

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

# CCP PLANT MARL VII GERMANY



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<b>Energy Source</b>	Natural Gas
<b>Number of Lines</b>	1
<b>GT-Exhaust Gas Flow</b>	137.2 kg/s
<b>GT-Exhaust Gas Temperature</b>	569 °C
<b>GT-Electrical Output</b>	55 MW
<b>ST-Electrical Output</b>	37 MW
<b>Steam Capacity</b>	226 t/h
<b>Steam Temperature</b>	500 °C
<b>Steam Pressure</b>	80 bar
<b>Feedwater Temperature</b>	85 °C
<b>HRST Exhaust Gas Temperature</b>	98 °C
<b>Combustion Thermal Output AF max.</b>	181 MW
<b>Additional Fuel</b>	Natural Gas, Production Residues (gaseous)
<b>Boiler Type</b>	Natural Circulation
<b>Year of Commissioning</b>	2021

## THE TASK

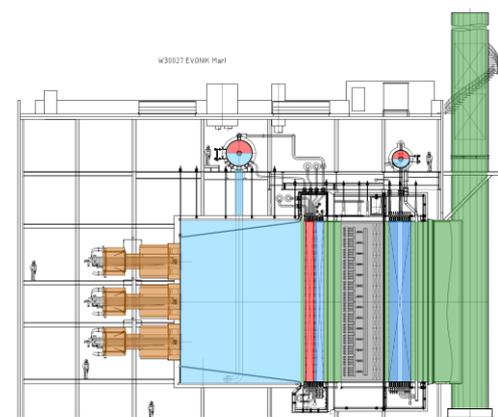
Evonik is replacing a further power plant in the Marl Chemical Park by a modern gas and steam turbine power plant. Hence, the modernisation of the Chemical Park is making further progress. The old power plant has so far been used as a reserve power plant and is now to make way for a modern and flexible gas and steam turbine power plant. Siemens Gas and Power GmbH & Co. KG is, as the general contractor, taking on the planning and construction of the CCGT plant. Standardkessel Baumgarte secured the order for the supply of the steam generator incl. the ancillary trades.

This third line supplements the two high-efficiency CCGT plants that are being constructed by Siemens jointly with Standardkessel Baumgarte in the Marl Chemical Park as a replacement for two coal-fired power plants.

## THE SOLUTION

The third CCGT plant will, exactly like the first two plants, generate electricity and steam in the cogeneration process on the basis of natural gas and for that will utilise various residual gases from the chemical production processes at the Marl location. The heat recovery boiler is constructed in horizontal design and suspended in the boiler steelwork. The three burners of the auxiliary firing system are used for the supply of GT exhaust gases and for the additional use of natural gas, LPG, process gas and harbour gas as additional fuels and they are integrated into the boiler front wall.

The new power plant unit will be connected to the existing plants in such a way that, upon failure or standstill of individual power plants, an uninterrupted supply of gas to the chemical park is ensured.



## SCOPE OF SUPPLY

- 2-Pressure Heat Recovery Boilers
- Combustion Air System
- Burners with Filter Stations and Fire-Fighting Fittings
- Insulation Stacks, Steelwork, Stairs and Platforms
- SCR (NOx + CO Reduction)
- Sampling Station
- Dosing Station
- Ancillary facilities

## SERVICES

- Engineering
- Assembly
- Commissioning