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(54) Title: VALVE SYSTEMS FOR BALANCING GAS FLOW TO MULTIPLE STATIONS OF A SUBSTRATE PROCESSING SYSTEM

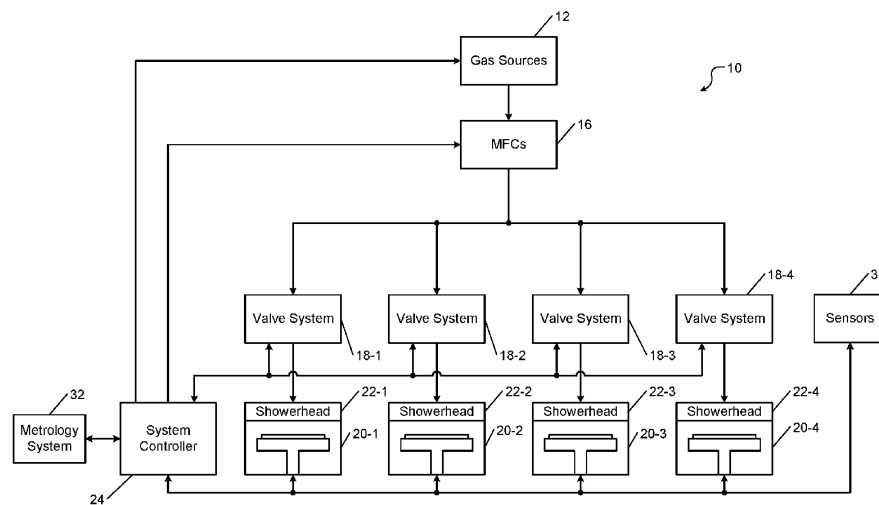


FIG. 1A

(57) Abstract: A substrate processing system includes N valve systems connected to N stations, respectively. Each valve system includes a manifold block, a plurality of valves, and a flow control device. The manifold block includes inlets to receive a process gas and an inert gas, an outlet connected to a station, and a plurality of gas flow channels disposed within the manifold block and connected to the inlets and the outlet. The valves are mounted to the manifold block and control flow of the process gas and the inert gas through the outlet. The flow control device is mounted to the manifold block and controls flow of the inert gas through the manifold block into the one of the N stations. The flow control device of each of the N valve systems is calibrated to balance the flow of the inert gas in the N stations.

[Continued on next page]

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