## **CASE STUDY**

# MicroClear®

### WASTE WATER TREATMENT FROM FISH PROCESSING, ITALY

#### **Project Description**

An industrial fish processing company, based in Italy, produces highly loaded process water and has a demand for high quality use water. The use water has to fulfil highest standards and should be free of turbidity. A tight barrier for all particles larger 1  $\mu$ m in the water treatment was a must. To be able ensuring a long term reliable water quality, a submerged Membrane-Bioreactor (MBR) using an ultra filtration membrane has been chosen. A robust

system made of highest quality materials with the lowest maintenance requirements was the end customers choice. newterra gmbh has been able to supply fast and exactly what the customer needed. The process is mainly composed of a MBR set-up with denitrification and nitrification step.



#### Performance characteristics

Flow: 6 m<sup>3</sup>/h

Average flux: 22 l/m²h at 2 chemical

cleanings per year

Membrane

surface area: 350 m<sup>2</sup> (MA04-90)

Permeate

extraction: Gravity flow

Waste water feed: Total daily flow

(DWF): 144 m³/day BOD₅ loading 1400 mg/l COD loading 2430 mg/l TKN loading 245 mg/l

Plant performance:

 $BOD_5$  95% reduction COD 90% reduction

Ammoniacal Nitrogen

[NH4-N] 90 % reduction







newterra GmbH, a subsidiary of newterra Group Ltd, is the technical center of development and excellence of the globally successful MicroClear® flat sheet membrane for MBR (membrane bioreactor) applications. The evolution of the filtration module, by specially developed and optimized production machines, to the ISO 9001 certified manufacturing process of the MicroClear® membranes, is 100% produced at the site in Langgoens, Germany (near Frankfurt).