE USE OF SOLVENTS STREAMS PRODUCED BY SOLVENT-ASSISTED TAR CONVERSION PROCESSES

In an embodiment, a method for decreasing reactor fouling in a steam cracking process is provided. The method includes steam cracking a hydrocarbon feed to obtain a quench oil composition comprising a concentration of donatable hydrogen of 0.5 wt. % or more based on a total weight percent of the quench oil composition; exposing a steam cracker effluent flowing from a pyrolysis furnace to the quench oil composition to form a mixture; and fractionating the mixture in a separation apparatus to obtain a steam cracker tar. In another embodiment, a hydrocarbon mixture is provided. The hydrocarbon mixture includes a mid-cut composition.

FIG. 1