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13/660,777 25 October 2012 (25.10.2012) US(71) Applicant: **CHEVRON PHILLIPS CHEMICAL COMPANY LP** [US/US]; 10001 Six Pines Drive, The Woodlands, TX 77380 (US).(72) Inventors: **INN, Yongwoo**; 217 Sagebrush Drive, Bartlesville, OK 74006 (US). **DESLAURIERS, Paul, J.**; 6831 E 84 St N, Owasso, OK 74055 (US). **YANG, Qing**; 2917 Montrose Drive, Bartlesville, OK 74006 (US). **SUKHADIA, Ashish, M.**; 2550 Regency Road, Bartlesville, OK 74006 (US). **ROHLFING, David, C.**; 488 E. Fawn Ridge Trail, Bloomington, IN 47408 (US). **MAEGER, Pamela, L.**; 2917 Versailles Place, Bartlesville, OK 74006 (US).(74) Agents: **CARROLL, Rodney, B.** et al.; Conley Rose, P.C., 5601 Granite Parkway, Suite 500, Plano, TX 75024 (US).

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— as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))

[Continued on next page]

(54) Title: CONTROLLING MELT FRACTURE IN BIMODAL RESIN PIPE

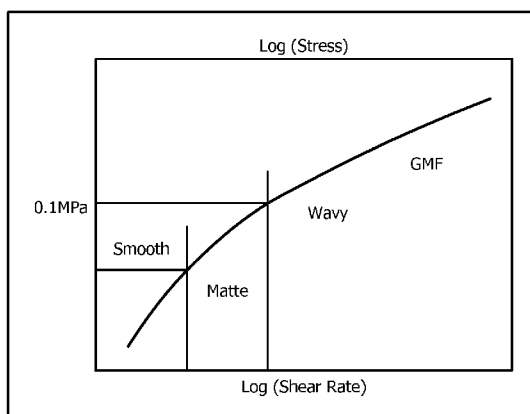


FIG. 1B

(57) Abstract: A method of improving processing of polyethylene resins comprising obtaining a plurality of multimodal metallocene-catalyzed polyethylene samples measuring the shear stress as a function of shear rate for the plurality of multimodal metallocene-catalyzed polyethylene samples using capillary rheometry wherein the measuring yields values for a magnitude of slip-stick, a stress for smooth to matte transition, and a shear rate for smooth to matte transition; and identifying from the plurality of multimodal metallocene-catalyzed polyethylene samples individual multimodal metallocene-catalyzed polyethylene resins having a reduced tendency to melt fracture characterized by a magnitude of slip-stick greater than about 300 psi, a stress for smooth to matte transition greater than about 90 kPa, and a shear rate for smooth to matte transition greater than about 10 s⁻¹.



- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))* — *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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