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(54) Title: METHOD OF FORMING SILICON-CONTAINING FILMS

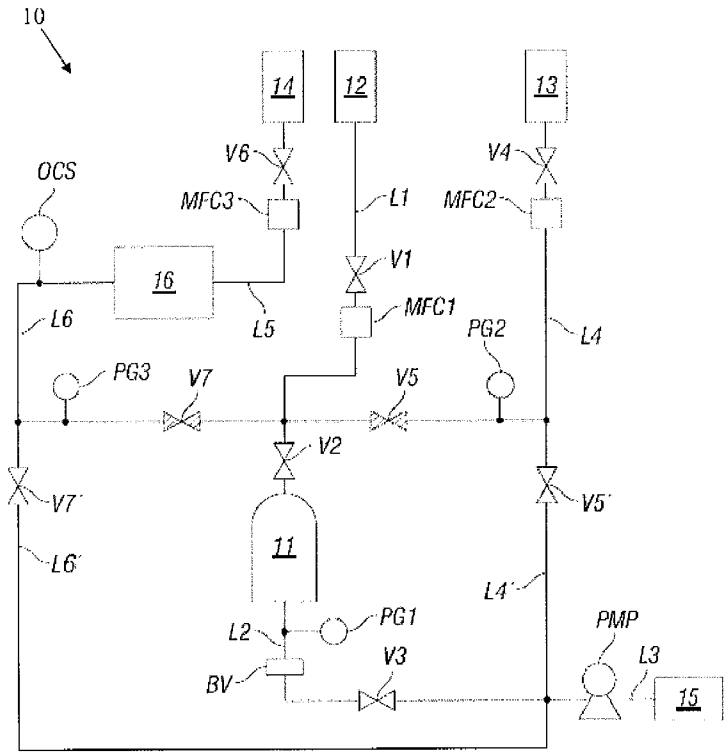


FIG. 1

(57) Abstract: A method of forming a silicon-containing film comprising providing a substrate in a reaction chamber, injecting into the reaction chamber at least one silicon-containing compound; injecting into the reaction chamber at least one co-reactant in the gaseous form; and reacting the substrate, silicon-containing compound, and co-reactant in the gaseous form at a temperature equal to or less than 550°C to obtain a silicon-containing film deposited onto the substrate. A method of preparing a silicon nitride film comprising introducing a silicon wafer to a reaction chamber; introducing a silicon-containing compound to the reaction chamber; purging the reaction chamber with an inert gas; and introducing a nitrogen-containing co-reactant in gaseous form to the reaction chamber under conditions suitable for the formation of a monomolecular layer of a silicon nitride film on the silicon wafer.

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