

SOLID WASTE MANAGEMENT



ROTARY KILN

A new giant petrochemical processing complex in China required an incineration system to reduce the volume of wastes transferred to off site disposal.

Verantis was able to design and supply a complete incineration system with waste heat recovery, air pollution control equipment and feed systems that met regulatory requirements.

The combustion system uses a rotary kiln for primary combustion of shredded solid waste, dewatered sludge, and liquid waste and a secondary combustor for holding the products of combustion at 1,000 degrees C for two seconds. The kiln is equipped with a dual fired burner to burn low sulfur fuel oil and/or energetic liquid waste.

The secondary combustion chamber (SCC) is equipped with an emergency bypass stack and stack cap, designed to open on power failure or positive pressure. A dry type water cooled ash drag conveyor is installed under the SCC for 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 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.

OVERVIEW

Verantis designed and supplied a system to treat solid wastes, aqueous liquids and sludge using incineration to reduce the volume of wastes transferred to off site disposal.



EQUIPMENT

Verantis designed and supplied all equipment for a complete incineration system with waste heat recovery and air pollution control and feed systems.



AUXILIARY EQUIPMENT

Verantis also supplied a complete sludge dewatering plant using belt filter presses. The dewatered sludge is fed by progressive cavity pumps to a sludge storage and a double acting hydraulic pump. Solid waste is shredded in a hydraulic shredder and fed to the kiln with a belt conveyor and a sequential ram feeder.



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FEATURES

- Solutions provided for new large scale petrochemical processing complex in China.
- Designed a solution for a complete air pollution control systems and feed system that met the regulatory requirement.
- Verantis design/build included a complete incineration system with waste heat recovery including dual cyclones for particulate and fly ash removal.
- Verantis was able to provide a complete system solution to treat solid wastes, aqueous liquids and sludge using incineration to reduce the volume of wastes transferred to off site disposal.

For more information and resources,
please visit www.verantis.com.

Corporate Headquarters
7251 Engle Road #300
Cleveland, OH 44130
800.924.0054

TECHNICAL CAPABILITIES

All parts of incineration and air pollution control systems are designed in-house. System components are sourced through a world-wide network of fabricators and suppliers.



DESIGN CAPABILITIES

Systems can be designed to accommodate a variety of requirements including NFPA and other regulatory codes such as Chinese GB, European EN and US EPA standards.



TURNKEY SOLUTIONS

Verantis is able to provide turnkey solutions globally for most of your incineration and pollution control needs. For more information on any of our production or solutions, please visit us at www.verantis.com.

