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(21) International Application Number: PCT/US98/05522 (22) International Filing Date: 19 March 1998 (19.03.98) (30) Priority Data: 08/854,731 12 May 1997 (12.05.97) US (71) Applicant: CATALYTIC DISTILLATION TECHNOLOGIES [US/US]; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). (72) Inventors: HEARN, Dennis; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). ARGANBRIGHT, Robert, P.; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). SMITH, Lawrence, A., Jr.; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). ADAMS, John, R.; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). (74) Agent: JOHNSON, Kenneth, H.; P.O. Box 630708, Houston, TX 77263 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, <u>SG</u> , SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>

(54) Title: PROCESS FOR THE ALKYLATION OF BENZENE**(57) Abstract**

A process for the alkylation of benzene contained in a mixed refinery stream is disclosed wherein the refinery stream (2) is first subjected to hydrogenation (14) of higher olefins prior to alkylation (12) to the benzene with selected types and quantities of lower olefins (1). Streams containing sulfur compounds may be pretreated by hydrosulfurization. All of the process steps are advantageously carried out in distillation column reactors (10) to take advantage of that mode operation.

