



162162



G00002

ABSTRACT

WET ABATEMENT SYSTEM FOR WASTE SiH_4

A new method of silane abatement is achieved. The novel silane abatement system comprises a water-filled chamber within an outer chamber. An air intake is located in one upper portion of said outer chamber and an exhaust output is located in another upper portion of the outer chamber. A silane gas intake pipe runs into the outer chamber and has its output under water in the water-filled chamber. A drain is connected through a valve at a bottom portion of the water-filled chamber. Many safety features are built into the wet abatement system, including temperature and water level sensors, water sprinklers, and means for shutting off air supply, exhaust, and silane intake. Waste silane gas is bubbled into a water-filled chamber. The waste silane gas is reacted with oxygen in water in the water-filled chamber whereby SiO_2 precipitates are formed and wherein the SiO_2 precipitates settle to a bottom surface of the water-filled chamber. The SiO_2 precipitates are drained out of the water-filled chamber to complete the abatement process.

FIGURE 2