



MUNICIPAL INSTALLATION | Cellulose Recovery

Beemster Wastewater Treatment Plant Middenbeemster, Netherlands

Wastewater treatment plants have traditionally been a cost-center for municipalities as treated effluent is often discharged back into the environment with little to no beneficial reuse. This is starting to change as wastewater professionals are finding innovative ways to produce a resource to use or sell. By doing this, operating costs can be cut and ideally Plants can become profit-centers.

For the Netherlands, resource recovery is a main priority and the Beemster Wastewater Treatment Plant (WWTP), near Amsterdam, is an example of this. They decided to optimize their treatment plant by taking advantage of funding from the Eco-innovation program through the European Commission.

The Challenge

With funding from the Eco-innovation program, the Beemster WWTP wanted to put into place equipment that would generate sludge with a high concentration of cellulose. Recovered cellulose would be reused for the production of other products.

The Solution

Eight SFK600 Salsnes Filters were installed - with 350 micron filtermesh and integrated sludge dewatering - to separate fine cellulose fibers from toilet paper in the wastewater. Fibers are collected and further processed into sugar and in a next stage to lactic acid as a base material for bioplastic.

The WWTP also discovered an added benefit of removing cellulose from the wastewater. The organic loading on their downstream biological process has been reduced, which has lowered the Plant's aeration requirements and energy consumption.



System Parameters

Salsnes Filter: SFK600
Type of Treatment: Primary Treatment & Cellulose Recovery

P.E.: 170,000
Particle Size: 0 - 100 mm
Dry Weather Flow Rate: 1200 m³/h (7.6 MGD)
Max. Flow Rate: 3600 m³/h (22.8 MGD) Rain weather flow
TSS Removal: 50%
COD Removal: 30%
Dewatered Sludge: 40% Total Solids



Eight SFK600 Salsnes Filters installed into channels

Integrated system dewatering produces sludge with 40% Total Solids.

