

Optimising operations

Pond treatment plant, Dürrfeld (Grettstadt), Germany



Community Grettstadt,
Teichkläranlage Dürrfeld
(Grettstadt)

Operation

OLOID Type 400 I in oxidation
pond III

Period

Since 2015

Success

Ice prevention in Winter

Stable discharge values

Energy saving by 50%
(compensation of paddle fan)

Goal of the OLOID operation

Operational optimization: Improvement of circulation, homogeneous distribution of the oxygen, replacing the existing paddle fans for ventilation and Ice prevention in winter

Description of the plant

municipal pond treatment plant, design capacity: 970 EEC, connected 665 EEC, predominantly domestic waste water

Process design:

Clarifier (950 m³) -> oxidation pond I (2720 m³) -> Pond II (3415 m³) -> Pond III (2570 m³)

In pond II and III a paddle fan with 0.75 kW was installed respectively.

The OLOID flow produces a heart-shaped flow in pond III, which eliminates the use of more energy-intensive paddle fans. The entire pond is kept in motion.

Results

- By using the OLOID the circulation is improved throughout the entire pond. The entire water body is fully mixed even in corner areas, there are no standing zones.
- Energy saving by 50% since the paddle fan in pond 3 is omitted.
- In winter, the pond can be kept free of ice and thus the oxygen transfer into the pond remains .
- The additional oxygen entry through the OLOID ensures stable discharge values of the pond treatment plant.