

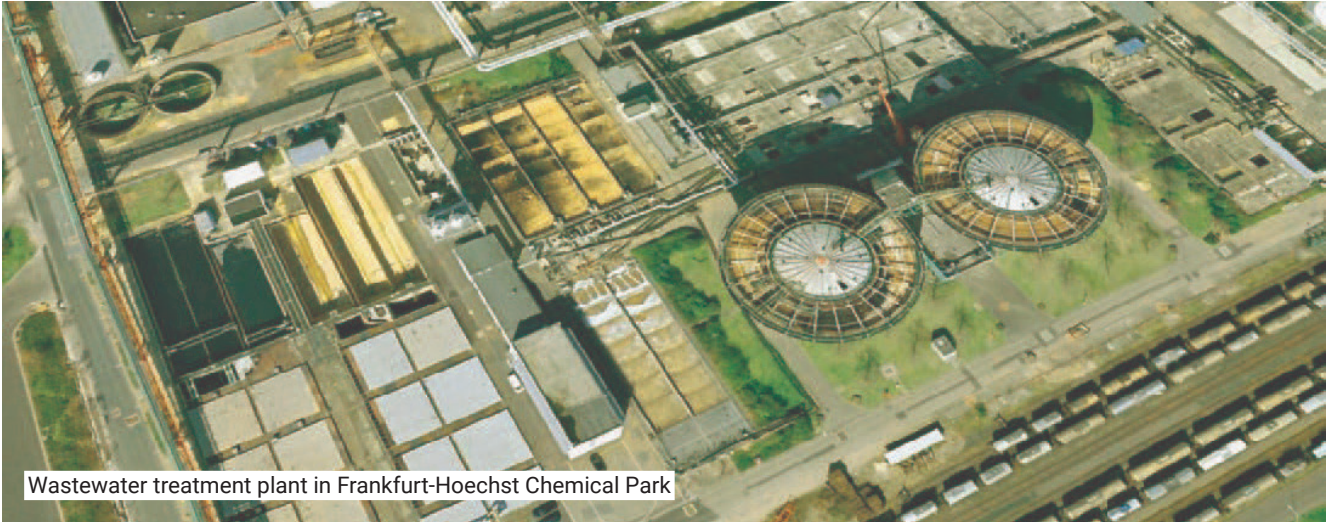


Case History



Chemical Park Frankfurt-Hoechst

OTT GROUP



Wastewater treatment plant in Frankfurt-Hoechst Chemical Park

INITIAL SITUATION

- + Second largest industrial plant with a population equivalent of 1.2 million
- + A high biological load
- + A low biological load
- + 2 stream nozzle aeration by Firma Hoechst

REASON FOR CHANGE

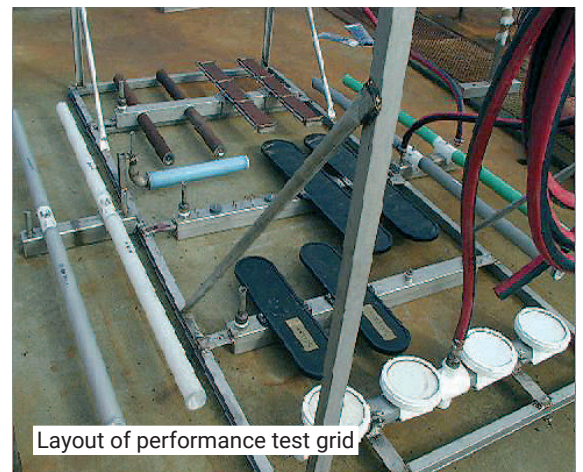
- + High shear forces from the twin stream nozzle
- + Problematic for the Biomass
- + High air requirements resulting in high energy costs
- + Find a sludge-friendly aeration solution
- + Save on energy costs

PERFORMANCE TEST OVER A 6 MONTH OPERATION TIME

- + 7 diffuser types from renowned manufacturers
- + Failure of rigid porous diffusers after a short time
- + O₂ entrainment measurement before & after the test
- + Membrane material tested before & after

RESULTS

- + OTT MAGNUM HE® had the best results in terms of:
 1. Membrane resistance
 2. Least amount of pressure increase
 3. Highest oxygen transfer efficiency
- + In 2004, aeration system was converted to 4,500 MAGNUM HE® diffusers. First membrane changeout occurred in 2012.



Layout of performance test grid

