

## **Aerated lagoons featuring FUCHS OxyStar Aerators WWTP Korça (Albania)**

In Albania, a comprehensive project was implemented that included the rehabilitation of the water supply and wastewater network and the construction of a new wastewater treatment plant for 85,000 PE.

The project was financed by the German Development Loan Corporation (KfW), the European Investment Bank (EIB) and with Albanian funds.

KfW Development Bank's evaluation report highlights the project as one of the most successful and functional investments of KfW Financial Cooperation and gives it the highest rating of 1 "very good" - on a scale of 1 to 5.

In addition, the project was recognized as a "Best Practice Project" by the World Bank.



For the wastewater treatment plant Korça a sturdy and reliable treatment system was sought that guarantees compliance with the effluent limits under extreme conditions and requires little experience for proper operation.

Aerated lagoon systems are excellent for this purpose. These systems are simple to operate, inexpensive and can be easily upgraded in the future if required.

The most suitable aerators for wastewater lagoon systems are FUCHS OxyStar Aerators. 48 numbers 11 kW OxyStar Aerators were selected for WWTP Korça as adequate to provide for good aeration and mixing in 6 aerated lagoons.

Due to their sophisticated design – compared to other brands – FUCHS OxyStar Aerators offer numerous advantages. They are designed to provide highest aeration efficiency and mixing in their class.

Customers worldwide favor the virtually maintenance-free OxyStar Aerators.

In addition, a self-financed photovoltaic plant was built directly next to the aerated lagoons, which covers more than 90 % of the average annual energy demand - one of many signs of the local operator's high level of commitment.



**WWTP Korça – Aerated Lagoon System**

### **Basic data**

- Type of wastewater: domestic
- Design Capacity: 85,000 PE
- Commissioning: 2012
- Load: 5,100 kg BOD5/day
- Load (influent aerated lagoons): 3,570 kg BOD5/day

## **Design**

- Inlet Pumping Station
- Screens
- Grit Chamber / Grit Traps
- Aerated Lagoons 1st Stage
- Aerated Lagoons 2nd Stage
- Polishing Lagoons
- Sludge Drying Beds



**WWTP Korça – Aerated Lagoon System**

## **Local operator**

UKKO - Water Supply and Sewerage Enterprise of Korça Municipality

## **Aerated Lagoons**

### **Stage 1**

- Number of lagoons: 3
- Volume, each lagoon: 33,400 m<sup>3</sup>
- Total volume: 100,200 m<sup>3</sup>

### **Stage 2**

- Number of lagoons: 3
- Volume, each lagoon: 22,700 m<sup>3</sup>
- Total volume: 68,100 m<sup>3</sup>

**Total aerated volume: 168,300 m<sup>3</sup>**



WWTP Korça – Aerated Lagoon System

## Aeration Equipment

### FUCHS OxyStar Aerators on floatations

#### Stage 1

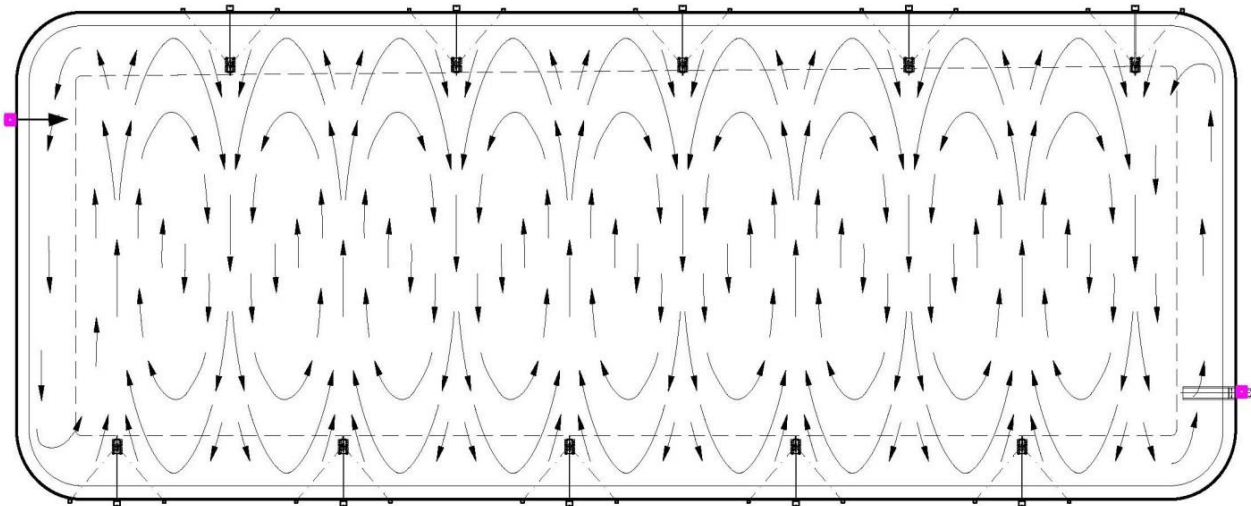
- Number of lagoons: 3
- Number of aerators, each lagoon: 10 x OxyStar Aerator OS 15.0
- Installed power, each lagoon: 10 x 11.0 kW = 110 kW (nominal power)
- Power density: approx. 3,3 W/m<sup>3</sup>

