



High solids anaerobic digestion **Passau/Hellersberg (DE)**

Customer

AWG Donau – Wald mbH
Außenzell (D)

Plant data

Commissioned: 2004

Input: source segregated biowaste

Capacity: 39,000 t/a

Power el.: 2 × 835 kW



Plant and Process

A dry anaerobic digestion system was integrated in the existing composting unit Passau / Hellersberg. After reception, the biowaste is screened to a size smaller than 80 mm. Next, the non-degradable particles are separated out and the ferrous metal parts are removed by a magnetic unit. Then the remaining organic material undergoes further screening and size reduction to a size smaller than 50 mm.

The material out of this treatment is stocked in three enclosed containers before being continuously fed into the digesters.

The digestion/unit is designed as a three-line facility, i.e. the material is processed in three digesters with a capacity of 950 m³ each. Slow turning paddle-shafts guarantee an optimum gas release and homogenisation of the material.

The process in the digesters is based on an anaerobic thermophile dry digestion with a temperature of approximately 55°C. Residence time is approximately two weeks.

During the anaerobic digestion process undesirable germs, microorganisms and weed seeds are securely eliminated.

Utilisation of Biogas

The biogas produced during the anaerobic digestion process is converted in two cogeneration power plants with a capacity of 835 kW el. each into thermal and electric power. A part of the heat is used for process heating, the excess heat is fed into the district heating network. The electric power goes to the public power grid.

Separation and Utilisation of the Digestate

At the end of the anaerobic digestion process the material is removed from the digester and dewatered. Part of the press water is recirculated into the digestion process and the remaining part is used as liquid fertilizer.

The solid part of the digestion residue is processed in the existing composting plant where high-quality fertilizer is produced.

Facility objectives

Expansion of the existing composting plant from 20,000 t/a to 39,000 t/a biowaste.