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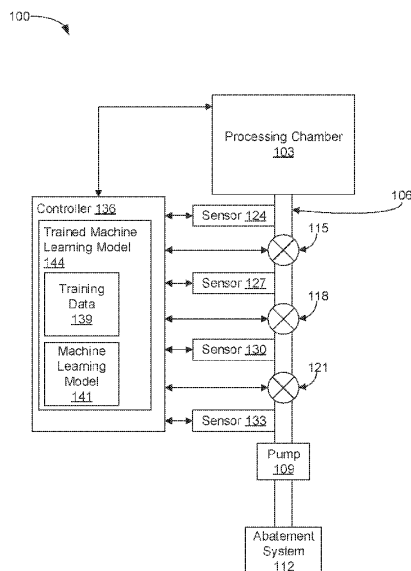


FIG. 1

(57) Abstract: Systems, apparatus, and methods are disclosed for foreline diagnostics and control. A foreline coupled to a chamber exhaust is instrumented with one or more sensors, in some embodiments placed between the chamber exhaust and an abatement system. The one or more sensors are positioned to measure pressure in the foreline as an indicator of conductance. The sensors are coupled to a trained machine learning model configured to provide a signal when the foreline needs a cleaning cycle or when preventive maintenance should be performed. In some embodiments, the trained machine learning predicts when cleaning or preventive maintenance will be needed.

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