

H+E technology key to securing environmental award

AS Estonian Cell, a pulp producer from Estonia, is expanding its production capacity to 200,000 tons of pulp per year. To this end, AS Estonian Cell invested in the gradual expansion of its wastewater treatment plant in 2018. The original pond bio-reactor was equipped with a membrane aeration system, which was no longer able to fulfil the high requirements of the special wastewater of the pulp production.

Task

As specialists for paper and pulp wastewater, the engineers at H+E developed a tailor-made process with ideally suited components to permanently optimise the unsatisfactory situation and additionally achieve energy savings.



Solution

In a first step, the large quantities of anaerobic sludge that repeatedly pass over from the upstream anaerobic stage are removed in the FLOCOMAT.T contact sludge reactor, which has been tried and tested for decades, with almost no energy expenditure. The downstream activated sludge

plant has been completely redesigned as a selector cascade revitalisation system and equipped with the extremely robust and at the same time highly efficient AEROFIT.V aerators.

In a comparison test lasting several months, the AEROFIT.V aerators proved to be far ahead of the competition in terms of both

aeration efficiency and resistance to oxalate encrustation.

The AEROFIT.V aerators designed by H+E have been used worldwide with great success for over 20 years. Due to the well-planned design, the aeration outlet gap is largely self-cleaning, thus allowing for many years of trouble-free operation.

Facts & Figures:

Flow rate:	8,640 m ³ /d
COD inlet:	52 t/d
Energy saving:	5.5 GWh of electricity per year

Award

Due to the new wastewater treatment and the resulting savings of 5.5 GWh/a of electricity, Estonian Cell was declared the winner of the competition "Environmentally Friendly Company of the Year in Estonia". With these measures, Estonian Cell came a significant step closer to its goal of becoming the best producer of pulp in the world.