

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
27 July 2006 (27.07.2006)

PCT

(10) International Publication Number
WO 2006/079028 A1

(51) International Patent Classification:

B01D 53/047 (2006.01) **C10G 47/18** (2006.01)
C10G 47/00 (2006.01) **C10G 47/20** (2006.01)
C10G 47/02 (2006.01) **B01D 53/22** (2006.01)

(21) International Application Number:

PCT/US2006/002296

(22) International Filing Date: 23 January 2006 (23.01.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/645,713 21 January 2005 (21.01.2005) US
 60/752,724 21 December 2005 (21.12.2005) US

(71) Applicant (for all designated States except US): **EXXON-MOBIL RESEARCH AND ENGINEERING COMPANY** [US/US]; 1545 Route 22 East, P.O.Box 900, Annandale, NJ 08801-0900 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VIETS, John, W.** [US/US]; 3605 Woodhill Place, Fairfax, VA 22031 (US). **SUNDARAM, Narasimhan** [US/US]; 8204 Townsend Street, Apt. #101, Fairfax, VA 22031 (US). **KAUL, Bal, K.** [US/US]; 12201 Wild Horse Road, Fairfax, VA 22033

(US). **STERN, David, L.** [US/US]; 1221 Lake Estates Avenue, Baton Rouge, LA 70810 (US).

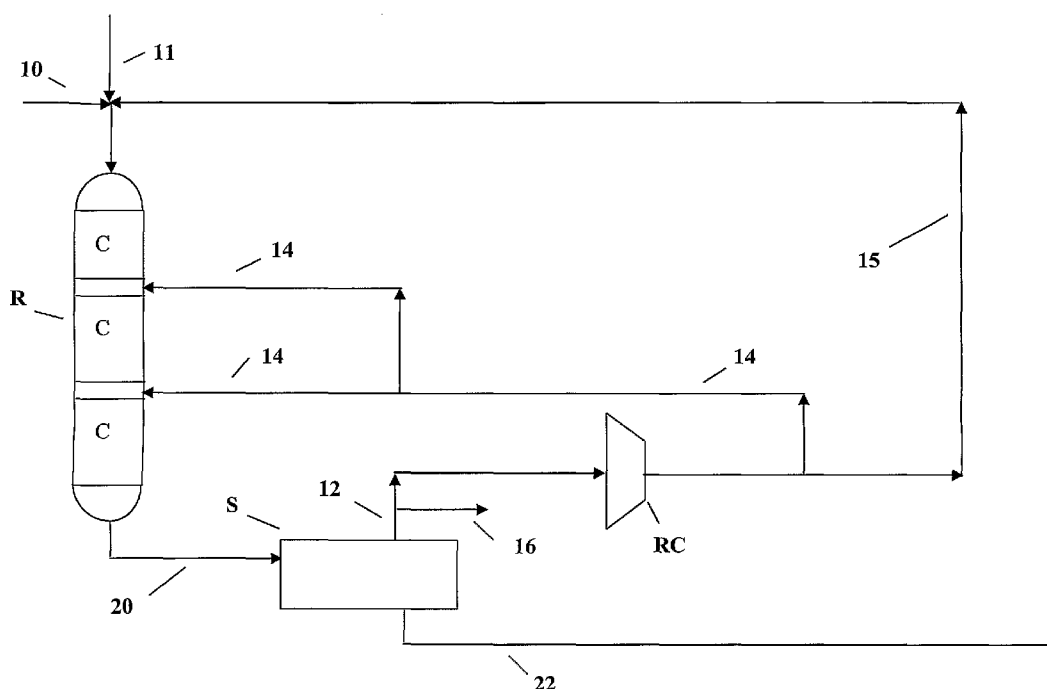
(74) Agents: **HUGHES, Gerard, J.** et al.; Exxonmobil Research and Engineering Company, 1545 Route 22 East, P.O.Box 900, Annandale, NJ 08801-0900 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: HYDROCRACKING OF HEAVY FEEDSTOCKS WITH IMPROVED HYDROGEN MANAGEMENT



(57) Abstract: An improved process for hydrocracking heavy petroleum feedstocks wherein hydrogen-containing streams associated with a hydrocracker are subjected to rapid cycle pressure swing adsorption having a cycle time of less than 30 S.

WO 2006/079028 A1



Published:

— *with international search report*

(15) Information about Correction:

see PCT Gazette No. 50/2006 of 14 December 2006

(48) Date of publication of this corrected version:

14 December 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.