Anaerobic Digestion (AD) Plant Lichtensee

Germany

Client	Danpower Gruppe, Potsdam
Location	Lichtensee, Saxony, Germany
Commissioned	2011
Input (feedstock)	Grass silage, whole crops (cereals) silage, maize silage
Total processing capacity	49,000 t/a
Raw biogas production	~ 1,400 m³/h or the equivalent of ~ 4.0 MW_{el}
Digester	2 x 4,360 m³
Post-Digester	1 x 7,150 m³
Storage Tank	1 x 7,270 m³
CHP	1 x 1.2 MW
Biomethane	~ 700 Nm³/h

Flexible operation with both gas to grid and electrical power generation

In this biomethane plant built by Agraferm for the Danpower Group, 1,400 Nm³ of raw biogas is turned into 700 Nm³ of biomethane every hour, i.e. it is brought up to natural gas quality using a physical pressure washing process and then fed into the natural gas grid operated by the local gas distributor ENSO Netz GmbH. A further 600 Nm³/h powers the local 1.2 MW_{el} CHP-unit, which also is used to provide electrical power flexibly at peak demand hours.

The plant is characterised by the efficient use of a technology, which allows for a higher dry matter organic loading rate and at the same time a smaller fermenter and a reduction in energy consumption. With just 2 fermenters and 1 secondary fermenter the plant produces an output of around 4 MW_{el}.

This type of technology is particularly interesting for locations with a limited amount of available space. Furthermore it was developed to deal with a very high level of viscosity without having to compromise on safety, flexibility or even gas output. This allows the operator the option of using a very varied and opportunistic substrate mix.

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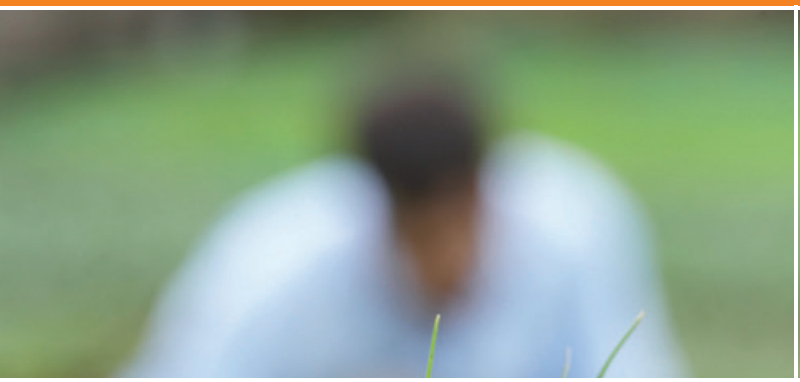

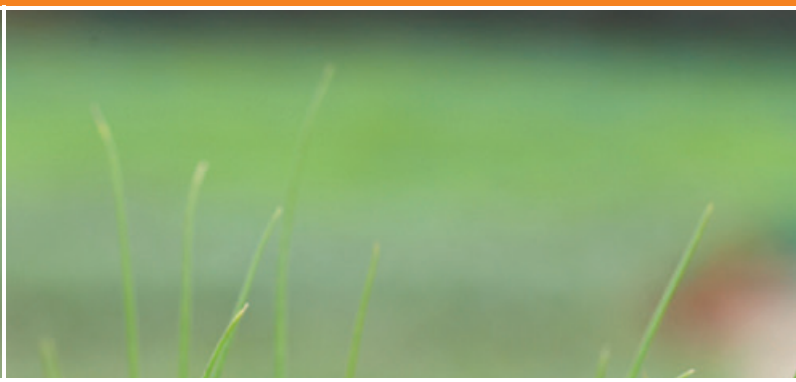

Agraferm GmbH, which is based in Pfaffenhofen, Germany, designs and builds Anaerobic Digestion plants. It is one of the few full service providers of turn-key agricultural and industrial biogas plants in Europe, which operates internationally. Our portfolio includes project planning and construction as well as biological and technical services.

Agraferm biogas plants have the following distinctive features

- High reliability and maximum system availability
- A small footprint, i.e. high biogas production with a minimum of land use
- Use of robust components such as digesters, agitators and pumps, these reliable components prolong the operational life of the AD plant
- Stable digestion process
- Industrial-quality plant construction

The advantages for you

- Minimum operating costs
- Optimum level of substrate flexibility
- Minimal risk of downtime
- Maximum cost-efficiency and minimal power consumption

We are committed to the long-term success of our customers through

- Planning, construction and service from a single source
- Biological and technical support services
- Many years experience with CHP-units and biomethane gas to grid injection

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