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62/061,527 8 October 2014 (08.10.2014) US(71) Applicant: **WEATHERFORD TECHNOLOGY HOLDINGS, LLC.** [US/US]; 2000 St. James Place, Houston, TX 77056 (US).(72) Inventors: **BRANA, Jose, D.**; 6610 W. Sam Houston Pkwy N., Suite 350, Houston, TX 77041 (US). **NIAZY, Jeffrey, W.**; 6610 W. Sam Houston Pkwy N., Suite 350, Houston, TX 77041 (US).(74) Agent: **MCDERMOTT, Sean, P.**; Blank Rome LLP, 717 Texas Avenue, Suite 1400, Houston, Texas 77002 (US).

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(54) Title: CHOKES CONTROL TUNED BY FLOW COEFFICIENT FOR CONTROLLED PRESSURE DRILLING

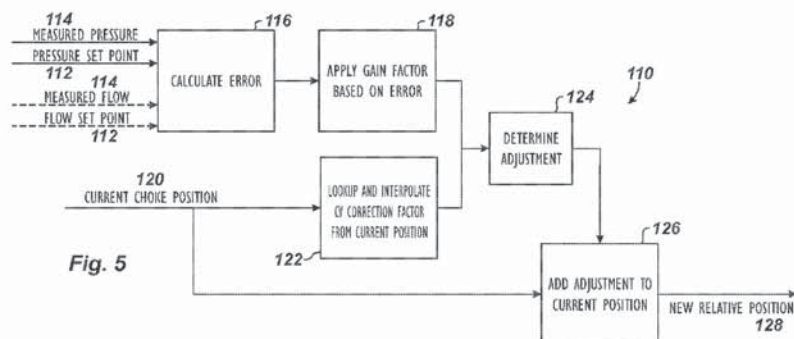


Fig. 5

(57) Abstract: A computerized control is used in controlling a choke when drilling a wellbore with a drilling system. The computerized control obtains a measured value of a parameter in the drilling system and controls the parameter in the drilling system using the choke. The computerized control obtains indications of an error between a set point of the parameter and the measured value of the parameter in the drilling system, a flow coefficient character of the choke, and a current position of the choke. Based on these indications, the computerized control then determines a position adjustment for the choke and adjusting the parameter in the drilling system by applying the position adjustment to the choke.