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(71) Applicant: CATALYTIC DISTILLATION TECHNOLOGIES [US/US]; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US).

(72) Inventors: GELBEIN, Abraham, P.; 3500 Pinetree Terrace, Falls Church, VA 22041 (US). SMITH, Lawrence, A., Jr.; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US).

(74) Agent: JOHNSON, Kenneth, H.; P.O. Box 630708, Houston, TX 77263 (US).

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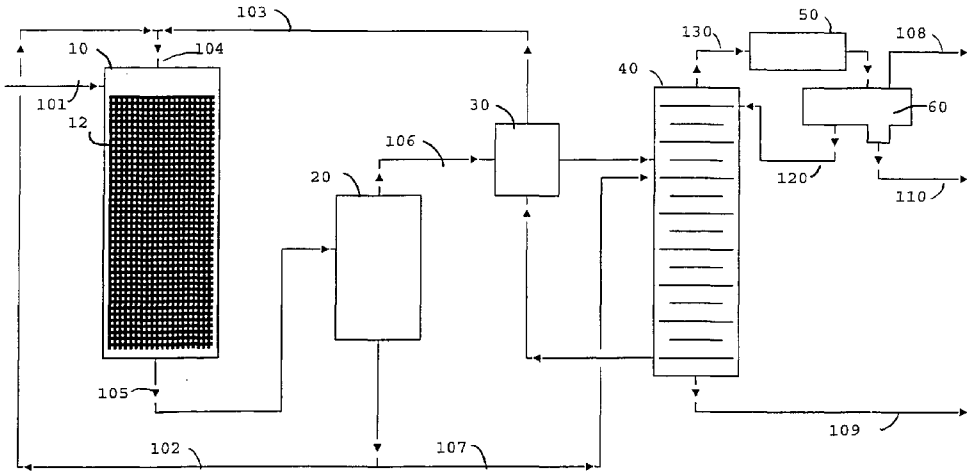
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(54) Title: SELECTIVE HYDROGENATION OF ACETYLENES AND DIENES IN A HYDROCARBON STREAM



(57) Abstract: Acetylenes and dienes in a stream containing hydrogen, methane, C_2-C_6 olefins and paraffins, C_2-C_6 acetylenes and dienes, benzene, toluene, xylenes, and other C_6+ components are hydrogenated in a downflow boiling point reactor wherein the heat of reaction is absorbed by the liquid in the reactor which produces a vapor. Besides the feed to the reactor there is a recirculating stream which is fed at a rate sufficient to ensure that the catalyst particles within the reactor are wetted. A third stream, which is taken from a downstream distillation column, is fed to provide the make up mass corresponding to the mass evaporated in the reactor. The composition of the this third stream controls the steady state composition of the liquid flowing through the reactor.

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