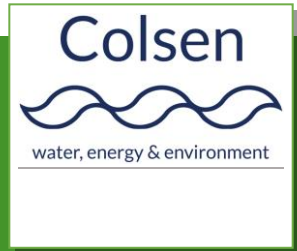


Technology for N recovery as ammonium nitrate/sulphate from raw digestate with "AMFER" stripping process



Keywords: Nitrogen • Fertilizer • Recovery • Re-use • Circular

Key facts:

- **Category of the technology:** Nitrogen stripping / scrubbing
- **Input:** Whole digestate or liquid fraction
- **Output product(s):** Ammonium sulphate or ammonium nitrate
- **Available capacity:** from 1 to 500 ton/hour
- **Focusing geographical areas:** Europe, America, Middle East, Africa
- **Technology status:** TRL 8 – 9
- **EC/MS Authority permits:** N.A.



Summary of the technology:

The AMFER[®] technology is designed for the treatment of digestate from manure (co) digestion. We can offer installations in the full spectrum of clients, from single dairy or pig farmers to industrial biogas facilities. The AMFER[®] nitrogen stripper operates as a batch or (semi-) continuous system. Digestate (or other liquids) is sprayed in the tank and aerated to strip the ammonia to the air.

The air is scrubbed with an acid, to produce the nitrogen fertilizer, which can be ammonium nitrate or ammonium sulphate.

A typical removal efficiency is 50% on mineral nitrogen, although removal of > 85% is also possible. The specific circumstances of the facility determines what removal efficiency is most beneficial.

For emerging plants, the system can be realised in a modular way, to enable expansion in the future.

Competitive position and advantages:

- Scalable design for any imaginable size
- Option to produce various fertilizer products
- Able to treat raw digestate: no solid/liquid separation required
- Farm-scale installations are containerized

Contact

Name: Jan Willem Bijngte

Company: Colsen

Web: www.colsen.nl

e-mail: sales@colsen.nl

