MicroClear®

CASE STUDY

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 µm 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 m³/h
Average flux:	22 l/m²h at 2 chemical cleanings per year
Membrane surface area:	350 m² (MA04-90)
Permeate extraction:	Gravity flow

Waste water feed:	
Total daily flow (DWF):	144 m³/day
BOD_5 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).

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