

Silane Waste Incineration

Verantis recently designed and installed an emissions control system comprising incineration and APC system to treat waste chlorinated silane gases and liquids coming from a new methyl chloro silanes (MCS) production facility in Jiangxi Province, China. This plant has an annual 200,000 ton production capacity of siloxanes.

The waste streams are first oxidized in a specially designed vertical “down-flow” incinerator. The “down-flow” design minimizes the build-up of SiO_2 on the combustion chamber walls. The proprietary Verantis design takes special care to provide optimal combustion conditions to ensure complete combustion of the waste gases and liquids and to produce SiO_2 in a form that minimizes the build-up on the equipment.

The products of combustion from the incinerator are rapidly cooled to saturation temperature in an adiabatic quench vessel to effectively cool the gas while minimizing dioxin formation.

The cooled combustion gases are treated in a downstream air pollution control system including a Ventruri Scrubber for collecting >1 micron particulates, Condenser for cooling the gas stream to reduce the temperature and volume of the gas stream, IWS ionizing wet scrubbers for collecting submicron particulates and neutralizing HCl.



From Left to right: Incinerator, Quench, Ventruri, Condenser, IWS™ Scrubber, Fan and Stack.

Application	Gaseous & Liquid Chlorinated Silane Waste Incineration
Pollutants	Chlorinated Silane, HCl and hydrogen
Exhaust Volume	3000 kg/h
Emission Control	SiO_2 , HCl, NO_x , Dioxin GB Standard