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(21) International Application Number: PCT/US97/04325 (22) International Filing Date: 19 March 1997 (19.03.97) (30) Priority Data: 08/619,840 19 March 1996 (19.03.96) US (71) Applicant (for all designated States except US): ENERGY & ENVIRONMENTAL INTERNATIONAL, L.C. [US/US]; 9137 Spring Branch Drive No. 301, Houston, TX 77080 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): EATON, Gerald, ✓ B. [US/US]; 9137 Spring Branch Drive No. 301, Houston, TX 77080 (US). MONAHAN, Michael, J. [-/US]; 9137 Spring Branch Drive No. 301, Houston, TX 77080 (US). TIPTON, Robert, J. [-/US]; 1807 S. Quincy Avenue, Tulsa, Oklahoma 74120 (US). (74) Agent: DUPHORNE, Darin, H.; Tobor & Goldstein L.L.P., Suite 2300, 1360 Post Oak Boulevard, Houston, TX 77056 (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, 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), 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. 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: PROCESS FOR FORMING POLYALPHAOLEFIN DRAG REDUCING AGENTS AND COMPOSITION CONTAINING SAME		
(57) Abstract A composition including polyalphaolefins that function as drag reducing agents and a process for the preparation of polyalphaolefins that function as drag reducing agents are disclosed. The process includes contacting alphaolefin monomers with catalyst particles in a polymerization mixture that includes a hydrocarbon solvent. The polymerization of the alphaolefin monomers produces polyalphaolefin drag reducing agents having an inherent viscosity of at least 10 dL/g. During polymerization of the polyalphaolefin monomers, localized micelles comprising high molecular weight polyalphaolefin polymer are formed in micellar zones around the catalyst particles. The polymerization is conducted in the presence of a viscosity reducing agent that includes a substantially hydrophobic dispersant. The viscosity reducing agent is present in an amount sufficient to reduce the viscosity of the reaction mixture and disperse the localized micelles. The addition of the dispersant during the polymerization process provides for high molecular weight polyalphaolefin and a more uniform molecular weight distribution of the resulting polyalphaolefin. A process of forming a polyalphaolefin drag reducing agent in one or more polymerization reactors and a process for reducing drag in a conduit are also disclosed.		