

HEAT RECOVERY
BIOMASS
PRIMARY FUELS
SOLID RESIDUES
LIQUID & GASEOUS RESIDUES

CHP PLANT RÖMERBRÜCKE SAARBRÜCKEN, GERMANY



CHP PLANT RÖMERBRÜCKE, SAARBRÜCKEN, GERMANY



Energy Source	GT Exhaust Gas
GT-Exhaust Gas Flow	127 kg/s
GT-Exhaust Gas Temperature	454 °C
GT-Electrical Output	42 MW
Steam Capacity	115 t/h
Steam Temperature	535 °C
Steam Pressure	115 bar
Feed Water Temperature	105 °C
FG Temp. Boiler Outlet	200 / 90 °C
RTI with Aux. Firing in GT Operation	56 MW _{th}
RTI with Aux. Firing in Fresh Air Operation	104 MW _{th}
Fuel for Auxiliary Firing	Natural Gas
Type of Boiler	Natural Circulation
Year of Commissioning	2005

THE TASK

GDF SUEZ Saarland GmbH (formerly Electrabel Saarland GmbH) is the site owner/operator of the district heating power station in Saarbrücken. The existing power plants were extended by the addition of a new combined cycle gas and steam turbine plant which was integrated into the existing heat power station as a modernised plant in the meaning of the Act on the Co-generation of Power Heat (KWKG-Gesetz). The plant consists of a gas turbine with downstream heat recovery boiler, the live steam of which is fed to a steam turbine for the generation of electricity and district heating water. To increase their own electricity share, within the scope of a complete co-generation of power and heat the extension was implemented during the years 2004/2005.

THE SOLUTION

For the new plant a gas turbine from GE, type LM 6000 with a nominal capacity of 47 MW was selected. The waste heat from the gas turbine is utilised in a downstream heat recovery boiler for the generation of high-pressure steam and district heating water. An additional firing system for the fuel natural gas is used in the gas turbine combined operation for increasing the capacity of the steam generation and in the event of GT trip as fresh air firing system for safeguarding the electricity and district heat supplies. The change-over between the two modes of operation GT combined and fresh operation is carried out with regard to steam generation without interruption in a smooth change-over.

SCOPE OF SUPPLY

- Heat Recovery Steam Generator
- Heat Exchanger for District Heating
- Steel Structure, Platforms, Stairs
- Firing System
- Flue gas Ducts incl. Flaps and Dampers
- Stack

ENGINEERING SERVICES

- Engineering
- Assembly
- Commissioning

