



Krieg & Fischer Ingenieure GmbH

## Biogas Plant DINTELOORD



Location:	Dinteloord, The Netherlands
Construction Period:	2011
Input:	Sugar beet pulp, vegetable waste (potatoes, chicory)
Fermenter:	Glass coated steel tank, 4 x 4,480 m <sup>3</sup>
Biomethane Production:	Biogas production: approx. 18.4 Mio m <sup>3</sup> /a and converted to approx. 11.7 Mio m <sup>3</sup> /a of biomethane. The gas is treatment by high pressure water absorption (DWW) to the required biomethane quality.
Special Features:	Waste digestion plant with 4 primary digesters and gas upgrading system including heat recovery, solid input device with buffer capacity of 200 m <sup>3</sup> solids in combination with hopper feed pump, decanter for separating fermentation residues, emergency flare for combined combustion of biogas and biomethane and automatic feeding of additives.

The DINTELOORD digestion plant is constructed and operated by SUIKER UNIE GREEN ENERGY. Start-up took place in 2011. Feedstock for the plant includes residues from the industrial processing of sugar beets, chicory and potatoes. Each year a total amount of 136,000 t of solids are fed into the digesters using two solid input devices – each with a buffer capacity of 200 m<sup>3</sup> – in combination with hopper feed pumps. Additionally three tanks (300 m<sup>3</sup> per tank) allow the feeding of liquids into the digesters. Digestion takes place in four primary high digesters. Each one is equipped with a central agitator. One secondary digester with double membrane gasholder roof is used as storage tank for digestate and biogas. The digestion plant is equipped with a post treatment system and a biogas upgrading system. Digestate is treated by using a centrifuge which separates solids from liquids. Both fractions are recycled as fertiliser. Approximately 18.4 million m<sup>3</sup> of biogas per year is upgraded to biomethane (89 vol.% methane) using a pressure water absorption (DWW). The biomethane is fed into the national natural gas grid. Process heat from this upgrading system is recovered and used to heat the digesters. Additives are automatically injected into the digestion process to stabilise the digestion process. With this digestion plant SUIKER UNIE GREEN ENERGY has become the largest biomethane producer of The Netherlands.

Responsibility of Krieg & Fischer Ingenieure GmbH:

Conception, Preplanning , Detailed and Final Engineering, Supervision of Construction, Start-up

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