

Successful replacement of floating brush rotors with FUCHS OxyStar Aerators

A small wastewater treatment plant in Texas, USA, was looking for a replacement of existing floating brush aerators.

The wwtp mainly consisted of a manual bar screen with 5/8" (~16 mm) bar spacing, an oxidation ditch and a settling tank. Floating brush rotors with hydraulic drive were installed for the aeration of the oxidation ditch.

The brush rotors lead to high maintenance cost and were difficult to be kept fully operational. The oxygen transfer and mixing were inefficient and created a mist of wastewater.



The design engineer and the city reviewed different oxidation ditch technologies and finally decided to design the upgrade around the FUCHS OxyStar Aerators.

Apart from combining excellent aeration and mixing with sturdy design the OxyStar Aerators also offers easy installation. This is often a decisive aspect for retrofits.

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.

Technical Data

Design flow:	1.75 MGD (6,600 m ³ /d)
Design peak flow:	5.25 MGD (19,900 m ³ /d)
Permitted effluent BOD ₅ :	10 mg BOD ₅ /l
Permitted effluent NH ₃ :	2 mg NH ₃ /l
Final plant effluent BOD ₅ :	2.2 mg BOD ₅ /l
Final plant effluent NH ₃ :	0.1 mg NH ₃ /l

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
- Easy handling and installation due to low weight
- No spray water
- Low noise emission

2021-01-13

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