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(54) Title: SHOWERHEAD ASSEMBLY AND SUBSTRATE PROCESSING SYSTEMS FOR IMPROVING DEPOSITION THICKNESS UNIFORMITY

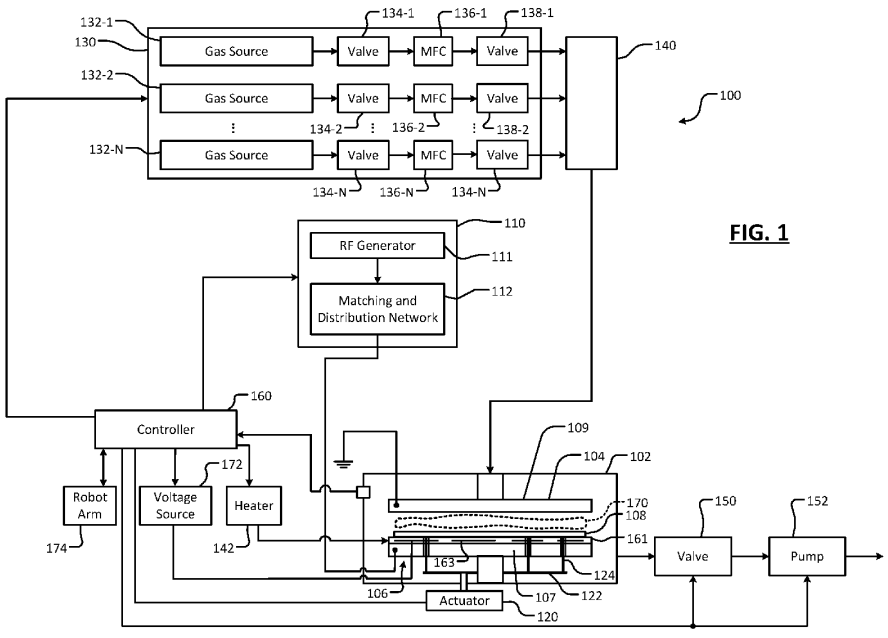


FIG. 1

(57) Abstract: A showerhead assembly includes a showerhead with an upper portion including a gas channel extending in a first direction and having a first width in a second direction. A lower portion is connected to the upper portion and includes a faceplate including a plurality of gas through holes extending vertically through the faceplate in the first direction and a baffle plate arranged on a plurality of posts above the faceplate and below an outlet of the gas channel. A gas plenum is defined between the upper portion and the lower portion, extends in the second direction, and is in fluid communication with the gas channel. The showerhead assembly includes a back side gas system to supply gas to a bellows volume defined by a bellows arranged around an upper portion of the showerhead. First and second annular gas flows are supplied across an outer surface of the showerhead.

[Continued on next page]

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