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(21) International Application Number: PCT/US00/10497 (22) International Filing Date: 19 April 2000 (19.04.00) (30) Priority Data: 60/130,188 20 April 1999 (20.04.99) US (71) Applicant (for all designated States except US): RPC INC. [US/US]; 2170 Piedmont Road, Atlanta, GA 30324 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): DECOSTER, David, C. [US/US]; 21 Great Road, Barrington, RI 02806 (US). DASSEL, Mark, W. [US/US]; P.O. Box 486, Indianola, WA 98342 (US). VASSILIOU, Eustathios [US/US]; 12 South Townview Lane, Newark, DE 19711-7419 (US). ROSTAMI, Ader, M. [IR/US]; 9205 Northeast Sea Ray Court, Bainbridge Island, WA 98110 (US). DUDGEON, Douglas, J. [US/US]; #B-206, 280 Wyatt Way Northeast, Bainbridge Island, WA 98110 (US). (74) Agents: PARKER, David, W. et al.; Seed Intellectual Property Law Group PLLC, Suite 6300, 701 Fifth Avenue, Seattle, WA 98104-7092 (US).		(81) Designated States: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: METHODS OF REPLACING WATER AND CYCLOHEXANONE WITH ACETIC ACID IN AQUEOUS SOLUTIONS OF CATALYST		
(57) Abstract This invention relates to methods of replacing water and cyclohexanone with acetic acid in an aqueous solution of catalyst, preferably a cobalt compound. Such an aqueous solution is produced by extracting catalyst with water from a cyclohexanone/water solution of reaction products made by the direct oxidation of cyclohexane to adipic acid. The replacement of both water and cyclohexanone are conducted in a solvent exchange column, wherein acetic acid dissolves the catalyst, while water vapors force the cyclohexanone into a condenser, followed by a decanter wherein two liquid phases may be formed and separated; an upper liquid phase containing a majority of cyclohexanone and a lower liquid phase containing a majority of water. The cyclohexanone may be removed in a pre-treatment zone, wherein also part of the water may be removed, before the concentrated catalyst extract enters the solvent exchange column.		

