



Pressemitteilung

Press release · Communiqué de presse

Vechta, March 2022

WELTEC BIOPOWER Commissions Fourth Biogas Plant in Japan

Biological Service Ensures High Gas Yield of Waste Plant

A biogas plant of WELTEC BIOPOWER recently went live in Saitama Prefecture, 40 km north of Tokyo. The facility – which is equipped with a 450-kW cogeneration power plant – is the fourth project to be rolled out by the German manufacturer in Japan. In terms of substrates, the operator makes use of organic leftovers from the vicinity. Since the raw material mix varies, WELTEC ensures a steady biogas output with its biological service. This special service of the biogas specialist also comprises another plant of the same customer.

Even after the reactor accident in Fukushima back in 2011, Japan continues to use nuclear power. However, renewable energies are consistently expanded and already account for a fifth of the power generated. Above all, leftovers are the preferred substrates in Japan. The biogas plant in Saitama, too, digests some 12,000 t of organic waste into energy. The substrate mix consists of organic waste and cattle manure from a nearby farm that belongs to the operator. The largely liquid organics are introduced to the digester by means of a central pump. Solid feedstocks are transported by a dosing feeder with a capacity of 27 m³.

To ensure efficient digestion of this mixture, WELTEC BIOPOWER has set up a stainless-steel digester with a capacity of 2,823 m³. Its diameter measures 25.34 m, and its height is 6.3 m. The upstream substrate storage tank, which is made of stainless steel, has a capacity of 336 m³, a diameter of 9.31 m and a height of 5.03 m. The 525-m³ digestate storage tank (diameter 11.64 m, height 5.03 m), too, is made of high-quality stainless steel.

Finally, the digestate is separated and the solid phase is dried with special technology in order to further reduce the volume. Most of this residue is used as compost, and some of it as fertiliser. „The Japanese appreciate the custom plant design and the benefits of our modular approach, especially because the plant structure with stainless-steel modules facilitates the consideration of the special risks in areas that experience a lot of seismic activity“, explains Vladimir Bogatov, who is responsible for sales.

All in all, WELTEC BIOPOWER has provided the customer with an all-inclusive package in „made in Germany“ quality along with individual after-sales service. Subsequently, the Japanese operator also entrusted WELTEC with the biological supervision of its other biogas plant, which had been set up by a different provider in 2017. As this plant's yield was above average, the biology experts of WELTEC had the substrate mix of the old plant carefully analysed by a Japanese lab. Based on the results, the raw material mix and the retention time have been optimised. Due to the constantly changing composition of the waste, WELTEC will continue to supervise the two plants biologically in order to maximise the gas yield.

A short video about the project can be found here: <https://www.youtube.com/watch?v=3OpE1FW0pZ8>

Further information on the energetic utilisation and use of all types of organic waste and wastewater will be available from May, 30th to June, 3rd 2022 at the IFAT in Munich (Germany), hall A4, stand 217. The specialists of WELTEC are looking forward to meeting you!



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Organic energy worldwide

Pictures/Captions



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Company Portrait

The **WELTEC** Group from Vechta, Germany, has developed into a globally leading specialist for the construction and operation of biogas and biomethane plants since it was founded back in 2001. The Group designs, plans and sets up energy plants, operates them on a permanent or temporary basis, provides 24/7 service and delivers sustainable usage concepts for output flows, thereby covering the entire biogas value chain.

The establishment of individual, technically mature solutions up to a plant size of 10 MW is one of the strengths of **WELTEC BIOPOWER**. The high proportion of custom-developed components is a key success factor. Moreover, the use of stainless-steel technologies ensures flexible substrate input, quick and inexpensive assembly and a consistently high quality standard, regardless of the location. Following the commissioning, **WELTEC**'s mechanical and biological service plays a significant role in ensuring the plant efficiency.

The company also boasts a wealth of experience in the field of biogas generation and utilisation. The company's nine decentralised plants generate 96 million standard m³ of biogas a year. A portion is processed to biomethane and made available to energy suppliers and petrol station operators via the public gas network. Additionally, at 16 locations in Germany – e.g. in the field of horticulture, housing construction and healthcare as well as communities – the biomethane is used for generating heat within the framework of **WELTEC** energy contracting.

The biogas specialist is well aware of the importance of customer and investor proximity. Accordingly, the Group's sales and service network spans the entire globe. The range of customers includes businesses from industries such as agriculture, food, waste and wastewater. So far, the 120 employees of the **WELTEC** Group have implemented more than 350 energy plants in 25 countries on five continents. All in all, the biogas specialist ensures annual savings of around 530,000 tons of CO_{2eq}.

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