

Innovative wastewater treatment plant at Elmo Leather AB

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Abstract

The tannery Elmo Leather AB in Sweden has recently finalised a new wastewater treatment plant using an innovative system for nitrogen removal. The innovation of the plant is the implementation of a nitrification and denitrification step in the treatment of tannery waste water. The technology has so far not been considered feasible in wastewater treatment plants for the leather industry, due to the composition of the tannery wastewater.

The construction of the wastewater treatment plant started in March 2004 and the plant was taken into operation in April 2005. The total investment for the plant was around 5 million Euro and the project was supported by the EU LIFE Financial Instrument with 913.000 Euro

The plant has been running during nearly one year and the performance of the plant has been very stable and as example can be mentioned that the reduction of nitrogen in the plant has never been below 85 % despite the Scandinavian winter conditions. During September-December 2005 the average reduction of some key parameters has been the following: BOD-removal 97%, COD-removal 89 %, Nitrogen-removal 89 % and Chromium-removal 87 %.