#### Stage 2

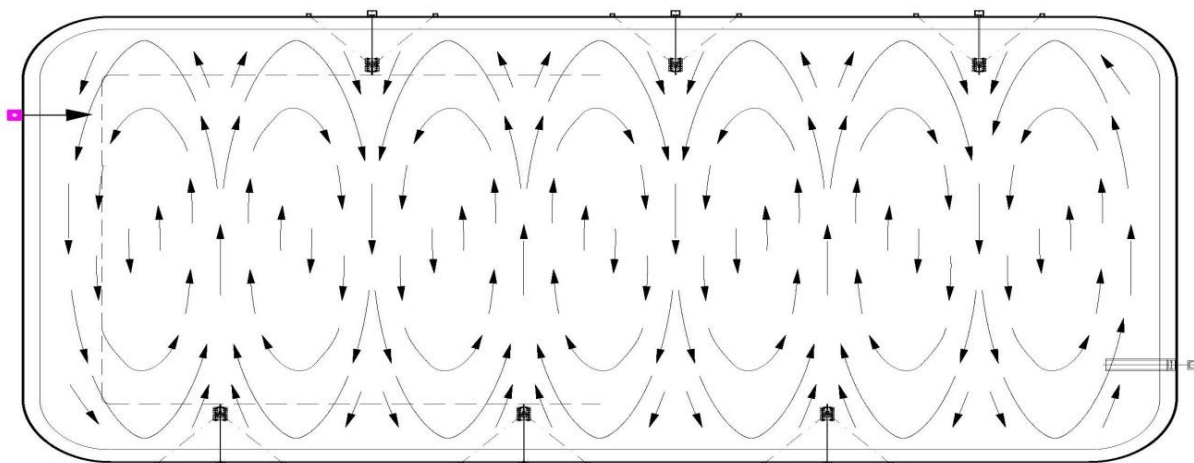
- Number of lagoons: 3
- Number of aerators, each lagoon: 6 x OxyStar Aerator OS 15.0
- Installed power, each lagoon: 6 x 11.0 kW = 66 kW (nominal power)
- Power density: approx. 2,9 W/m<sup>3</sup>

**Total Number of Aerators:** 48 x OxyStar Aerator OS 15.0  
48 x 11.0 kW = 528 kW

## Arrangement of FUCHS OxyStar Aerators



### **Aerated Stage 1** (3 lagoons with 10 FUCHS OxyStar Aerators each)



### **Aerated Stage 2** (3 lagoons with 6 FUCHS OxyStar Aerators each)



The features making FUCHS OxyStar Aerators the number one choice for aerated lagoons are:

- Combination of outstanding oxygenation and mixing
- Sturdy and intelligent design
- No sealing or bearing in the immersed part
- No gears
- No need for lubrication or oiling
- Virtually maintenance-free
- Resistant high-quality materials
- Easy handling and installation due to low weight
- No spray water
- Low noise emissions

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