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HZI Gas Upgrading Technologies: Standardisation Pays Off

Hitachi Zosen Inova supplies XL membrane technology redesign to Denmark

Hitachi Zosen Inova has won another project in the emerging biomethane market in Denmark: The specialist in green gas technologies has received an order from Bigadan A/S for two membrane plants with a total treatment capacity of 4,000 Nm³/h. This will allow biomethane to be produced from the biogas of an agricultural waste plant in Odense. It is HZI's largest membrane plant to date. It is due to be connected to the grid this year.

Odense, Denmark. The Swiss green tech company Hitachi Zosen Inova AG (HZI), Zurich, has been commissioned by Bigadan A/S to supply two membrane gas upgrading plants. The Danish company, based in Skanderborg, is a general contractor for the construction of biogas installations and operates several plants in Denmark. At the Odense site on the island of Funen in the Region of Southern Denmark, an existing biogas plant is now being converted from electricity generation to biomethane production. HZI is supplying two M-Series Model L gas upgrading systems as double membrane systems. The individual systems each have a raw gas upgrading capacity of 2,000 Nm³/h and produce around 1,200 Nm³/h of the natural gas equivalent biomethane. The plant is scheduled to commence operation at the end of 2024.

Standardised Redesign Meets Market Demand

The systems are part of the new series featuring the standardised redesign that HZI recently developed for its two gas treatment processes, membrane technology and amine scrubbing: Engineering and production for the three sizes S, M and L have been standardised, optimising both costs and delivery times. Depending on the volume of raw gas, units can be connected in parallel; in Odense, for example, the total volume flow of 4,000 Nm³/h of biogas is processed by two 2,000 Nm³/h units. Additional option packages allow the gas upgrading systems to be customised to individual requirements and specific parameters. "Compared to electricity generation, biogas upgrading and gas feed-in is the more economical option for future operation. That's why we are converting to biomethane production," explains Ralf Karmann, Head of Projects at Bigadan. "This conversion will also enable us to provide more flexible energy for this country's renewable energy mix and make a greater contribution to decarbonisation and energy supply security in Denmark."

On-Site Service Activities Stepped Up

Bigadan also relies on HZI for plant service and has bought a technical services package for three years after commissioning. To ensure the best possible service for the upgrading plants in the north, HZI recently expanded its longstanding cooperation with its Danish project partner Regaco A/S (formerly Nærenegi): Fast on-site service is guaranteed 24/7 by qualified, Danish-speaking plant technicians working out of Regaco's sites in Denmark. This way the cooperation partners can offer a high level of service and optimum system availability for the Danish market. "Our jointly developed approaches to plant service have already been very well received by existing Danish customers," says Dr Benoît Boulinguiez, Managing Director of the German HZI company where the gas processing plants are manufactured, looking back on the latest developments in the service business. "This also puts us in a good position for further greenfield projects that are currently under development."

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Attachment: 1 image

Odense.jpg; caption: Aerial view of the current biogas plant in Odense, Denmark



About Hitachi Zosen Inova

Zurich-based greentech company Hitachi Zosen Inova (HZI) is a global leader in solutions for energy transition and circular economy including Waste to Energy (WtE) and Renewable Gas (RG), operating as part of the Hitachi Zosen Corporation Group. HZI acts as a project developer, technology supplier and engineering, procurement and construction (EPC) contractor delivering complete turnkey plants and system solutions for thermal and biological waste recovery. Its solutions are based on efficient and environmentally sound technologies, are thoroughly tested, and can be flexibly adapted to customer requirements. HZI's Service Solutions Group combines its own research and development with comprehensive manufacturing and erection capabilities to provide support throughout a plant's entire plant cycle. HZI works for customers ranging from established waste management companies to up-and-coming partners in new markets. Its innovative and reliable solutions have been part of more than 1,600 reference projects worldwide. Find out more about HZI at www.hz-inova.com.

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