Treatment of Digested Sludge System GNS „ANAklär“

Gesellschaft für Nachhaltige Stoffnutzung mbH

Pilot Plant „ANAklär“ - Removal of Nitrogen from Digested Sludge

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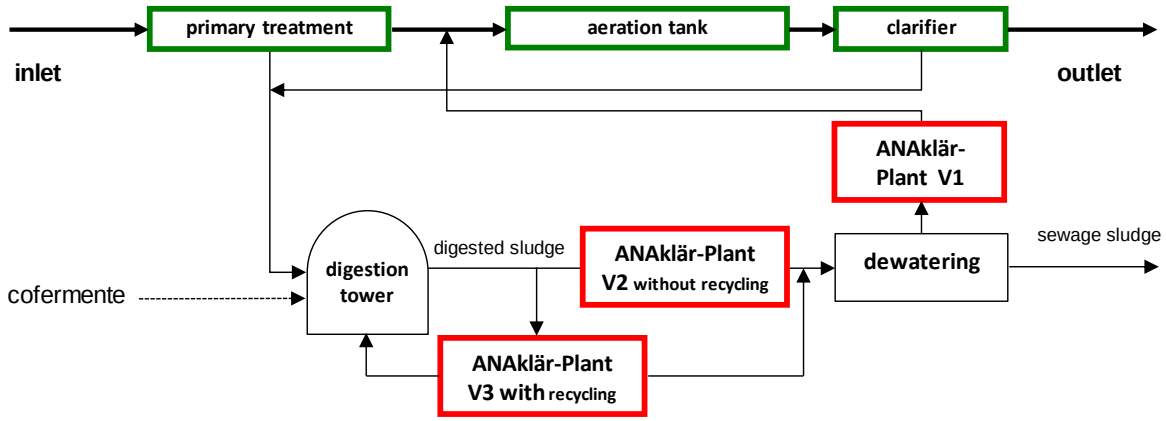
Partner:

Universität für Bodenkultur Wien, IFA Tulln (A); AIM Technical Solution GmbH, Timelkam (A)
HIPI Ziviltechniker GmbH, Vöcklabruck (A); SSM - Technology, Nauen (D); GNS mbH, Halle/Saale (D)

Model Variants:



Variant 1	press waser treatment
Variant 2	treatment of digested sludge, total or partial flow
Variant 3	treatment of digested sludge with recycling, total or partial flow

Results:

- Reduction of back contamination with nitrogen about 70 - 80 % (V1 - V3)
- Increase the production of biogas in the sludge digestion tower by 7 - 11 % (V3)
- Cost reduction of precipitations and flocculants (V2, V3)
- Reducing the amount of sludge to be disposed of by 10 - 15 % by reducing the dry matter and improving the de-watering characteristics of digested sludge (V2, V3)

Pilot plant on location auf the sewage treatment plant Tulln (2012/13):
Container with 2 digesters á 2 m³ volume, stripping plant 1.5 to 5 m³/h, 3 stirred sludge vessels, manually sludge press

Prospects:

→ The digested sludge can be treated before dewatering.
→ Halving the costs for aerating to eliminate nitrogen is possible.
→ Conferment and higher loaded waste water can be adopted without additional nitrogen load on the sewage treatment plant.
→ Covering the power requirement by co-fermentation is possible.

GNS - Gesellschaft für Nachhaltige Stoffnutzung mbH
Weinbergweg 23, 06120 Halle, Tel./Fax: +49 345 5583-754/-706, www.GNS-Halle.de