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(21) International Application Number: PCT/US96/01950 (22) International Filing Date: 9 February 1996 (09.02.96) (30) Priority Data: 08/398,690 6 March 1995 (06.03.95) US 08/404,095 14 March 1995 (14.03.95) US (71) Applicant: CHEMICAL RESEARCH & LICENSING COMPANY [US/US]; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). (72) Inventors: GILDERT, Gary, R.; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). HEARN, Dennis; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). PUTMAN, Hugh, M.; 10100 Bay Area Boulevard, Pasadena, TX 77507 (US). NEMPPOS, Speros, Peter; 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, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AZ, BY, KG, KZ, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, 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: HYDROGENATION OF UNSATURATED CYCLIC COMPOUNDS (57) Abstract A process for the hydrogenation of unsaturated cyclic and polycyclic compounds to saturates is provided wherein the reactor is operated at a pressure wherein the reaction mixture is boiling under low hydrogen partial pressure in the range of about 0.1 psi to less than 70 psia at 0 to 350 psig. The catalyst is provided as a catalytic distillation structure such that the reaction is concurrently occurring with a distillation. A portion of the overheads is returned as reflux to provide cooling within the catalyst bed and concurrent condensation of some of the gaseous material within the bed. Although no separation is obtained all of the advantages of concurrent reaction with distillation are achieved.		