



cleaning
systems
for liquids

Wastewater treatment in electroplating

Surface technology/electroplating

Case Study

Working with MKR toward future-oriented wastewater treatment in electroplating

A modern electroplating company with an international customer base relies on maximum process reliability, quality, and sustainability. The aim was to further develop the existing wastewater treatment system in a future-proof manner, reduce disposal costs, and consistently recycle valuable resources.

Initial situation

As part of a production expansion and new construction project, the electroplating company planned to further develop its existing wastewater treatment system. With production volumes on the rise, the focus shifted to further reducing the amount of concentrate and making even more efficient use of water and energy.

After initial successful experiences with an atmospheric evaporator, the plant concept was to be specifically expanded in order to further minimize disposal quantities and make the plant future-proof—without additional personnel or energy costs.

Requirements

- Safe reuse of the distillate in existing processes
- Significant reduction in the amount of concentrate
- Compact, low-maintenance, and reliable technology
- Implementation in the existing wastewater treatment plant
- Adaptation to the existing space conditions
- Insignificantly increased energy consumption

Solution by MKR

The electroplating wastewater is first pretreated on the process side (detoxification, destruction of complexing agents, pH adjustment) and buffered in a customer-supplied storage tank. The wastewater is then conveyed to the ET 250 atmospheric evaporator via a bag filter station. The distillate produced is passed through a foreign oil separator and collected in a distillate tank. The concentrate, which was previously filled into IBC containers, is now fed directly into the ET-MaXx. There, it undergoes further, significantly higher concentration – without significant additional energy consumption.

Concentration ET 250: approx. 15 : 1
Concentration ET-MaXx: approx. 5 : 1

Project at a glance

Project:

Reduction of the concentrate quantity from the atmospheric evaporator ET 250

System Technology:

- ET 250 evaporator
- ET-MaXx
- tanks
- Bag filter station

Customer:

Existing customer from the electroplating industry in Germany since 2022

Contractor:

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Results

- Significantly reduced disposal volumes and costs
- Virtually unchanged energy and personnel costs despite additional concentration stage
- Compact, energy-efficient, and low-maintenance overall system
- Future-oriented system concept with high process reliability
- Expected return on investment: < 1 year

The customer was able to see for themselves how effective MKR technology is through the accompanying tests – supported by close, expert assistance throughout the entire project.

