

## Rotary Kiln Treating Petrochemical Plant Waste

Verantis recently designed and installed a rotary kiln and air pollution control system for a Petrochemical Plant in Daya Bay, China.

The combustion system adopts a rotary kiln incinerator for combustion of shredded solid waste, dewatered sludge, and liquid waste. The Kiln is equipped with a dual fired burner to burn low sulfur fuel oil and/or energetic liquid waste. A "dry" type water cooled ash drag conveyor is installed under the secondary combustion chamber for continuous bottom ash removal.

The Rotary Kiln installed has an overall length of 13.7 meters from feed to discharge and has an internal diameter of 3,454 mm. Kiln shell is made of boiler plate steel and is lined with a stalastic liner for corrosion protection. Kiln refractory is designed for a continuous operating temperature limit of 1,550° C. The kiln is tapered from the feed end and is designed with a 2 degree slope from horizontal.

### APC Equipment Supplied:

- Dual Cyclones for particulate and fly ash removal.
- Waste Heat Recovery Boiler designed to produce up to 7.6 ton per hour of medium pressure steam at a temperature of 285°C.
- Evaporative Cooler to cool the flue gas exiting the boiler from 300°C to 170°C.
- Pulse Jet Fabric Filter Collector with High Temperature bags for particulate removal and dry scrubbing.
- Induced Draft Fan to maintain the system under negative pressure before exhausting the flue gas through a 50 meter high stack equipped with CEMS.



Application	Petrochemical Plant Waste
Waste Sludge	2, 200 kg/h
Waste Solid	100 kg/h
Organic Liquid Wastes	400 kg/h
<b>Total Waste load</b>	<b>2, 700 kg/h</b>