



TTV ST.AUGUSTIN

DE

THÖNI HIGH SOLIDS ANAEROBIC DIGESTION

Plant Data

Operator:
RSAG



Plant Data

Initial operation:
2022

Input:
30,000 t/a of biowaste

Digester:
TTV1950 (concrete)



PLANT AND PROCEDURES

A total of around 60,000 t/a per year of biowaste from the Rhein-Sieg district is delivered to the Sankt Augustin waste disposal and recycling park of RSAG mbH. Of this, the energy content of 30,000 t/a of biowaste is used in the digestion stage to produce high-quality biomethane.

After delivery, the biowaste is first shredded, sieved and freed from impurities. A wheel loader transports the processed organic fraction to an intermediate storage facility. The material is then transported by an automatic crane system to a feed bunker, from where it is fed into the digester via the feed system consisting of a mixer, feed pump and heat exchanger.

Anaerobic digestion takes place in a TTV plug-flow digester. In this process, the energy-rich material is passed through the digester, supported by a slowly rotating agitator. The special design of the agitator reliably prevents the formation of sinking and floating layers and promotes

a high and uniform gas yield. The temperature, the filling level in the digester, the amount of gas produced and the gas pressure are continuously monitored.

The digestate is fed to a dewatering stage and separated into a solid and liquid phase. The liquid portion is primarily used for moistening in the composting plant. The dewatered digestate, together with the biowaste left over from the sieving process, is fed to the composting stage and processed into compost.

The biogas produced in the digester is then refined into biomethane in an upgrading plant and fed into the local natural gas grid.