



Pressemitteilung

Press release · Communiqué de presse

Vechta, March 2016

Energy supply ensured – costs reduced

WELTEC BIOPOWER Upgrades Municipal Wastewater Treatment Plant in Bavaria

The increasing restriction of the agricultural use of sewage sludge is associated with mounting pressure on municipalities and sewage treatment providers. Moreover, the high power needs drive up the expenses of wastewater treatment plants. Thus, more and more sewage treatment plants decide to employ energy-saving sludge stabilisation in an anaerobic reactor and utilisation of the digestion gas for the generation of energy.

The administrative partnership Burgebrach in Bavaria, Germany, is one of the municipal organisations that have decided to consistently reduce the sludge volume and make use of the sewage gas. Accordingly, the technical operator SüdWasser GmbH has commissioned the biogas plant manufacturer WELTEC BIOPOWER as the general contractor for the setup of an anaerobic digestion unit and the utilisation of the sewage gas for the generation of energy in the combined heat and power (CHP) plant for the existing wastewater treatment plant, which serves a population equivalent of 13,000. In addition to the aerobic treatment stage, the organic material will be subjected to anaerobic treatment starting from April.

To ensure optimum treatment of the daily influx of 16 m³ of raw sludge with a dry matter content of 4 to 4.5 percent, a specially designed V4A stainless-steel digester has been installed. In it, a diagonally installed long-axis agitator will mix the sludge in order to gently carefully promote the microbiological transformation to methane. With its capacity of 420m³ and a flexible gas storage roof with a storage volume of up to 68m³, the bioreactor is large enough to run the CHP plant with its electrical output of 28kW and thermal output of 58kW without any interruptions. The generated power will be used directly at the facilities, and the heat will be employed both for speeding up the digestion process and for use at the sewage treatment plant site.

Apart from the energy generation and the sludge stabilisation, the minimisation of odour emission was another decisive factor in favour of the WELTEC anaerobic stage. Through the systematic anaerobic sludge stabilisation, unpleasant odours will henceforth be largely prevented. Prior to the upgrade, this problem occurred constantly in Burgebrach.

“In the sewage treatment plant in Burgebrach, we used to stabilise the sludge without using the digestion gas. Through the installation of the digestion unit, we have established a sustainable, climate-friendly energy concept and can reduce the amount of sludge. In total, the COD load in the wastewater will be reduced by about a third”, explains Arne Nath, Head of the Wastewater department of the operator SüdWasser GmbH. However, the plant upgrade also delivers financial advantages: The said benefits and the bonus under the German Combined Heat and Power Act (KWKG) will result in a yearly cost advantage in the medium five-digit range.



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Organic energy worldwide

“Our customers appreciate our anaerobic sludge digestion for its economic and ecological sustainability. It produces energy, cuts disposal costs and generates municipal income. Moreover, the plant capacity can be expanded without any major need for additional space”, says Jens Flerlage of WELTEC BIOPOWER, summarising the system’s benefits. “These positive aspects make this smart alliance of wastewater treatment and energy generation basically viable for all sewage treatment plants for population sizes of 8,000 to 50,000”, says Flerlage.

The procedural approach of WELTEC BIOPOWER and the modular stainless-steel tanks have already resulted in a significant improvement of existing wastewater systems in various countries. Besides the said benefits, the high process stability and low maintenance and operating costs help to combine the energy reform with the highly important value creation through renewable energies.

WELTEC BIOPOWER will provide further information on the anaerobic stage at the IFAT in Munich (Hall: B3, Booth: 205) from 30 May to 3 June.

Pictures/Captions



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Company Portrait

WELTEC BIOPOWER GmbH is one of the world's leading enterprises in the field of stainless-steel biogas plant construction. The company has planned, developed and built anaerobic digestion plants since 2001. Today, the medium-sized company has about 80 employees at the headquarters in Vechta, Germany, and has established more than 300 energy plants in 25 countries worldwide. The global distribution and service network spans six continents. The range of customers includes businesses from the agriculture, food, waste and wastewater industries.

The strength of WELTEC BIOPOWER lies in custom-tailored design and technically mature solutions for projects up to 10 megawatt capacity. In this context, the high proportion of internally developed components is a key success factor. The company also owes its leading edge to the use of stainless steel. This enables the input of a diverse range of feedstocks, a fast and economic assembly and a consistently high quality standard – regardless of the location.

After a biogas plant goes live, WELTEC BIOPOWER offers additional support through its experienced mechanical and biological service team. 24/7 availability and an in-house lab contribute significantly to the efficiency of the plant. In addition, since 2008 the company has ensured certified internal quality and environmental management in accordance with the ISO 9001 and 14001 standards.

Nordmethan, a subsidiary company of WELTEC BIOPOWER, addresses another business area: The operation of biomethane plants and the provision of heat through energy contracting. In this way, the WELTEC Group covers the entire value chain of energy generation with biogas and biomethane – from the plant construction to the plant operation.

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