

Pulp goes the food waste as ultra-reliable Landia pumps help make AD substrate

By Chris Noyce | December 5, 2018

Pumps and mixers from Landia are playing a key role in the success of Gemidan Ecogi's new pre-treatment technology that processes source-separated food waste into a high-quality pulp-based substrate for AD.

Initially, during a flow test at the KomTek Miljoe waste treatment facility in Jutland, Denmark, an 11kW Landia pump produced much better results than a 22kW model from another manufacturer – despite the challenging raw pulp having a solids content of up to 17%.

With Danish municipalities on a deadline of 2022 to ensure that 50 percent of waste is recycled, AffaldPlus' Energy Manager, Ole J. Andersen, believes that the decision to challenge the environmental credentials of equipment suppliers is already paying off.

“To truly embrace the circular economy at our waste treatment facility” he said, “we must practice what we preach and look very closely at the lifetime costs of items such as pumps and mixers to make sure, for example that energy and maintenance costs are low. There was never any discussion about buying the cheapest possible plant. Here, we are investing in the future, so it is only right that we choose strong reliable equipment”.

Gemidan Ecogi's pre-treatment technology at AffaldPlus' facility handles waste for six municipalities in South and West Zealand, adding water to collected waste, which is then driven through a centrifuge pulper the waste is dissolved into a viscous, porous mass for use as raw material in an AD/biogas plant. The degassed biomass is dispersed on fields as a fertilizer.



Ole J. Andersen added: “Processing organic household waste with the Gemidan Ecogi process has been a new departure for us, but with Landia's stainless steel pumps and mixers, we have a very robust and reliable system. Servicing is also easy and safe with everything conveniently located, rather than having to go down into the tank”.

The new plant has met all new requirements for the use of the waste gas pulp on farmland, which recently entered into Danish legislation. In fact, the biopulp from the Gemidan Ecogi plant is up to five times cleaner than the law requires.

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