

## Successful Replacement of Surface Aerators in a sugar factory with FUCHS OxyStar Aerators

The sugar beet company SUTA in Morocco has implemented in several years ago a wash water treatment plant to clean up its effluents to respect standard of direct and indirect discharges into the environment. The SUTA water treatment plant, installed in **2012**, is based on activated sludge technology. The technical specifications of this plant are:

Effluent input	Effluent output
Flow: 360 m <sup>3</sup> /h	BOD <sub>5</sub> : < 300 mg/l
COD: 2800 mg/l	MES: < 100 mg/l
BOD <sub>5</sub> : 1000 mg/l	
MES: 400 – 500 mg/l	

The activated sludge lagoon has the following characteristics:

Capacity: 25,000.00 m<sup>3</sup>  
Dimensions: L x W x D = 180 m x 50 m x 4 m  
Structure: made by an earthen material

05/2015



For the aeration of the activated sludge lagoon **16 surface aerators** with a nominal power of **55 kW** were installed (**total 880 kW**). Since their installation in 2013, these aerators encountered many electrical and mechanical failures.

07/2018



*only 9 of the 16 aerators are still in operation*

In 2019, FUCHS was commissioned to replace these aerators with FUCHS Aerators.

For the replacement of the existing surface aerators while ensuring the desired treatment performance FUCHS proposed the installation of **24 FUCHS OxyStar Aerators** installed on a floating assembly with a nominal power of **22 kW (total 528 kW)**.

For financial reasons it was decided to install only 20 OxyStar Aerators with the intention of installing the remaining 4 aerators later. The installation of FUCHS Aerators is easy, this is a valued aspect for retrofits.

05/2019



Since 2019 the OxyStar Aerators have been operating successfully. They have provided the necessary aeration and mixing to achieve the desired treatment rate with very little maintenance.

Through the replacement of the surface aerators by FUCHS OxyStar Aerators the installed power was reduced (**528 kW instead of 880 kW**) and automatically the energy consumption.

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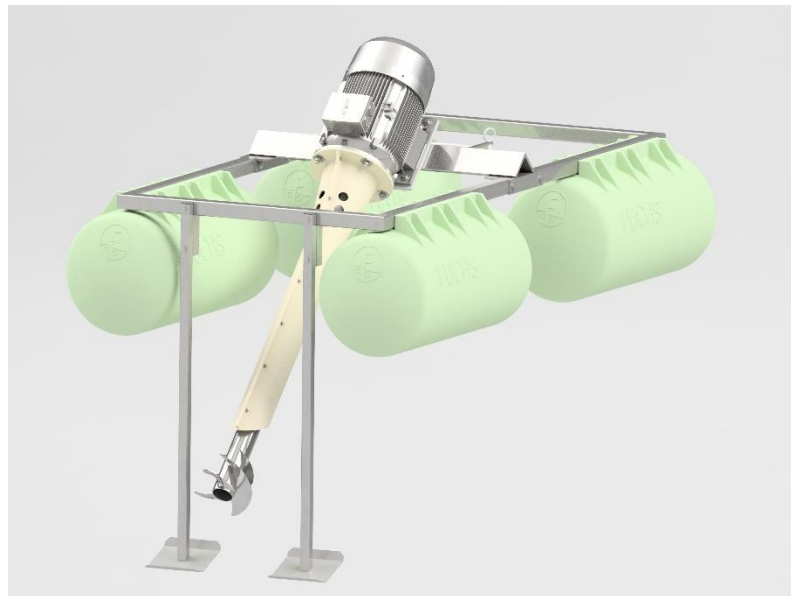


*20 x FUCHS OS 30 (22 kW) and 2 x 55 kW Surface Aerators*

FUCHS OxyStar Aerators are available in various sizes. They can be bridge or wall mounted or mounted on floats. Due to their sturdy design OxyStar Aerators are highly reliable and almost maintenance free.

### **Advantages of FUCHS OxyStar Aerators at a glance**

- Efficient aeration
- High mixing and circulation capability and flexibility
- Outstanding quality of material and production
- Almost maintenance free – no lubricating or greasing required
- Versatile and simple modes of installation
- Endling and installation due to low weight
- No spray waters
- Low noise emission



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