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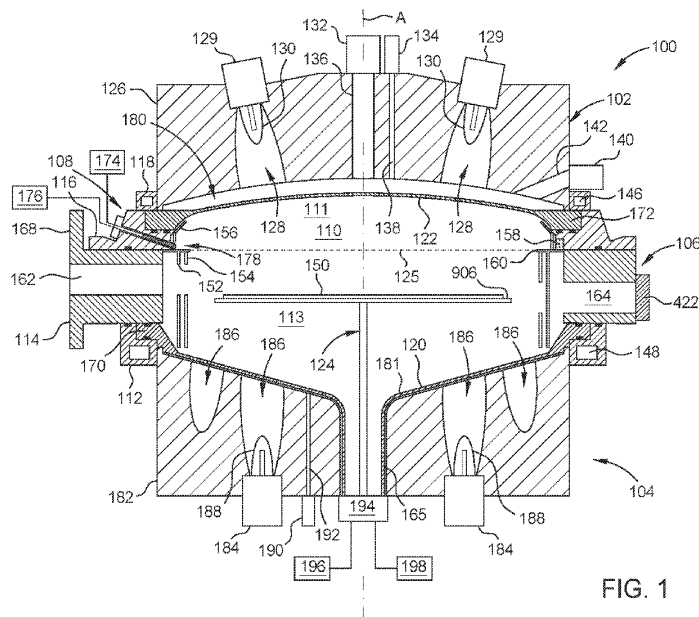


FIG. 1

(57) Abstract: The present disclosure generally relates to a process chamber for processing of semiconductor substrates. The process chamber includes an upper lamp assembly, a lower lamp assembly, a substrate support, an upper window disposed between the substrate support and the upper lamp assembly, a lower window disposed between the lower lamp assembly and the substrate support, an inject ring, and a base ring. Each of the upper lamp assembly and the lower lamp assembly include vertically oriented lamp apertures for the placement of heating lamps therein. The inject ring includes gas injectors disposed therethrough and the base ring includes a substrate transfer passage, a lower chamber exhaust passage, and one or more upper chamber exhaust passages. The gas injectors are disposed over the substrate transfer passage and across from the lower chamber exhaust passage and the one or more upper chamber exhaust passages.

[Continued on next page]

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