Optimising operations
Pond treatment plant, Winkel, Germany
Nitrification process started

Wasserverband Kleine Elster
http://www.wv-winkel.info/

Operation
1 OLOID Type 600 (for test) and 1 OLOID Type 400 in pond 1 with 8000 m^3 and
1 OLOID Type 400 and 1 turbine aerator in pond 2 with 4000 m^3

Period
Since 2013

Success
More stable discharge values

Saving of 20-30 % of energy

Nitrification process started

Goal of the OLOID operation
Optimising operations: Start nitrification by proving enough oxygen while saving energy at the same time.

Pond aeration
Initially 2 OLOID Type 400 were installed, one in each aerated pond. This installation already let to energy savings of 20-30 %.
In 2016, the position of the OLOID Type 400 in aerated pond 1 was changed to optimise interaction with the additionally installed OLOID Type 600. Pond 1 is now aerated and circulated with an OLOID Type 600 and an OLOID Type 400 in combination with the already present jet aerator. In pond 2 the initial installation of one OLOID Type 400 was optimised by adding a turbine aerator. In pond 2, the OLOID and turbine aerator replace 2 jet aerators with a power consumption of 6.5 kW each, while the OLOID and turbine aerator need 1.7 kW combined. The jet aerators were only operated for 6h/day where the OLOID and turbine aerator are operated continuously.
This holistic solution further stabilises the discharge values and a nitrification process has been started.

Results Summary
All measurements indicate a better aeration as before with jet aerators. The aeration is 2-3 times better, which is difficult to assess because the nitrification process (which is oxygen demanding) has to be taken into account and is difficult to quantify and separate.

The project was carried out jointly with our partners Mr. Tomberg, Prosys and $HydrO_2$
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