Kumac system for processing slurry and digestate

Reichenbach im Vogtland/Saxony, Germany

Project data

Start of construction:	Spring 2023
Commissioning:	February 2024
Input materials:	capprox. 65,000 m^3/a of digestate and silage liquid
Output:	15 % solid fertilizer 30 % liquid fertilizer 55 % dischargeable water

Technical plant description

After separation of the solid and liquid phases by the belt press, a nutrient-rich and high-quality organic solid fertilizer is produced.
In the flotation tank, suspended solids are separated from the liquid phase as foam or sludge using compressed air. This is fed back into the treatment process. The remaining liquid phase is passed through the three-stage reverse osmosis and treated in the ion exchanger. What remains is pure water. The separated nutrient concentrate is used as a liquid fertilizer.

Characteristics

The Kumac plant in Saxony is the first liquid slurry and digestate treatment plant built by WELTEC in Germany. In this pioneering project funded by the European Agricultural Fund for Rural Development, all system components are coordinated in such a way that minor interruptions such as maintenance and cleaning activities do not reduce the overall performance.

In the flotation tank, suspended solids are separated from the liquid phase as foam or sludge using compressed air.

During reverse osmosis, dissolved salts and nutrients are separated from the liquid phase.

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As of January 2024