

Case Study

"Quenching, rinsing, processing – MKR brings clarity to the hardening plant"

A medium-sized company in the heat treatment industry was looking for a solution for the internal treatment of its oil-containing wastewater. The previous disposal method using external service providers was expensive, inefficient and associated with high risks in terms of compliance with legal requirements. MKR developed a customised, robust system that is optimally tailored to the requirements of the hardening plant – economical, space-saving and process-reliable.

Initial Situation

The hardening shop regularly produced large quantities of oily wastewater during quenching, cleaning and rinsing processes. Until now, this wastewater has been collected in its entirety by external waste disposal companies – at high cost, with unclear traceability and no real influence on the process. The plant management sought a solution that would enable independent, legally compliant wastewater treatment while also contributing to resource conservation.

Project at a Glance**Project:**

Internal treatment of oily wastewater in a hardening plant for safe discharge into the sewer system

System Technology:

- Buffer tank with skimmer technology
- Belt and bag filters
- ET 200 evaporator
- Tramp oil separator
- IBC filling station (concentrate)

Customer:

Medium-sized heat treatment company

Contractor:

MKR Metzger GmbH
Rappenfeldstraße 4
86653 Monheim

Requirements

- Treatment of oily wastewater from rinsing and quenching processes
- Safe discharge of treated water into the sewer system
- Compliance with local discharge limits
- Reduction of ongoing disposal and operating costs
- Robust technology for long-term use in harsh industrial environments
- Automated, low-maintenance system solution with low personnel requirements

MKR Solution

MKR developed a tailor-made solution for the complete internal treatment of wastewater. The oil-containing rinse water is first collected in a buffer tank, where foreign oils are separated using skimmer technology. This is followed by pre-filtration using belt and bag filters before the water enters the ET 200 evaporator.

The distillate produced there is secured again via a tramp oil separator and discharged into the sewer system. The remaining concentrates are collected in an IBC filling station and only rarely disposed of. The system is designed to run continuously, stably and with low maintenance, even under the difficult conditions of a hardening plant.

Results

- Significant reduction in disposal costs
- Compliance with all statutory discharge values
- High operational reliability even with heavy contamination
- Minimal personnel requirements thanks to automatic cleaning systems
- Compact design – can be integrated into existing operating structures
- Sustainable use of resources and media

