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(54) **RHEOLOGICAL MEASUREMENT PROCESS**

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(57) **ABSTRACT**

A method and apparatus for measuring the rheological properties of a polymer melt includes flowing the polymer melt from a first reactor to a device through a conduit at a predetermined flow rate, measuring a first pressure of the polymer melt at a first location in the conduit, measuring a second pressure at a second location downstream from the first location, measuring a temperature at a third location in the conduit, wherein the third location is between the first location and the second location, and calculating the rheological property of the polymer melt as it flows through the conduit. The method and apparatus do not require diversion of the polymer melt from the main process stream.

21 Claims, 4 Drawing Sheets