

Off-gas monitoring

Aeration-Check

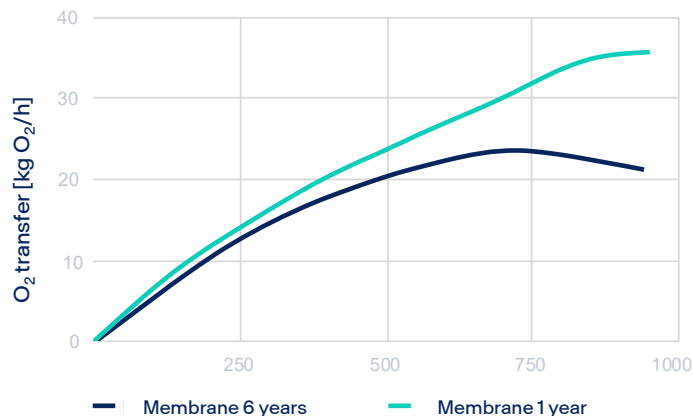


Aeration in biological systems is the largest electricity consumer in wastewater treatment plants. The efficiency of aeration systems is normally difficult to quantify. Exhaust air measurement fills this gap. We recommend the aeration check for energy optimization.

Included services

- Off-gas measurement on 1–2 aeration tanks over 4 weeks
- Notos Mini measuring device and airflow measurement
- Installation, commissioning, dismantling, maintenance, and monitoring
- Results as PDF report and raw data (CSV)
- Meeting with presentation of results and optimization recommendations

Case study membrane replacement, ARA Langmatt



Procedure

- Oxygen transfer measurement (2 lanes, 4 weeks)
- Comparison of old (5-year-old) and new (few months old) membranes
- Evaluation and recommendations

Results (see figure)

- Oxygen transfer significantly worse for old membranes at high airflow rates
- Oxygen transfer constant at high airflow rates for new membranes

Recommendations

- Membrane replacement (energy savings: ~10%)
- Limit old membrane to 700 m³
- Limit maximum airflow rate
- Repeat measurement after 5 years