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(21) International Application Number: PCT/GB98/00629 (22) International Filing Date: 27 February 1998 (27.02.98) (30) Priority Data: 9705699.8 19 March 1997 (19.03.97) GB (71) Applicant (for all designated States except US): IMPERIAL CHEMICAL INDUSTRIES PLC [GB/GB]; Imperial Chem- ical House, Millbank, London SW1P 3JF (GB). (72) Inventors; and (75) Inventors/Applicants (for US only): PEARSON, Jean, Mar- garet [GB/GB]; 67 High Street, Great Broughton, Mid- dlesbrough, Cleveland TS7 7EF (GB) ^① HADDEN, Ray- mond, Anthony [GB/GB]; 15 Cartington Road, Newton Hall, Durham DH1 5YR (GB). (74) Agents: GIBSON, Sara, Hillary, Margaret et al.; ICI Group Intellectual Property, P.O. Box 90, Wilton, Middlesbrough, Cleveland TS90 8JE (GB).		(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, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, 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 CARBONYLATION OF ETHYLENE (57) Abstract A process for the liquid-phase carbonylation of ethylene in the presence of a catalyst system comprising a Group VIII metal or compound thereof, a phosphine ligand and a source of anions, and in the presence of a source of hydroxyl groups, is carried out in conditions in which the molar ratio of ethylene to carbon monoxide in the gaseous phase of the reactor is greater than 1:1 and preferably greater than 5:1. The higher ratios of ethylene to carbon monoxide are beneficial in increasing the turnover number of the catalyst system.		