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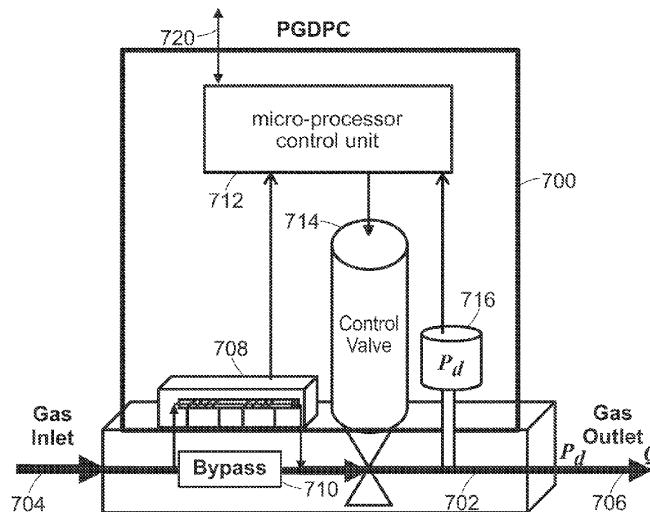


FIG. 7

(57) Abstract: Pulsed gas delivery is obtained with mass flow control using a thermal mass flow sensor and control valve. The controller is augmented for pressure control with a downstream pressure sensor. In separate control modes of operation, the control valve is controlled in response to the flow sensor during pulse gas delivery mode and controlled in response to the downstream pressure sensor during pressure control mode of operation.

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