

Europaper, Italy

A Case Study

Case Study: Pulp & Paper Plant
 Client: Siemens Water Technologies – Italy
 Start Up: August 2005
 Capacity: 2,000 m³/d

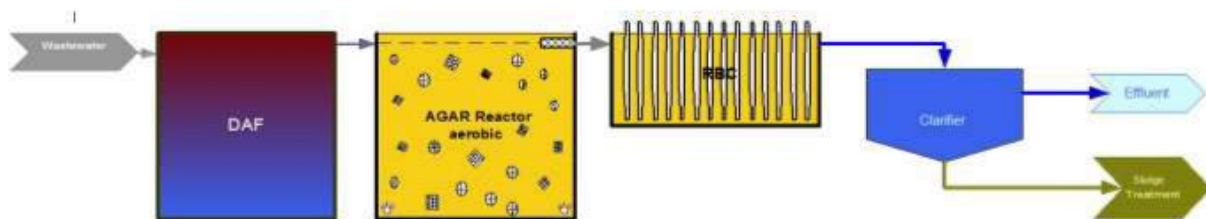
Overview

Europaper produces tissues paper for Industrie Cartarie Tronchetti, which has its own branch (Foxy). Changes in the paper production were followed by an increase of the BOD load in the wastewater. Therefore the existing water treatment plant had to be upgraded.

Requirements

An increased BOD load in the wastewater, caused by a conversion of production, required an upgrade of the existing wastewater treatment plant. The existing plant, which consisted of a DAF, RBC, and secondary clarifier, had to be expanded by an additional treatment step before the RBC with the aim to reduce the COD load in 60%.

Design



A one stage Roughing Filter system with a filling ratio of 35% was installed between the existing DAF and RBC. By the implementation of the paper industry special developed ABC (Aqwise Biomass Carriers), with an increased surface area of 600m²/m³, a sufficient BOD removal is achieved while operating with an HRT of only 4h.

Solution

For the tissue paper production, a high percentage of recycled paper is used. Therefore, the wastewater is characterized by a high concentration of biological easy degradable BOD. An additional biological treatment prior to the RBC was chosen in order to reduce the COD load in 60%. The AGAR Roughing Filter system, which utilizes the attached biofilm on biomass carriers and with no need of activated sludge, was installed for intense BOD removal.

Results

The plant operates efficiently since the start up. Due to the high water temperature of 30°C an almost full development of the biofilm was noticed in less than a week. The effluent COD-concentration is with less than 100 mg/l below the required value of 500 mg/l.

