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(54) Title: INTEGRATED MULTI-PORTED VALVE ASSEMBLY

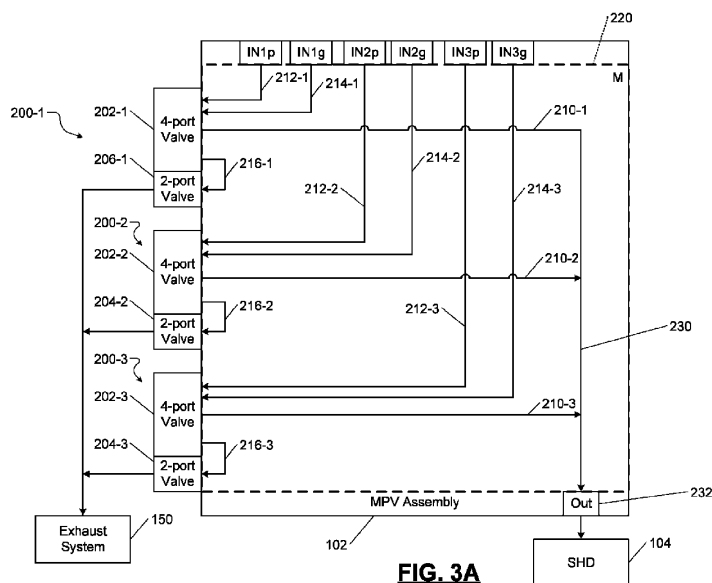


FIG. 3A

(57) Abstract: A multiport valve assembly for a substrate processing system includes a manifold block and a plurality of valves mounted to the manifold block. The manifold block includes N first inputs connected to N sources of N vaporized precursors, where N is an integer greater than 1; an outlet connectable to a showerhead of a processing chamber; and a plurality of manifolds enclosed in the manifold block. The valves are coupled to the N first inputs by the manifolds in the manifold block. The valves are configured to supply the N vaporized precursors through respective supply manifolds in the manifold block. The respective supply manifolds are connected to an output manifold in the manifold block. The output manifold includes the outlet to supply one or more of the N vaporized precursors to the showerhead.

[Continued on next page]

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