

Sludge Treatment Facility - Hong Kong

Characteristics:

- Stationary fluidized bed incineration
 - 4 Lines each with 4 x 6.25 tDS/h
 - Total capacity 200,000 tDS/y
- Dry Flue Gas Cleaning System
 - Multicyclone, BiCarb-Reaktor, Bag Filter
 - Flue gas volume 4 x 70,000 m³/h
- Energy utilization
 - Condensing steam turbines 2 x 12 MWel
 - Self sufficient heating supply



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Scope of Work:

- Technical expert support and advice to the client (HK Government)
- Assessment of the plant design
- Monitoring of factory acceptance tests of vital components
- Inspection of plant construction quality
- Monitoring of plant commissioning and test trials

Description:

Hong Kong produced sludge in eleven water treatment plants of about 2,000 tOS/day, which were hitherto exclusively landfilled. Since the landfill capacity is limited due to municipal waste a sludge incineration plant was for the thermal disposal of dewatered sludge.

When selecting the combustion and flue gas cleaning technology particular emphasis was placed on the state of the art according to European standards in order to meet the stringent environmental requirements. Thus, the method of stationary fluidized bed for combustion and a dry process (bicarb) method was selected for flue gas purification.

Dr. Born- Dr. Ermel engineers was appointed professional technical advisor for the Ministry of the Environment (EPD), being responsible for the process engineering and acting as client representative to support the project in the phases planning, construction and commissioning. The plant went into successful continuous operation in 2015.