



## Hallesche Wasser und Stadtwirtschaft GmbH

### Client

Hallesche Wasser und Stadtwirtschaft GmbH

### Construction time

08/2019 - 02/2020

### Order value net

600,000 €

### Contractor

FRIEDRICH VORWERK SE & Co. KG

### Own work

Planning/civil engineering/reinforced concrete construction/pipe construction (stainless steel)/EMSR/grounding and Lightning Protection/IBN

### Subcontractor services

Delivery of the plant components

### Features

The gas treatment plant had to be integrated into an existing system, with different conditions, without system, with different conditions, without cause long downtimes

### Contact

[www.friedrich-vorwerk.de](http://www.friedrich-vorwerk.de)

## Gas treatment plant Halle-North sewage treatment plant

Hallesche Wasser und Stadtwirtschaft GmbH operates the Halle-Nord sewage treatment plant with a current capacity of 340,000 population equivalents. For the utilisation of the resulting sewage gas quantities (max. 600 m<sup>3</sup>/h, 6,000 - 9,000 m<sup>3</sup>/d), a CHP plant (3 CHP units á 647 kW elt. built in 1997) with a total firing thermal output of of 1.94 MW is integrated into the system.

Prior to the conversion, the gas was treated only by means of a gravel filter and condensate removal. With the tightening of the the exhaust gas limits for formaldehyde to 20 mg/m<sup>3</sup> on 01.07.2018. mg/m<sup>3</sup>, the CHP plant was retrofitted with oxidation catalysts. catalysts. The service life (effective service life) for oxidation catalysts is catalysts is significantly influenced by the raw gas quality of the raw gas. The service life of the catalysts required an extension of the gas treatment system. For this purpose HWS agreed on a gas purification system with Friedrich Vorwerk Vorwerk KG (GmbH & Co.).

For the realisation and implementation of the project, the Friedrich Vorwerk KG (GmbH & Co) was commissioned to realise and implement the project on 23 August 2019.

The system, consisting of the components gas drying for condensate discharge, with a gas heating system for the optimisation of the effect of the activated carbon, with a compressor to maintain the necessary operating pressure, with two activated carbon tanks for filtering sulphur and of sulphur and siloxanes, with the necessary piping, electrical and communication technology was successfully integrated into the existing system. integrated into the existing system.