

AVR BioGas GmbH

Client
AVR BioGas GmbH

Construction time
08/2018 - 08/2019

Order value net
3,000,000 €

Contractor
FRIEDRICH VORWERK SE & Co. KG

Own work
Process design Detail Engineering Prefabrication and plant engineering Automation Service

Features
Biogas treatment of waste gas by means of a membrane process with a three-stage purification process

Contact
www.friedrich-vorwerk.de

Gas pre-cleaning Lot 1 + BGAA Lot 2 Sinsheim

At the Sinsheim site, biogas from organic municipal waste is upgraded to natural gas quality. The raw gas is first cleaned of sulphur in a purification system developed by Vorwerk, and then higher hydrocarbons are removed in a scrubber and regenerative adsorption. from higher hydrocarbons in a scrubber and regenerative adsorption. A 5,000m³ gas storage tank ensures great flexibility and optimum gas yield.
In a three-stage process using gas permeation membranes, the raw biogas is separated into a product gas with 97% methane and an exhaust gas with over 99% CO2. Compression to 13 bar is achieved by an oil-lubricated, single-stage screw compressor with subsequent fine cleaning. The process control system optimally regulates the temperature of the individual membrane stages for the respective operating point, since partial load capability is of great importance due to the different gas production. Is of great importance. While the exhaust gas is freed of residual methane in the autothermal afterburning system, the biomethane flows via a gas metering system at approx. 6bar into the feed-in plant.
The treatment plant is controlled by the process control system developed by Vorwerk. by the process control system developed by Vorwerk on the basis of the Siemens S7 1500 developed by Vorwerk and networked with the partners. The Sinsheim project illustrates the wide range of services Vorwerk Group's wide range of services in the trades of civil engineering, prefabrication of complete units, on-site plant construction on site, automation, commissioning and service.