

Optimising operations

Pond treatment plant, Grimburg-Gusenbug (Hermeskeil), Germany



VG-Werke Hermeskeil,
Teichkläranlage Grimburg-
Gusenbug

Operation

2 OLOID Type 400 in 2 ponds
with 2000m³ and 3000m³

Period

Since June 2014

Success

More stable discharge values

Saving of 30% of energy for
aeration through reduced
operating time of the jet
aerators

Goal of the OLOID operation

Optimising operations: Improvement of the agitation, uniform distribution of oxygen, reduction of operating time of the pre-existing aeration with at least unchanged efficiency of degradation

Description of the plant

Communal pond treatment plant, design capacity: 2000 PE (population equivalent), predominantly domestic waste water

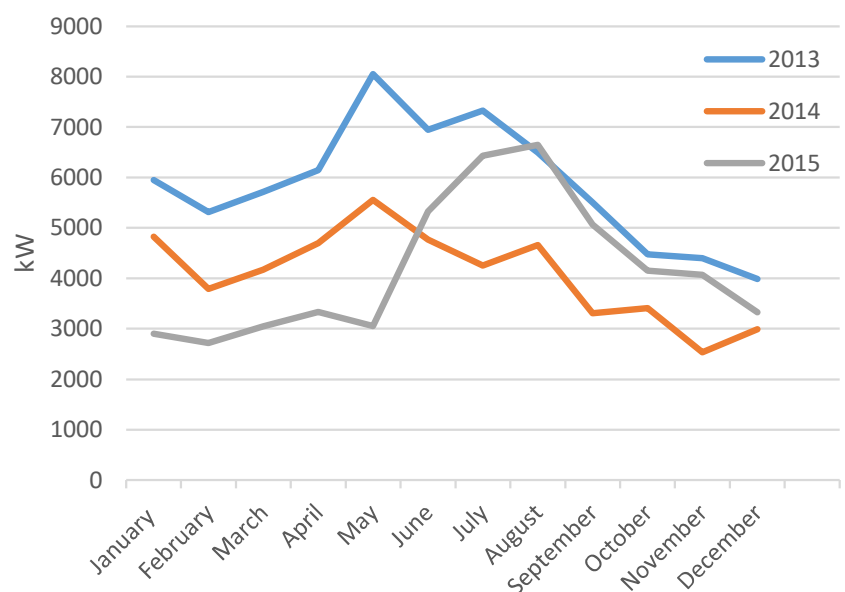
Process design: 2 aerated ponds -> tertiary treatment ponds

Pond aeration: each 2 jet aerators (each 2.2 kW) in pond 1 and 2 jet aerators (each 2.2 kW) in pond 2 mounted on floaters

Power consumption

From the graph it can be seen that the power consumption decreases from June 2014, particularly decreases below the consumption of the previous year.

Energy consumption



Results

- The circulation in the entire pond is improved through the operation of the OLOID. The entire body of water is stirred as far as the corners leaving no death zones.
- Because the jet aerators are no longer necessary for the circulation but only for the aeration with oxygen necessary for the biological degradation, **energy savings from 70000 kW per year to 50000 kW per year** could be achieved. This corresponds to **energy savings of around 30%** for operating the pond treatment plant.
- Additionally the discharge values could be met continuously.

