



TNV HERBSTADT

DE

TNV THÖNI WET DIGESTION SEMI DRY

Plant data

Customer:
bio rest GmbH



Plant data

Commissioning:
2020

Input:
20,000 t/a of packaged food waste, biowaste, food remains, residues of food production

Digester:
1 primary digester, 1 secondary digester



PLANT AND PROCESS

The delivery of the biowaste and food-remains is done in waste containers or, respectively, in waste collection vehicles. The biowaste is shredded and sieved in a processing plant and from there it gets to an intermediate storage.

The packaged food waste and food-remains first go in a reception bunker and from there are transported by a continuous conveyor in a separation mill, where they are freed from impurities (packaging). The cleaned substrate is subsequently pumped in the intermediate storage.

From there, the processed substrate is directly fed to the primary digester. Both digesters (primary and secondary digester) are constructed as cylindrical tanks made of reinforced concrete with a gas storage. Sufficient insulation and an integrated heating system as well as the consistent feeding and homogenisation ensure ideal conditions for the generation of biogas. The TNV Thöni paddle mixers ensure a homogeneous mixing of the substrate – even if the dry solids content is high – and largely prevent the formation of

sinking and floating layers. At the same time, they facilitate the release of biogas from the substrate.

At the end of the digestion process, the whole digestate is separated in a solid and a liquid phase and then pasteurised. The liquid part is intermediately stored in a digestion product storage until it is put out on the agricultural cultivation areas as beneficial liquid fertiliser. The solid phase is also utilised as organic, high-quality plant fertiliser and is applied for gardening and landscaping.

The biogas produced in the digesters is collected in a gas system and fed to the gas processing. The biogas is directed to the combined heat and power units to generate 'green' electricity and heat. The generated thermal energy is used for the on-site demand of the plant, whereas the generated 'green' electricity is fed in the public grid.