

RotaCut[®]: Reliable protection against heavy material with greater efficiency

Case Study - Agrargesellschaft Gischau mbH, Kuhfelde, Germany



Problem

Pump damage due to foreign matter and insufficient gas yield

Solution

RotaCut 5000pro Compact XL

The customer and the problem

Agrargesellschaft Gischau mbH in Germany operates a 190 kW biogas plant with an upright digester and post digester. In addition to the 12 m³ cattle manure, approx. 4-5 t corn silage, 2 t dung and 2 t grass silage are fed each day on average. The grass silage is quite long as it is also used to feed young cattle. The transfer from the digester to the post digester is carried out via AutoBlubb (pneumatic overflow); however, it does not always work reliably due to the high viscosity. Furthermore, the plant have a great deal of foreign matter, which means that the wear parts of the displacement pump needs replacement every 4 weeks due to damage caused by foreign matter. Additionally, the gas yield was not satisfactory.



The solution

In order to optimize the plant, increase the gas yield and reduce the amount of damage caused by foreign matter, a RotaCut 5000pro Compact XL was installed on the suction side in front of the displacement pump. Now the cattle manure first passes through the RotaCut, before conveying into the digester. The transfer to the post digester is also carried over via the RotaCut.

Since the installation, the situation at the biogas plant has greatly improved. The gas yield increased by 5-10%, which enabled the operator to reduce the amount of corn silage by approx. 25%, thereby increasing the proportion of long-fibered materials. If the viscosity increases, they successfully compensate it by recirculating approx. one cubic meter of digester contents per hour via the RotaCut.

Overall, the organic suspension is now more flowable, the power consumption of the mixers is lower and the service life of the pump has multiplied.



The RotaCut RCpro

Advantages of the RotaCut®

- Efficient chopping of long fibered solids
- Reliable separation of heavy material separation (stones, metal)

Benefits for the user

- Prevents damage of displacement pump from heavy material
- Reduced power consumption of mixers and pumps thanks to lower viscosity of the suspension
- Increased gas yield because of the treatment of the solids

Mentioned Vogelsang products

[RotaCut: Wet cutter with heavy material separator](#)



Mentioned Vogelsang products

[RotaCut: The wet cutter for biogas applications](#)



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