ALTE EMSCHER

Municipal WWTP

500,000 P.E. / Q_{inlet} 90,000 m³/d

The „Alte Emscher" sewage treatment plant was built in 1936 in the Hamborn district of Duisburg and was initially only used for the mechanical cleaning of waste water for 100,000 P.E. 1988 the plant was rebuilt and for the first time included a biological stage. Today, the WWTP has a capacity for 500,000 P.E. and cleans both domestic and industrial wastewater.

NUMBER OF TANKS	3
TOTAL VOLUME	16,404 m³
WATER DEPTH	6 m
SOTR (Standard Oxygen Transfer Rate)	max. 2,459 kg O_2/h
TOTAL AIRFLOW	max. 19,750 Nm³/h
TOTAL AEROSTRIP® DIFFUSERS	1,082

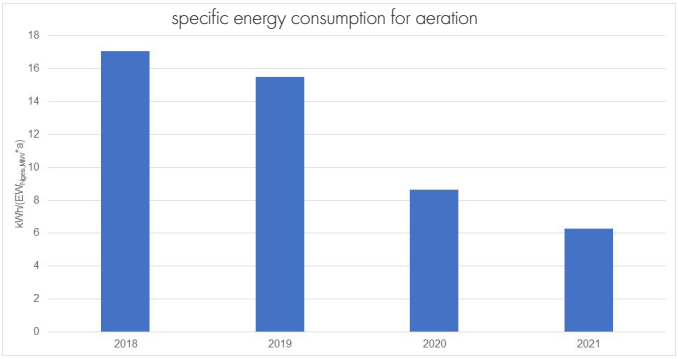
DOUBLE CONTROL RANGE WITH INTERLOCKING

Around 30 years after the implementation of the activated sludge process, the Emschergenossenschaft, as the operator of the sewage treatment plant, decided to switch to a highly efficient aeration system. The choice fell on AEROSTRIP® diffusers in combination with turbocompressors.

A special feature of this system is the „interlocked" arrangement of the strip shaped diffusers, in which the individual elements of each diffuser field are alternately supplied from the left or right via separate air pipes.

This doubles the control range of the aeration system.

Whether it is the nightly minimum or daytime peak in oxygen demand: With this design of air supply, AEROSTRIP®s work in an optimum range for every load case.



By optimizing the aeration system, energy savings of an extremely impressive 63 % could be achieved, as was shown after the modification in 2021. The investment in highly efficient AEROSTRIP® diffusers has paid off.

AEROSTRIP®

fine bubble diffusers by AQUACONSULT