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PRESSURE REGULATING APPARATUS

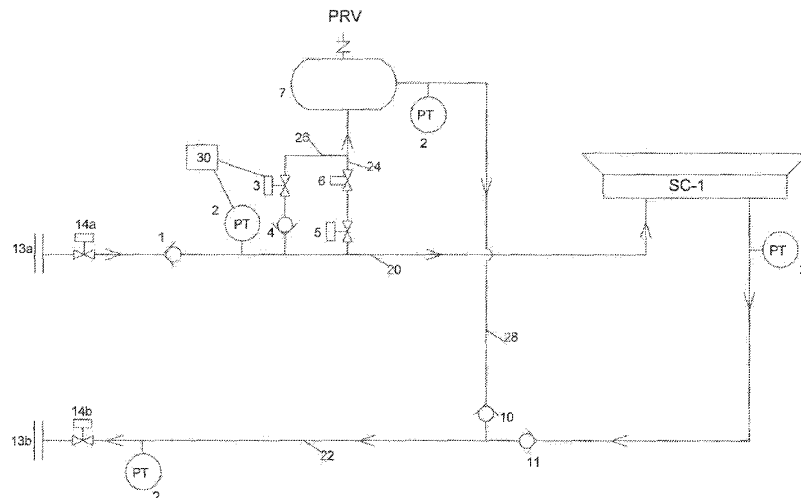


Figure 1

(57) Abstract: A semiconductor wafer cooling system and method and a pressure regulating apparatus for mitigating pressure increases in a semiconductor wafer conditioning circuit are disclosed. The pressure regulating apparatus comprises: a buffer vessel, the buffer vessel comprising an inlet and outlet channel; wherein the inlet channel is configured in operation to be in fluid communication with a higher pressure location of the semiconductor wafer conditioning circuit, and the outlet channel is configured in operation to be in fluid communication with a lower pressure location. The inlet channel comprises a pressure controlled valve configured to close the inlet channel during normal operation such that the buffer vessel is isolated from the higher pressure location of the conditioning circuit and to open the inlet channel in response to the pressure within the semiconductor conditioning circuit rising above a predetermined level.

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