Aerobic Digestion

Air

Water

Biosolids
FUCHS
Aerobic Digestion at > 35°C
- The Cost Effective Biosolids Treatment

Upgrade of an overloaded wwtp
Aerobic digestion is a simple and cost-effective way of increasing the capacity of existing waste-water treatment plants.
Using already existing tanks (including storage tanks) reduces the load of the activated sludge plant. Additionally, separate stabilization improves quality of biosolids.

Design of a new wwtp
The use of aerobic digestion at temperatures of > 35°C (~ 95°F) is a cost-effective alternative to conventional processes.
Highly efficient equipment leads to short retention times, space requirements are reduced and investment costs lowered.

Sewage sludge - a valuable resource
Today, we recognize sewage sludge and manure as valuable resources for nutrients and soil-improving organic carbon, phosphorus and nitrogen.
Returning sludge and manure into the natural cycle provides not only ecological, but also economical benefits.
Prior to application sewage sludge stabilization is necessary.

High temperatures for disinfection

Easy to install
Sturdy and efficient equipment
Fundamentals

Biological stabilization of sewage sludge is achieved by degrading the volatile solids.

With FUCHS CENTROX Aerators degradation takes place aerobically. Chemically bound heat energy is released from the sewage sludge during the digestion process.

The autoheating of the sewage sludge leads to mesophilic process temperatures of approx. 35°C (95°F) and above.

At these temperatures the mesophilic bacteria grow fast, allowing for retention times as low as 8 – 12 days.

Benefits

- Use of existing basins/tanks
- Easy plant expansion
- Treatment of virtually all kinds of sludge (primary sludge, waste activated sludge, sludge with high amounts of fat, mixtures)
- Short retention times
- Low space requirements
- Low investment costs
- Industrial and municipal applications
- High-quality product with excellent fertilizing qualities
- Sturdy and efficient process and equipment

FUCHS Machinery Equipment

The CENTROX Aerator with foam control ensures agitation, mixing and fine-bubble aeration of the sewage sludge.

It controls the amount of foam produced in the process.

Basically, the FUCHS CENTROX Aerator consists of drive, mounting plate, foam cone and impeller. The rotating impeller sucks sludge from below and air or foam from above through the foam cone and swirls the mixture of both radially to the sides.

The aerator can be mounted either at a bridge or into a reactor roof or on a float assembly.

The CENTROX Aerator is made of high-quality materials. The sturdy and efficient machine is almost maintenance free.
That’s your way to a Clean Solution!

The Equipment

Aerators
- Spiral Aerator
- OXYSTAR Aerator
- CENTROX Aerator
- CENTROX Aerator with foam control
- AEROSTAR Aerator

High Speed Mixers
- TURBOSTAR Mixer
- Submerged TURBOSTAR Mixer

ATAD Equipment
- Spiral Aerator
- CENTROX Aerator
- Foam Controller

Biofilters for Odour Control
- with integrated pre-scrubber
- with separate pre-scrubber

The Applications

- Municipal Wastewater
- Industrial Wastewater
- Activated Sludge Plants
- Aerated Lagoons
- Nitrification / Denitrification
- Aeration of Rivers and Lakes
- Balance and Equalization Tanks
- Neutralization of Alkaline Wastewater
- Mine Water Treatment
- Leachate and Landfill Lagoons
- Biosolids Treatment
- ATAD process (Autothermal Thermophilic Aerobic Digestion)
- ATAD AIC™ (Advanced Integrated Concept)
- Odour Control

FUCHS Clean Solutions

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