Krieg & Fischer Ingenieure GmbH

Biogas Plant ANKLAM

Location:	Anklam, Germany
Construction Period:	2012/2013
Input:	Sugar beet pulp and molasses
Fermenter:	4 x 4,610 m³, steel tank
Biomethane Production:	Biogas production: approx. 22,2 million m³ per annum Integration of the additional biogas line from existing plant (about 2.3 million m³), the gas is treated by pressure water absorption (DWW), biomethane to grid approximately 13.8 million m³ per year.
Special Features:	Industrial plant with 4 primary digester, 1 secondary digester, blower station for raw gas, 2 high pressure water scrubbing units with heat recovery and gas injection, two solid input devices (solid-liquid, each 200 m³), decanter for separating fermentation residues, emergency flare for combined combustion of biogas and biomethane, additive tanks for automatic dosing of process-stabilizing agents. Integration of biogas plant into existing structures of the sugar factory.

The ANKLAM digestion plant was built and is operated by the SUIKER UNIE owned subsidiary ANKLAM BIOETHANOL GMBH (ABe). Start-up was in 2012. Feedstock for the plant includes residues from the industrial processing of sugar beets and molasses. Each year a total of 184,000 t of solid and liquid material is fed into digesters producing 22,2 million m³ of biogas. Additional around 2.3 million m³ of biogas delivered from existing plant. Raw gas is then converted to 13,8 million m³ of biomethane. The gas is treated by high pressure water scrubbing to the required biomethane quality (98 % Vol. biomethane) and fed into the natural gas grid. Waste heat from this upgrading process is recovered and used to heat the digesters or in existing sugar fabric. Digestion takes place in four 20 m high upright primary digesters. Each one is equipped with a top mounted mixer. One secondary digester with double membrane gasholder roof serves as storage space for digestate and biogas. Two solid input devices (each with a storage capacity of 200 m³) are used in combination with hopper feed pumps. Additional two tanks allow feeding of liquids into digesters. Additives are automatically injected into the digestion process to stabilise the process. Digestate is treated using a decanter centrifuge which separates solids from liquids. Both fractions are recycled as fertiliser.

Responsibility of Krieg & Fischer Ingenieure GmbH:
Conception, Preplanning , Detailed and Final Engineering, Supervision of Construction, Start-up

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