

# Optimising operations Pond treatment plant, Grimburg-Gusenburg (Hermeskeil), Germany



VG-Werke Hermeskeil, Teichkläranlage Grimburg-Gusenburg

#### Operation

2 OLOID Type 400 in 2 ponds with 2000m<sup>3</sup> and 3000m<sup>3</sup>

#### **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

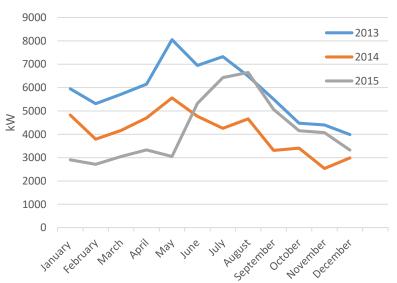
#### **Description of the plant**

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**



# Pond treatment plant



#### 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.



