

Test Case Morubel

Morubel produces premium quality prawns and related speciality seafood, frozen and chilled up to customer's specification at the best market price to the industry, food service and major retailers all over Europe.

The Morubel site consists of one integrated building of 16.000m² built surface housing offices, the production plant, warehouses and a laboratory.

In the plant there is a complete separation between low and high care zones and very strict hygienic procedures are in place.

Waste Water Treatment

Morubel produces a substantial amount of sanitary and industrial waste water. This water is discharged into the public collector and treated in the Municipal Wastewater Treatment Plant of Ostend. Especially the discharge of industrial wastewater represents a significant cost. Apart from the organic waste, the industrial water contains also a lot of Nitrogen and Phosphorus.



Pilot Scale Testing

A pilot scale test is actually running in order to examine the possibility to reduce the actually discharged pollution in order to reduce discharge costs and burden of the Municipal Wastewater Treatment Plant. This pilot project is part of the Morubel policy for corporate sustainability.

EPAS n.v. How we work:



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Pilot Reactor Anaerobic Treatment

Pilot specifications

Process-technical advice for your water and wastewater treatment plant

In response to the growing demand for professional environmental process and technological advice, EPAS (Eco Process Assistance) was founded in 1992 as a spin off from the Laboratory for Microbial Ecology of Ghent University.

Our core business

EPAS specializes in the treatment of wastewater and provides process and technical advice to industries all over the world covering a wide range of technologies, including microbiological and physico-chemical treatment.

Advice supported by in-house lab research

EPAS invests heavily in research facilities to test common and advanced wastewater purification techniques. Modern microscopical equipment allows detailed analysis of the microbial community in biological wastewater treatment systems. In-house research enables the Epas engineers to examine and propose the latest and innovative technologies for optimisation of processes or the remediation of specific problems.

EPAS has no direct links with suppliers and constructors, and can therefore guarantee independent assistance based solely on scientific, technical and economical facts.

PILOT UASB

Reactor characteristics

- HDPE cylindrical reactor mounted on stainless steel skid
- Internal diameter 70 cm – total height 4.5 m – Total liquid volume 1.5 m³
- Three phase separator on top of reactor
- Internal recycle
- Modular and mobile construction (foot print 180 cm x 140 cm)
- Multiple sampling ports
- Treatment capacity: 15–20 kg COD/day

Pump capacity

- Feed pump: 0–215 l/h
- Recycle pump: 0–810 l/h
- Positive displacement pumps: accurate flow regulation
- Overpressure protection

Instrumentation

- pH control (redundant pH measurement)
- Temperature control
- Safety pressure switch (pumps)
- Gas flow measurement (flow + totaliser)
- Inline conductivity measurement

Automation

- Controlled by PLC
- Datalogging of controlled parameters and gas flow / alarm
- HMI panel interface for parameter input / configuration
- GSM messaging modules for remote follow up

Sampling Points

- 1.4 m
- 1.2 m
- 1.0 m
- 0.8 m
- 0.6 m

Feeding Pump

Cap. 120 l/h

Recirculation Pump

Cap. 800 l/h

Ventilation shaft for biogas

Three phase separator

UASB reactor:

Diameter 0.7 m
Heigt ca 3.5 m
Volume ca 1.5 m³

Pilot Installation

