

HEAT RECOVERY  
BIOMASS  
PRIMARY FUELS  
SOLID RESIDUES  
LIQUID & GASEOUS RESIDUES

## CCP PLANT HATTORF PHILIPPSTHAL, GERMANY



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### THE TASK

E.ON Energy Projects GmbH placed an order with Standardkessel Baumgarte for the construction of a gas turbine plant with heat recovery boiler at the location of K+S KALI GmbH. The new plant supplements the existing combined heat and power station. The new combined heat and power station supplies the production facilities of K+S KALI GmbH with electricity and live steam. Standardkessel Baumgarte was entrusted with the task of designing the plant in such a way that the highest possible fuel utilisation rate is achieved with the highest possible electricity yield. Moreover, it was necessary to optimise the plant up to the highest possible availability.

### THE SOLUTION

For the new plant, a gas turbine of the type SGT 700B with a nominal output of 32 MW was selected. The heat recovery steam generator was conceived as a single-pressure boiler with auxiliary firing equipment for natural gas after an upstream gas turbine. The boiler design was carried out in accordance with the design data provided. The installation of the heat recovery steam generator is carried out inside the weatherproof enclosure, all boiler and stack loads being transmitted into the boiler's steel supports. The transmission of these loads into the supports is effected via an appropriate steel structure. The stack is designed as a single structural shell stack freestanding on the boiler supporting structure.

### SCOPE OF SUPPLY

- Gas Turbine SGT700B
- Heat Recovery Boiler with Auxiliary Firing Equipment
- Feed Pumps
- Piping as far as into the Existing Equipment
- Gas Pressure Unit and Gas Metering Station
- All of the Natural Gas Piping
- Complete Civil Works such as Foundations, Switchgear, Transformer Rooms, etc.
- 5kv, 20kv Switchgear
- Complete Instrumentation and Control Equipment

### SERVICES

- Obtaining of Approvals / Licences and Liaising with Authorities
- Design Engineering
- Delivery, Erection, Commissioning

Energy Source	Natural Gas
GT-Exhaust Gas Flow	97 kg/s
GT-Exhaust Gas Temperature	530 °C
GT-Electric Output	32 MW
Steam Capacity HD	80 t/h
Steam Temperature	500 °C
Steam Pressure	62 bar
Feedwater Temperature	105 °C
FG Temp Boiler Outlet	130 – 180 °C
Rated Thermal Input	70 MW
Type of Boiler	Natural Circulation
Year of Commissioning	2012