

- HEAT RECOVERY
- BIOMASS
- PRIMARY FUELS
- SOLID RESIDUES
- LIQUID & GASEOUS RESIDUES

SLECO-CENTRALE BEVEREN, BELGIUM



SLECO-CENTRALE, BEVEREN, BELGIUM



Number of Lines	3
Fuel	Household Waste, Residues and Sewage Sludge
Heating Value (min./max./nom.)	7.9 / 17.0 / 8.2 MJ/kg
Fuel Throughput each (min./max./nom.)	7.5 / 23.8 / 20.8 t/h
Rated Thermal Input each	52.3 MW
Steam Capacity each	61.5 t/h
Steam Pressure	42 bar
Steam Temperature	400 °C
Feedwater Temperature	140 °C
Flue-Gas Flow each	157,180 m ³ i. N./h
Exhaust-Gas Temperature	210 – 250 °C
Operating Approval	17. Federal German Pollution Control Act
Year of Commissioning	2006

THE TASK

So as to increase the firing capacity of the existing waste-to-energy plant located in Beveren by around 350,000 t per year, the plant was to be extended by three new combustion lines. The combustion system was to be selected and planned so that the requirements for the specified fuel range were met. The client, the Lurgi Benelux N.V., a subsidiary of the Lurgi Energie- und Entsorgung GmbH situated in Ratingen, decided to apply the Rowitec (rotating fluidised-bed technology) as combustion system. So, the steam generators of identical construction were to be designed and developed as vertical boilers. Owing to a delayed official authorisation procedure, the plant was to be installed within an reduced time schedule.

THE SOLUTION

In consideration of the requirements which were laid down largely with the assistance of Standardkessel Baumgarte within the project planning phase, a concept tailored on the thermodynamical and constructive criterions was developed, i. e. steam generator in vertical construction, with an empty pass downstream the inlet for the flue-gases leaving the combustion chamber. The economiser in sheet-metal plate housing was separately arranged downstream the second boiler pass with the installation of evaporator- and superheater heating surfaces. Thanks to qualified professional companies, normally acting on site, and an exactly planned installation procedure the very tight time scheduled could be maintained.

SOPE OF SUPPLY

- Main-Steam Generators with Valves and Accessories
- Heating-Surface Cleaning Systems as Sootblowers
- Boiler Supporting Structure with Stairs and Platforms
- Thermal Insulation
- Flash Tank with Fittings
- Metrological Equipment

ENGINEERING SERVICES

- Engineering incl. Part Engineering for Official Approval
- Installation and Commissioning
- Trial Run

