



(51) International Patent Classification:

C10G 45/10 (2006.01) *B01J 23/40* (2006.01)
C10G 67/02 (2006.01) *C07C 7/163* (2006.01)
C10M 101/02 (2006.01)

(21) International Application Number:

PCT/US2011/030763

(22) International Filing Date:

31 March 2011 (31.03.2011)

(25) Filing Language:

English

(26) Publication Language:

English

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

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KRISHNA, Kamala, R.** [US/US]; 951 Richard Lane, Danville, California 94526 (US). **ZIEMER, James, N.** [US/US]; 987 Calle Verde, Martinez, California 94553 (US). **RAINIS, Andrew** [US/US]; 50 Hansen Lane, Walnut Creek, California 94596 (US). **BISCARDI, Joseph, A.** [US/US]; 170 East 88th Street Apt. 6G, New York, New York 10128 (US). **HARRIS, Thomas, V.** [US/US]; 183 W. Seaview Drive, Benicia, California 94510 (US).

(74) Agents: **FLAHERTY, Terrence** et al.; Chevron Corporation, Law Department, Post Office Box 6006, San Ramon, California 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, RO, RS, RU, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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).

Published:

— with international search report (Art. 21(3))

(54) Title: NOVEL PROCESS AND CATALYST SYSTEM FOR IMPROVING DEWAXING CATALYST STABILITY AND LUBRICANT OIL YIELD

(57) Abstract: The invention provides for a process for dewaxing a waxy hydrocarbon feedstock to form a lubricant oil. The invention is also directed to a catalyst system comprising a hydrotreating catalyst upstream of a dewaxing catalyst, used in the dewaxing of a waxy hydrocarbon feedstock to form a lubricant oil. In particular, the invention is directed to a process and catalyst system designed to maintain yield of lubricant oil product. Specifically, the yield of lubricant oil does not decrease more than 2%, at a target pour point, over a dewaxing temperature range. The hydrotreating catalyst helps prevent aging of the dewaxing catalyst and maintains lubricant oil product yield at a target pour point over a wide temperature range. The hydrotreating catalyst comprises platinum, palladium, or combinations thereof on a low acidity inorganic oxide support where acidity is measured by a decalin conversion of less than 10% at 700F.

