

**METHOD AND SYSTEM FOR ASSESSING THE OPERATING CONDITION
OF A PRESSURE REGULATOR IN A CORROSIVE GAS DISTRIBUTION
SYSTEM**

ABSTRACT OF THE DISCLOSURE

A method of detecting a malfunction or failure of a pressure regulator in a corrosive or reactive gas distribution system while in use involves continuously measuring or monitoring the output pressure of the pressure regulator, both in the presence and the absence of gas flow. The onset of a malfunction of the pressure regulator can be predicted when the differential output pressure between flowing and non-flowing gas fluctuates highly and increases gradually. Failure of the pressure regulator or of the total system is detected when the differential output pressure in the presence and absence of flowing gas exceeds some experimentally determined value.

Figure 2