Smooth and cost-effective hydrolysis in Tannhausen, Germany

Success Story

Picture: Streisal Maischebull® / Hydrobull® agitator system for mixing pits and hydrolysis tanks

Operator
Streisal GmbH

Location of the project

Tannhausen, Germany

Contact details
Bioenergy Abele GbR
Schloßstraße 10 D-73497 Tannhausen

Project results

Physical

- Improved mixing

Thermodynamics

- Lower electric energy process

Economical

- Lower operation costs
- Lower maintenance costs

Project outline

Hydrolysis tank of the biogas plant in Tannhausen was equipped with one compulsory mixer ZM4 (Zwangs-Mischer, Serie 4) and 1 submersible mixer. The installed mixers were suitable only for low concentration of dry substance, thus the fresh material had to be diluted with a substance from post-digester. Such a mixing required a lot of recirculation from post-digester (additional pumping power), resulting in long operating time of mixers at full load and high energy consumption and operating cost of the facility. Due to this high recirculation the pH-value in the hydrolysis tank was increasing. As a consequence, decomposition of the fresh substrate and the process stability was insufficient and it further resulted in a lower biogas production. Mixers maintenance required each time opening of the reactor, which couldn`t be done without disturbance of the biological processes.

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