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(21) International Application Number: PCT/US97/14761 (22) International Filing Date: 22 August 1997 (22.08.97) (30) Priority Data: 60/024,306 ☒ 23 August 1996 (23.08.96) ☒ US (71) Applicant (for all designated States except US): EXXON CHEMICAL PATENTS INC. ☒ [US/US]; 5200 Bayway Drive, Baytown, TX 77520-5200 (US). (72) Inventor; and (75) Inventor/Applicant (for US only): IACCINO, Larry L. [-/US]; 2017 San Joaquin Parkway, Friendswood, TX 77546 (US). (74) Agents: RUSSELL, Linda, K.; Exxon Chemical Company, P.O. Box 2149, Baytown, TX 77522-2149 (US) et al.		(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, HU, 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, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ARIPO patent (GH, 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 Without international search report and to be republished upon receipt of that report.
(54) Title: HETEROATOM REMOVAL THROUGH COUNTERCURRENT SORPTION (57) Abstract The present invention relates to a process for heteroatom removal, particularly during process excursions, from petroleum and chemical hydrocarbon streams. The invention is comprised of at least two zones through which the hydrocarbon stream and a hydrogen containing treat gas flow. The first zone contains a bed of heteroatom hydroprocessing catalyst in contact with hydrogen-containing treat gas and the second zone contains heteroatom sorbent material(s) through which the hydrocarbon stream flows countercurrent to the up flowing hydrogen-containing treat gas.		