

WASTEWATER
TREATMENT PLANTS



DIGESTERS AND
ANAEROBIC REACTORS

Optimization for wastewater and anaerobic



PRODUCTS AND
SYSTEMS



CONSULTING AND SERVICE
EQUIPMENT



ANALYTICS





PRODUCTS AND
SYSTEMS



CONSULTING AND SERVICE
EQUIPMENT

Stable Biology Stable Process Output

We understand the specific challenges in the field of wastewater treatment and anaerobics and help you with customized solutions.

Our wide range of products and solutions covers many industry-specific challenges and helps you to sustainably increase the process stability of your system.

The many years of experience of our application professionals guarantee rapid and expert assistance in trouble-shooting and solution development in case of operating problems or process disturbances.

OUR FOCUS

- ✓ Dewatering of excess and digested sludge
- ✓ Optimization of the performance and structure of the activated sludge
- ✓ Elimination of odors and H₂S development at the sludge storage facility
- ✓ Improvement of processes in the digestion tower / anaerobic reactor
- ✓ Restoring process stability in the event of disruptions and problems

INTERDISCIPLINARY EXPERTISE

Our experts support you during ongoing operations as well as in the event of problems and process disruptions.

The expertise of the individual departments such as the microbiology laboratory, research & development and application technology are interlinked.

The focus is always on finding a tailor-made solution in consultation with the customer.

We find the best solution for every challenge - whether large or small.

COMPREHENSIVE SERVICE FOR YOU

- ✓ **Extensive analytics** in our in-house laboratory and in cooperation with external specialists
- ✓ Development of **customized treatment schedules**
- ✓ **Application trials** and **product conversion**
- ✓ **Application support, service** and **monitoring**
- ✓ Provision of **dosing-** and **storage equipment**

Comprehensive expertise and individual solutions for your specific challenge



WASTEWATER TREATMENT PLANTS

Challenge Sludge dewatering

Influences / Causes:

- ▶ Characteristics of the sludge to be treated
- ▶ Operating modes of the purification stages
- ▶ Precipitants and other process auxiliaries

Products:

- Polymers, Flocculants and Coagulants
- Precipitants and Index-Optimizers
- Milk of lime to increase dewatering



WASTEWATER TREATMENT PLANTS

Challenge Floc formation, Turbidity

Influences / Causes:

- ▶ Unfavorable Ca-/Na-ratio, high N-contents
- ▶ High proportion of rain water
- ▶ Inadequate denitrification, poor aeration

Products:

- Precipitants and Index-Optimizers for the stabilization of the floc structure
- Chalk for the optimization of the floc formation
- Products to enhance nitrifiers



WASTEWATER TREATMENT PLANTS

Challenge High SVI, Bulking-/Floating sludge

Influences / Causes:

- ▶ Filamentous bacteria
- ▶ rarely extreme high fat content in the wastewater

Products:

- Precipitants and Index-Optimizers
- Chalk to reduce filaments and improve flocculation



Think clearly. Act sustainably.

Comprehensive expertise and individual solutions for your specific challenge



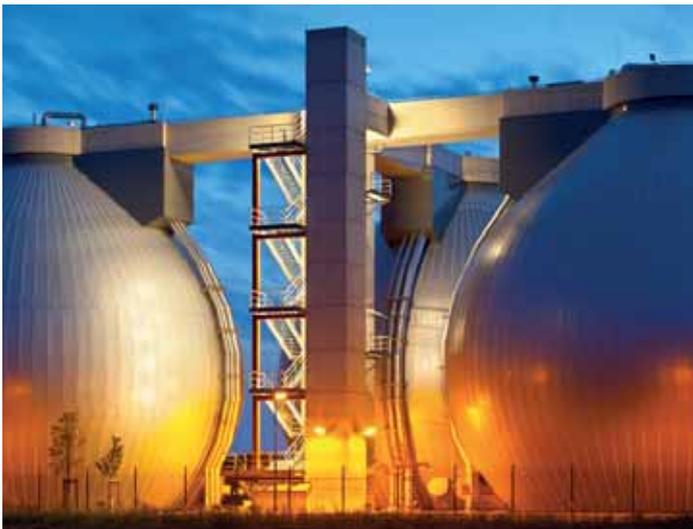
Challenge H₂S and odor

Influences / Causes:

- ▶ Thiols (Mercaptanes), amines, ammonia
- ▶ Hydrogen sulfide
- ▶ short-chain organic acids (eg butyric acid)

Products:

- Odor binders for H₂S, ammonia, amines and mercaptanes
- Odor maskers



DIGESTERS AND ANAEROBIC REACTORS

Challenge Digester foaming

Influences / Causes:

- ▶ can be detected in the activated sludge

Products:

- Defoamers and Degassing-Agents
- Precipitants and Index-Optimizers
- Methanogenesis-Boosters, Micro-Macro-Nutrients
- Chalk
- Milk of lime



DIGESTERS AND ANAEROBIC REACTORS

Challenge Increase of Gas Yield Stable Operations

Influences / Causes:

- ▶ Deficiencies in micro-macro nutrients
- ▶ Overdosed/unbalanced trace elements
- ▶ Poor buffering, unbalanced C:N:P
- ▶ Increased concentration of volatile fatty acids

Products:

- Methanogenesis-Boosters
- Micro-Macro-Nutrients
- Chalk, Milk of lime



Smart product range

GENERAL PRODUCT OVERVIEW FOR WASTEWATER/ANAEROBICS

AERATION TANK/ SECONDARY CLARIFIER

- Coagulants
- Phosphate Precipitants
- Sludge Index-Optimizers
- Chalk
- Products to increase
Nitrifiers

DIGESTER/ANAEROBIC REACTOR

- Methanogenesis-Boosters,
Micro-Macro-Nutrients
- Defoamers/Degassing Agents
- Chalk

SLUDGE DEWATERING

- polymer Flocculants (pFM),
conventional/acrylamide-free
- Milk of lime
- Chalk

SEWAGE/SLUDGE STORAGE

- Odor Binders/-Maskers
- H₂S-Binders





Excellent Analytics In-House Laboratory

METHODOLOGICAL COMPETENCE AND HIGHEST TECHNICAL LEVEL

Evaluate system stability - Recognize changes - Optimize efficiently

Up to a quadrillion tiny creatures process the dissolved pollutants from the wastewater in sewage treatment plants, metabolize organic carbon compounds and convert part of the organic mass into digester gas in the digestion tower.

The analysis of these microbial communities provides detailed information on the plant condition and supports the development of targeted measures and general optimization options.

Our analytics packages help you to evaluate system stability, detect changes at an early stage, take targeted measures and optimize the process efficiently:

