Passavant Geiger

A brand of
Aqseptence Group

Replacement of third-party surface brush aerators by the original Passavant® Mammutrotors® in the Heraklion WWTP (Greece)

Situation

Managing the sewage for the 4th largest city in Greece with around 200.000 inhabitants, the wastewater treatment plant of Heraklion (Crete) was successively upgraded to cope with the stricter effluent values required by water reuse guidelines and the requisites for tertiary wastewater treatment.

The twelve surface brush aerators of the Heraklion WWTP had been installed in 1995 and needed to be replaced after over 20 years in operation. As one of the leading providers of this technology worldwide, Passavant-Geiger GmbH was awarded the project to substitute the existing third-party aerators by original Passavant® Mammoth Rotors® in 2023.

Design Capacity

200.000 PE - 32.960 m^3/d

Construction

2022 - 2023

Solution

As one of the leading manufacturers of surface brush aerators world-wide and with many decades experience in outfitting activated sludge basins with the original Passavant® Mammoth Rotors®, the Passavant Process Technology team helped customizing the substitution of the surface brush aerators in the four basins of the Heraklion WWTP to guarantee optimal performance for different load and flow scenarios, so that aeration blade immersion can be adjusted to accommodate to varying hydraulic loads and optimal BOD requirements.

Eight of the twelve units employ 37/45 kW pole changing motors to further increase versatility through variation of the rotation speed (and hence SOTR). In this way the oxygenation rates of each of the four 3000 m^3 basins can be adjusted according to demand. With gearboxes and end bearings specifically designed for this application and the know-how of over half a century producing excellency in surface aeration, the biological degradation basins of the Heraklion WWTP are ready to continue operations for further decades.

Technical Data

12 x Passavant® Mammoth Rotor®

Type:	MR 1000 - 9.0 m

12 x Passavant® Guide Baffles

Type:	MR 1000

Advantages

- Expert consultation for optimizing oxygenation and biological degradation strategy
- Gearboxes of own manufacture specifically designed for the task ensure reliability and long service life
- Aeration segments in glass fiber-reinforced plastic (GRP) provide better corrosion resistance and flexibility
- Outfit with guide baffles allow for 10 - 20% higher process and energy efficiency increase

Passavant-Geiger GmbH
Water Processing Solutions

Passavant-Geiger-Strasse 1
65326 Aarbergen | Germany
Phone +49 6120 280
info.passavant@passavant-geiger.com

www.passavant-geiger.com