Doosan Lentjes

PROJECT PROFILE: Waste-to-energy, Poland

Krakow

Waste-to-energy

Doosan Lentjes provided key technology for the construction of a two-line waste-to-energy plant located in Krakow, Poland. The project scope encompassed grate and boiler as well as site services. The new plant is the largest facility of its kind in Poland.

DELIVERABLES

- Key process equipment for two incineration lines, each consisting of counter-reciprocating grate and 5-pass boiler
- Provision of site services

CHALLENGES

- Emissions limits below European Industrial Emission Directive (IED)
- Construction of one of the first WtE plants in Poland requires familiarisation with this technology of all parties involved (owner, authorities, consultants)

BENEFITS

- High flexibility and life expectancy
- High flexibility for changing future waste qualities
- Plant to be considered as recovery facility due to high efficiency
- Attractive architecture

Krakow WtE facility serves as a role model for Europe

The Krakow waste-to-energy plant treats municipal solid waste for the Polish city of Krakow. The steam produced is used to generate electricity as well as district heat for the surrounding residential areas, resulting in extraordinarily high overall plant efficiency.

The contract included engineering, procurement and delivery of equipment, as well as services for construction and commissioning. Doosan Lentjes supplied grate and boiler for two incineration lines already being designed to cope with future requirements, but still maintaining low operating costs and high plant availability.

The plant combines proven air-cooled reciprocating grate and steam generator technologies and reaffirms Doosan Lentjes' WtE capabilities. The realisation of the concept was based on close cooperation between the general contractor and Doosan Lentjes as technology provider.

The Krakow is a role model for all new EU members as they seek to come to terms with the Waste Framework Directive and clean energy legislation requirements.

Key Project Data

Customer	Posco E&C Co. Ltd. (General Contractor) Krakowski Holding Komunalny SA (Principal)
Location of power station	Krakow, Poland
Award date	2012
Main fuels	municipal solid waste, bulky and similar pretreated waste
Total plant capacity	nominal 220,000 t/a, max. 14.1t/h throughput per unit (eq. 225, 600 t/a)
Number of lines	2
Thermal capacity	2x 34.5 MW_{th}
Heating value	8.8 MJ/kg
Steam pressure	40 bar
Steam temperature	415°C

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Doosan Lentjes is a global provider of processes and technologies for energy production from renewable and fossil fuels. Our specific areas of expertise include circulating fluidised bed boilers, key technology for the generation of energy from waste, and flue gas cleaning systems. We have been pioneering energy solutions for 90 years and convert millions of tonnes of waste into valuable energy each year.

Doosan Lentjes is part of a powerful combination of companies united under the Doosan Group to deliver complementary technologies, skills and value to customers the world over.

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