



### Abstract

**A German company developed a new thermophile anaerobic treatment technique to purify organically polluted processing water and wastewater at temperatures from 30 to 55°C without the need for pre-cooling. It is suitable for various degrees of pollution (eg. paper, sugar, textile, brewery) and characterised by high stability. Industrial end-users are sought for commercial agreements with technical assistance. Engineering and construction companies are sought for implementation of joint projects.**

### Description

The German company is active in water and wastewater treatment. Their product range covers the entire biotechnological field and comprises suspended anaerobic/aerobic systems, membranes, bioreactors and fluid/solid abscission. Modular solutions are tailored to any specification.

The company developed a new thermophile anaerobic treatment technique to purify organically polluted processing water and wastewater at temperatures from 30 to 55°C without the need for pre-cooling.

The newly developed insensitive abscission technology separates biomass, clear water and biogas while at the same time keeping organic sludge grounded. Organic excess sludge is significantly reduced. Optimised mass transfer between process water and micro-organisms is achieved through an adaptive mixing system.

High process stability is guaranteed through consistent feed of the reactor with wastewater.

The application becomes cost-effective starting off at a COD content of 1500 mg O<sub>2</sub>/l. It is suitable for weakly to strongly polluted wastewaters (> 40000 mg O<sub>2</sub>/l).

The process can be combined with other methods. Combined with an aerobic cyclic decarbonation process, also newly developed by the company, it represents an independent, profitable clarification device with integrated waste air treatment. This combination can also be used at high hardness of water.

### Innovations and advantages of the offer

- No pre-cooling needed
- Compared with activated sludge procedure, organic excess sludge is reduced by up to 90%
- Cost effective
- Suitable for various degrees of pollution
- Production of valuable biogas (methane)
- Expert know-how in German company
- Close co-operation with University guarantees access to latest research results

### Current and Potential Domain of Application

Industrial water recycling, waste water treatment, generation of biogas (methane). Areas of application are e.g. breweries, paper industry, sugar production and textile industry.

### For further information (including IPR status)

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