

ABSTRACT OF THE DISCLOSURE**FLUORINE ABATEMENT USING STEAM INJECTION IN OXIDATION
TREATMENT OF SEMICONDUCTOR MANUFACTURING EFFLUENT GASES**

An apparatus and process for abatement of halogen in a halogen-containing effluent gas, such as is produced by a semiconductor manufacturing plant utilizing perfluorocompounds in the operation of the plant. Halogen-containing effluent gas is contacted with water vapor in a thermal oxidation reactor to convert halogen species to reaction products that are readily removed from the effluent gas by subsequent scrubbing. A shrouding gas may be employed to separate the halogen-containing effluent gas from the water vapor at the inlet of the thermal oxidation reactor, to thereby prevent premature reaction that would otherwise produce particulates and reaction products that could clog the inlet of the reactor.

FIG. 1

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