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(71) **Applicant** (for all designated States except US): **CHEVRON U.S.A. INC.** [US/US]; 6001 Bollinger Canyon Road, San Ramon, CA 94583 (US).

(72) Inventors; and

(75) **Inventors/Applicants** (for US only): **DRIVER, Michael, S.** [US/US]; 6001 Bollinger Canyon Road, San Ramon, CA 94583 (US). **TIMKEN, Hye, Kyung** [US/US]; 6001 Bollinger Canyon Road, San Ramon, CA 94583 (US).

(74) **Agents**: **ROTH, Steven, H.** et al.; Chevron Corporation, Law Department, P.o. Box 6006, San Ramon, CA 94583-0806 (US).

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(54) **Title**: RECOVERY OF ALKYL CHLORIDE ADSORPTION CAPACITY BY BASIC SOLUTION TREATMENT OF SPENT ADSORBENT

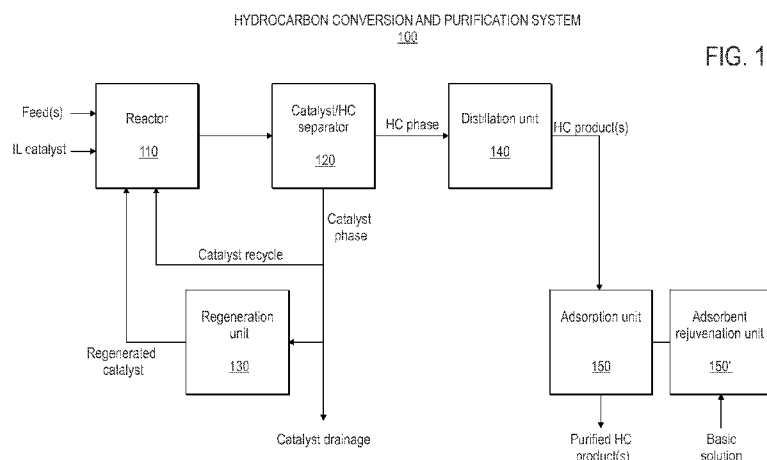


FIG. 1

(57) **Abstract**: Processes for the rejuvenation of a spent adsorbent, wherein the adsorption capacity of the spent adsorbent may be repeatedly restored by treating the spent adsorbent with a basic solution and subsequent adsorbent activation, thereby allowing a plurality of adsorption cycles using a single adsorbent sample. Processes for ionic liquid catalyzed hydrocarbon conversion and hydrocarbon product purification are also disclosed.