

# **Automated biological treatment**

#### Référence : TAE/3000



## Demonstrate the various stages of wastewater treatment through the reproduction of the activated sludge process in an automated system

Realization of a biological treatment under real conditions; functionality for several days.

Unit requires regular monitoring

#### GENERAL SPECIFICATIONS

#### Instrumentation

- Flow transmitter.
- Air flowmeter.
- pH probe, PVC can.
- Redox probe, PVC can.
- Dissolved oxygen probes, PVC can.
- Color touch screen

**Dim** : 280 x 80 x 200cm – 250 kg SS tubular framework 40 x 40mm

- Tank polyethylene, removable lid, draining valve and level detector.
- Anoxic tank, removable lid, taps for measuring pH, dissolved oxygen and redox.
- Aerobic tank, taps for measuring dissolved oxygen, pH or redox, Vessel with two overflow levels.
- Settler, stirring motor and scraping blades mobile, draining valve, venting overflow with sampling valve.

## DESCRIPTION

### Activated sludge treatment:

This method uses an aerated reactor where are growing populations of micro-organisms

in charge of degradation of dissolved organic pollutants (COD, BOD5).

This reactor is coupled to a clarifier for the physical separation of the treated effluent and biomass by settling.

The treatment of nitrogen compounds (nitrates) is possible by the development in the aerated basin of anoxia working range (lack of ventilation) or by establishing a separated basin of anoxia (unventilated) upstream.

## Study of the sewage treatment process

Strictly aerobic

Aerobic and anoxic by aeration syncopating

Aerobic and anoxic in separated basins

## Conduct the process of wastewater treatment

Called activated sludge treatment

Process monitoring

Search for optimal treatment parameters

# Automation

Alarm management

pH and O<sub>2</sub> control

Sludge recycling management Production of polluted er



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