

CASE STORY: Wastewater Treatment Plant

This customized wastewater treatment plant is performing with great success for the egg product manufacturing client.

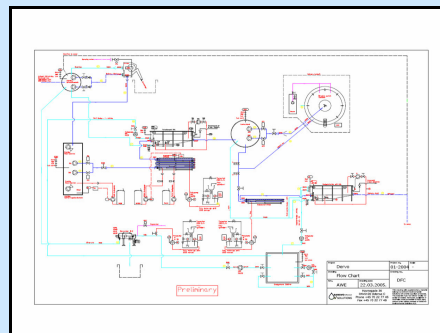
The Challenge. The client was facing server problems with wastewater legislation and was burdened with high cost for municipal wastewater treatment and constant scrutiny of the plants effluents. Often the wastewater pollution exceeded wastewater class thirteen where the authorities allow maximal class five. As available space was limited the design of the plant had to be optimized accordingly.

The Solution. Since installation was completed in May 2005, the facility cleans the wastewater with high efficiency. The performance of the WWTP classifies the treated wastewater as top of class one of the wastewater legislation. As the company earlier had to pay the wastewater disposal fee according to class five, analyses, fees and fines, the yearly savings exceeds € 50.000,-.

The performance. The amount of wastewater treated is approx. 300 m³/day, 5 days a week. The wastewater from the egg product manufacturer is heavily polluted, with a COD of 7.000 mg/l and an SS exceeding 1.000 mg/l. The treated effluent guarantees a COD below 200 mg/l and an SS below 50 mg/l.

Technical description. The WWTP consists of a physical, chemical and biological treatment with sludge dewatering in the following sequence:

1. Particle filtration
2. The wastewater is then collected in a buffer/homogenisation tank.
3. Chemical treatment with pH adjustment and addition of coagulants and flocculants.
4. In a biological reactor the residual dissolved pollution is converted into bacteria mass and CO₂. The majority of the activated sludge is re-cycled.
5. Finally, sludge from the chemical treatment and excess biological sludge is collected and dewatered in a decanter centrifuge.



Wastewater Treatment Plant P&ID



Sanovo Flotation Unit.



Sanovo Biological Reactor made of fibreglass.



On the left: Effluent water from the WWTP