



## **STAHNSDORF SEWAGE TREATMENT PLANT**

### **CHRONICLE**

**1931**

Commissioning of the sewage treatment plant

**1989**

Introduction of a combined chemical and biological phosphate elimination

**1991**

Start of mechanical sludge dewatering using centrifuges

**1992**

Introduction of part-time nitrification

**1998**

Commissioning of the biological phosphate elimination in combination with nitrification and denitrification

**2003**

Commissioning of a block cogeneration plant

### **PROCESS ENGINEERING**

Mechanical and biological sewage treatment. Biological phosphate elimination in combination with nitrification and denitrification. The digestion of the sewage sludge takes place in digestion tanks, the mechanical sludge dewatering in two centrifuges. The digested sludge, dewatered in centrifuges, is recycled in line with closed substance cycle waste management.

### **TECHNICAL DATA**

**Treatment capacity:**

47,000 m<sup>3</sup>/day in dry weather

**Mechanical treatment:**

Three automatically cleaned fine screen systems, two aerated grit chambers each with two chambers. Nine tanks with a total useful volume of 7,500 m<sup>3</sup> for primary sedimentation, two round tanks each with 6,800 m<sup>3</sup> as intermediate storage tanks for wet weather.

**Biological treatment:**

Three denitrification tanks with a volume of 29,000 m<sup>3</sup>, 20 aeration tanks with pressurised aeration and a total useful volume of 37,200 m<sup>3</sup>, eight Dortmund wells for secondary sedimentation with a total useful volume of 20,820 m<sup>3</sup>.

**Sludge treatment:**

Eleven digestion tanks with a total capacity of 19,800 m<sup>3</sup>. Two centrifuges for dewatering of the sewage sludge.

**Biogas recycling:**

Two gasholders with 3,000 m<sup>3</sup> and 5,000 m<sup>3</sup> capacity. one gas heating house with two combined hot water boilers for sludge gas and natural gas. The biogas is used for the sludge drying, sludge heating, building heating and for the hot water supply to the sewage treatment plant.



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