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(54) Title: PROCESSES AND SYSTEMS FOR STEAM CRACKING HYDROCARBON FEEDS

(57) Abstract: Processes and systems for steam cracking hydrocarbons. Liquid water can be combined with a preheated hydrocarbon feed to produce a mixture, which can be heated to produce a heated mixture. At least a portion of the heated mixture can be steam cracked to produce an effluent. A process gas, a steam cracker naphtha, a condensed process water, and one or more heavy steam cracker products can be separated from the effluent. The condensed process water can include entrained hydrocarbons and at least a portion of the entrained hydrocarbons can be separated therefrom to produce a purified process water. At least a portion of the purified process water can be heated to produce dilution steam. The liquid water combined with the preheated hydrocarbon feed can include a portion of the condensed process water, a portion of the purified process water, condensed dilution steam, or a mixture thereof.



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