# Old emulsions/alkaline and acidic rinse water

*Metal industry*

**Case*Study***

cleaning systems for liquids

## Treatment of aqueous waste instead of costly external disposal

An international mechanical and plant engineering group had to dispose of considerable quantities of aqueous waste every month – a process that not only incurred high costs but also had a negative impact on the environment. MKR developed a cost-effective and sustainable treatment concept that enables complete internal treatment of the wastewater produced – conserving resources, efficient and reliable.

### Initial situation

The client was faced with high disposal costs, as aqueous waste had to be regularly collected and treated by external service providers. The company management was therefore looking for a solution that was both more cost-effective and more environmentally friendly – without compromising on safety and process quality.

### Requirements

- Avoidance of external disposal costs
- Treatment of different types of wastewater in a single plant:
  - Old emulsions
  - Alkaline rinse water
  - Acidic rinse water
- High operational reliability and environmental compatibility
- Simple and robust system management

### Solution by MKR

MKR developed a flexible and modular plant concept for internal wastewater treatment. Two storage tanks enable the separate collection of acidic and alkaline wastewater. The alkaline line is pretreated using a belt filter with an integrated oil separator and a bag filter, and then treated using an ET 200 evaporator. Downstream, a TB 250 tramp oil separator and an activated carbon station ensure final purification.

The acidic wastewater is first neutralized via pH adjustment and then passed through the same treatment line. This ensures that all material flows are cleaned efficiently, safely, and completely—internally, cost-effectively, and in an environmentally friendly manner.

### Project at a Glance

**Project:**
Internal wastewater treatment

**System technology:**
- 2 storage tanks for separate collection of acidic and alkaline wastewater
- pH neutralization
- Belt filter with integrated oil separator and bag filter
- ET 200 evaporator
- Tramp oil separator TB 250
- Activated carbon station

**Customer:**
Internationally active mechanical and plant engineering group

**Contractor:**
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**Results**

- Significant reduction in disposal costs
- Complete in-house treatment of all types of wastewater
- Modular and flexible plant design
- Compliance with environmental regulations
- Sustainable and economical operation
- Relief of internal processes and resources