

BIOMASS

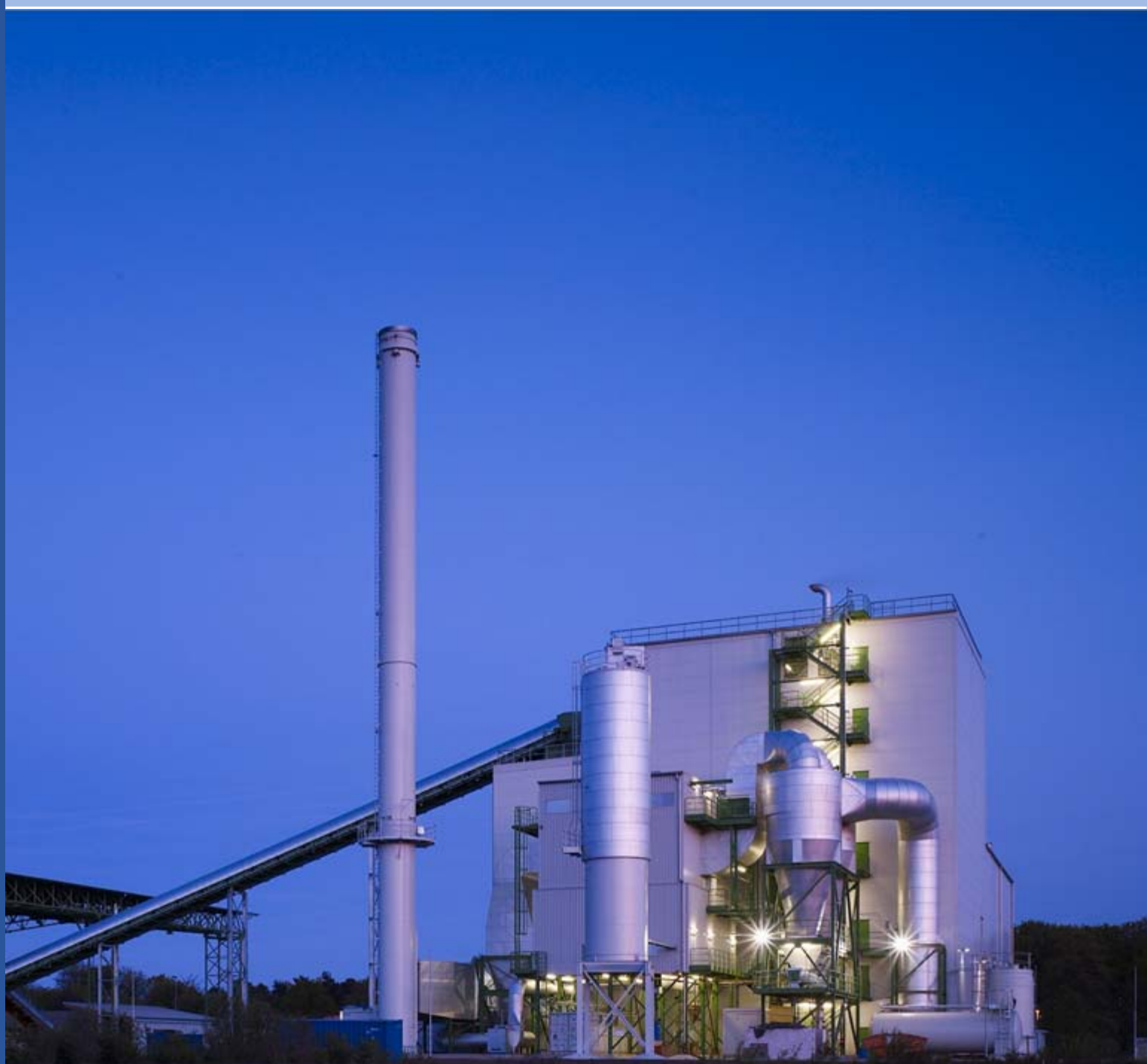
INDUSTRIAL RESIDUES

HEAT RECOVERY

PRIMARY FUELS



## BIOMASS POWER PLANT EBERSWALDE, GERMANY



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### THE TASK

At the Eberswalde location a new biomass-fired power plant (BMPP) had to be constructed in the harbour area. The task of the BMPP is to supply the surrounding households with electricity. Moreover, the co-generation of process steam for supplying the surrounding business enterprises/production plants is planned. As fuel for the BMPP, only fresh wood is used, in accordance with the Biomass Ordinance. The order for implementation was placed with Standardkessel in July 2005.

### THE SOLUTION

In order to find a solution in keeping with the terms of reference, the plant was equipped with the following process equipment units. The delivery of the fuel is carried out by means of trucks. The fuel is taken from the receiving station to a roofed-over outdoor storage area where it is put into intermediate storage. From the open air storage area, the fuel is conveyed by means of moving floors and conveyor belts to the boiler area.

The thermal part consists of grate stoker, steam generator and flue-gas cleaning system. The firing of the fuel is carried out via a three-compartment underfeed stoker. The steam generator is designed as a water-tube boiler in the vertical type of construction with natural circulation. In order to achieve optimum efficiency, there is an integral reheat stage. Flue-gas cleaning is carried out in a dry process by means of fabric filters. The electric energy generated in the turbine/generator is fed into the public grid.

### SCOPE OF SUPPLY

Turn-key Biomass Power Station

- Fuel feed system
- Firing system / boiler / flue-gas cleaning system
- Water / steam circuit with reheat
- Steam turbine / generator/ cooling tower / cooling circuits
- Chemical water treatment
- Electrical instrumentation and control system
- Auxiliary plant units

### ENGINEERING SERVICES

- Engineering incl. Licensing Engineering and Engineering for official Permits
- Assembly and Commissioning
- Trial-Run

Fuel	Wood
Low Heating Value (min./max./nom.)	8.5 / 12.0 / 10.4 MJ/kg
Fuel Throughput (min./max./nom.)	11.0 / 24.0 / 22.0 t/h
Rated Thermal Input	68 MW
Electrical Power Output	20 MW
Steam Capacity	68 t/h
Steam Temperature	482 °C
Steam Pressure	82 bar g
Feed Water Temperature	105 °C
Rated Flue Gas Volume	135.000 m <sup>3</sup> /h i.N.
FG-Temperature	160 / 200 °C
Operating Approval	13. BlmSchV
Year of Commissioning	2006

