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(54) Title: IN SITU WAFER CLEANING PROCESS

(57) Abstract

A low pressure in situ wafer cleaning process and apparatus are disclosed wherein a low pressure external combustion reactor in combination with a low pressure furnace produces a stream of a combustion product through the combustion of a halogenated hydrocarbon and oxygen. The combustion product is contacted with semiconductor wafers in the low pressure furnace to remove Group I and II metals. After a sufficient time has passed for cleaning, the combustion reactor and furnace are purged with an inert gas to remove the combustion product. In a preferred embodiment, the halogenated hydrocarbon is trans-1,2-dichloroethylene and the combustion product is vaporous hydrochloric acid.

