


## STA Wastewater Treatment

 S.T.A Società Trattamento Acque srl  
Via G. di Capi, 28/30  
46100 Mantova  
Italy

 stacque.com

 Mr. Luca Mancini

 Luca.mancini@stacque.com

 +39 0376 372604  
+39 345 6719767



### INFORMATION ON THE ECO-INNOVATIVE SOLUTION PROVIDER

This eco-innovative solution was developed by STA, a company based in Italy, to provide a solution for industrial and urban wastewater and water treatment

### SHORT DESCRIPTION OF THE ECO-INNOVATIVE SOLUTION

Integrated solution for water treatment for Textile and Food industry, using the most modern technologies depending on necessities, ensuring the achievement of water purification at the lowest cost.

The applied technologies include:

- Biological activated sludge plants classic scheme
- Dissolved air flotation systems
- Sequencing batch reactors (SBR)
- Moving bed biofilm reactors – MBBR
- Integrated biological reactors with membrane filtration process, MBR

Process water treatment includes the following solutions:

- Filtration systems
- Softening
- Demineralization
- Desalination
- Reverse Osmosis

### Industrial sector – Market segment and actual applications in industry

36 Water collection, treatment and supply

### INDUSTRIAL CLASSIFICATION - NACE CODE;

20 Food and kindred products

## 1. DESCRIPTION OF ECO-INNOVATIVE SOLUTION

### Technical aspects of the eco-innovative solution

The following technologies will be offered to industries, depending on the wastewater to be treated:

#### Biological activated sludge plants classic scheme

The active sludge biological process refers to a type of aerobic treatment conducted by more or less prolonged aeration of the wastewater in a biological reactor in the presence of a microbial population (biomass).

In activated sludge plants, with suspended biomass, the bacterial populations responsible for the cleaning treatment are present in the form of flakes kept in suspension through the air blower (if aerated reactors) or by mixer (if anoxic reactors for removing nitrates).

**Dissolved Air Flotation (DAF)** wastewater treatment plant is typically used in a wide range of industrial applications.

The DAF wastewater treatment system is widely used for the reduction of Chemical Oxygen Demand (COD) present in fats, oils and greases, organic matter, biological sludges and colloidal material.

**Sequencing batch reactors (SBR)**, are discontinuous flow treatment units where the different treatment steps are finalized within a single vessel. No development in space as in the case of traditional activated sludge units, where the flow is pumped to the following vessel, but they are time oriented units, leading to flow and volume changes in the vessel in compliance with the different operating strategies.

**The Membrane BioReactor**, is a biological water filtration plant combining a traditional cleaning process on activated sludge with a membrane separation system (generally microfiltration or ultrafiltration), replacing a normal secondary separator. The system is extremely useful as it reaches high activated sludge concentrations in the biological reactor (10-15 gSS/m<sup>3</sup>), which can't be reached in traditional systems. The use of membranes instead of a separators avoids possible sludge leakages, extremely frequent in industrial plants, often leading to many problems.

### Economic and environmental benefits of the eco-innovative solution

Smallest unit available and investment costs / costs for treated wastewater per m<sup>3</sup> for the individual technologies. STA Wastewater Technology solutions offers by STA, can provide high purifying efficiencies. The proposal of the best technology will depend on the need to adapt existing structures, available space and the best quality / price-ratio. We can build plants directly on site or provide pre-assembled systems.

## 2. AVAILABILITY OF THE ECO-INNOVATIVE SOLUTION AND BUSINESS PARTNERSHIP

### Market readiness, Trade mark, existing market coverage commercialization strategy

The company offers the design, planning and construction of the entire water treatment solutions STA has extensive experience in the industrial sector

### Requirements to adapt the solution to the local market and potential applications/market size

Utmost care the cost-effectiveness of the solution proposed – STA's aim is to propose an optimal solution that can be paid back within very short time. This is possible thanks to the very low running/operational costs of our plants. Highly sustainable plants – During the development of our plants, STA always keep the environmental aspects as a priority.

### On site after-sales services support and the technical assistance requirements

A remote support system makes it possible to offer global assistance.

### Targeted local business partners

All customers of textile industries and agro-food industries - especially in the dairy industry - of any size.

Looking for local partners to consolidate our presence and provide better after sales service

### Type of local business partnership sought

We are looking for local environmental and water treatment companies to bring our technologies/know how for collaborate. We are also looking for business agents and final clients (companies) of textile and agro-food sector.