



- (51) **International Patent Classification:** Not classified
- (21) **International Application Number:**
PCT/US2012/038164
- (22) **International Filing Date:**
16 May 2012 (16.05.2012)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
13/169,695 27 June 2011 (27.06.2011) US
- (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).
- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO,

DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- without international search report and to be republished upon receipt of that report (Rule 48.2(g))

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

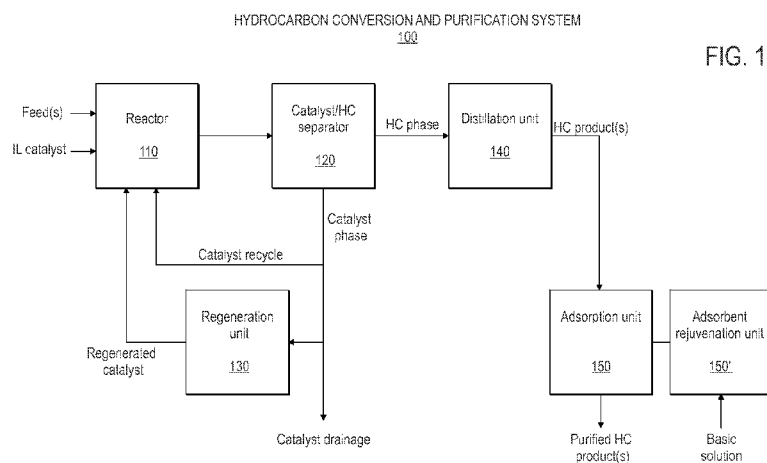


FIG. 1

(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.