

[54] ADAPTIVE PRESSURE CONTROL SYSTEM

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 137/487.5, 624.11; 346/33 TP

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[57] ABSTRACT

An apparatus and method control the pressure in a system by continuously measuring the pressure and comparing it to a desired set pressure. The apparatus and method record a history of the measured pressure as a function of time and calculate the rates at which the pressure changes. The rates at which the pressure changes are recorded and the rate at which the rates change is also calculated to determine the rate at which the apparatus and method can vary the rate of change of pressure. The apparatus and method calculate the amount of time required to reach the desired set pressure and compare it to the amount of time required for the rate of change of the pressure to become zero and adjust the flow of a gas in the system so that the desired set pressure is achieved at substantially the same time as the rate of pressure change becomes zero.

14 Claims, 22 Drawing Figures

