

Case Study

Challenge: Handling increasing wastewater volumes and reducing disposal costs

A European aviation supplier of mechanical components for auxiliary gearboxes aimed to significantly reduce industrial wastewater costs while meeting its own environmental targets to improve the company's ecological footprint. In particular, the costly disposal of rinsing water from crack testing was the main focus.

Initial Situation

The existing evaporator used for coolant treatment had become too small. The company decided to also treat both, the rinsing water from parts cleaning and the used crack testing rinsing water with a new evaporator.

The larger system needed to handle all three wastewater streams in order to cut costs. Especially the expensive disposal of crack testing water was to be treated with the new evaporator to achieve substantial savings.

Altogether, the three wastewater streams amounted to around 1,500 m³ per year, which had to be processed by the evaporator.

Requirements

- Reduction of disposal costs
- Increase in throughput capacity
- Reduction of operating costs
- Effective treatment of crack testing water

MKR Solution

The old evaporator was replaced by the atmospheric evaporator ET 200 from MKR, complemented by an efficient peripheral system.

A belt filter with integrated tramp oil separator TB 250 removes coarse contamination and floating oils.

Preliminary laboratory trials, focused on crack testing rinse water, optimized the system for the specific requirements of the aviation client.

Project at a Glance**Project:**

Replacement of an old evaporator with a new, larger unit in order to also treat crack testing rinsing water.

System Technology:

- Tanks for the storage of wastewater, concentrate, and distillate
- Pumping station
- Belt filter with tramp oil separator
- Bag filter with pump
- Evaporator ET 200
- Tramp oil separator TB 250 for treatment of the distillate

Customer:

European supplier in the aviation sector

Contractor:

MKR Metzger GmbH
Rappenfeldstraße 4
86653 Monheim



Results

- Cost savings compared to the old system
- Significant improvement of the environmental balance
- Reduced operating costs through lower maintenance requirements
- Increased availability and process reliability
- Sustainable and robust wastewater treatment for the future

