

Case Study

Construction of a new evaporator line – a new approach to waste disposal

An established waste disposal service provider based in Austria, decided to replace its existing chemical-physical treatment system with a modern evaporator plant. The aim was to modernise the company's own wastewater treatment system and make it more efficient. MKR supplied a completely new line solution for the treatment of industrial wastewater – tailor-made, compliant with regulations and future-proof.

Initial Situation

Until now, wastewater treatment has been carried out using traditional chemical-physical methods. No plant technology was available for the switch to evaporator technology. A complete system solution had to be designed, planned and installed from scratch – including all components from media handling to discharge into the sewer system.

Requirements

- Treatment of alkaline water and waste emulsions from metal processing
- Complete reconstruction of the plant technology for an evaporator line
- Safe discharge of the distillate in accordance with official regulations
- System integration for flexible feeding (IBC, suction truck)
- Automated pH control and discharge monitoring
- Discharge of the distillate in accordance with legal requirements

MKR Solution

After extensive consultations and laboratory analyses, MKR developed a customised plant concept that was precisely tailored to the companies requirements. The plant comprises:

- Receipt of liquid waste from IBC containers and by vacuum truck
- pH adjustment for pre-treatment of acidic/alkaline media
- Filtration and tramp oil separation for the removal of impurities
- Distillation in the evaporator to separate water and concentrates
- Light phase separator to ensure oil separation
- Measurement and control technology for pH and temperature monitoring prior to discharge

The purified distillate is discharged directly into the sewer system if all parameters are met. Automatic pH readjustment takes place if necessary.

Project at a Glance

Project:

Complete evaporator line for treating industrial wastewater – efficient, safe and compliant with regulations.

System Technology

- IBC filling station
- pH adjustment with container
- Filtration
- Tramp oil separator
- ET 250 evaporator
- Light phase separator
- Measuring and control technology for pH and temperature monitoring

Customer:

established waste disposal service provider based in Austria

Contractor:

MKR Metzger GmbH
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Results

- Complete system setup from a single source by MKR
- Efficient treatment of industrial wastewater
- Legally compliant discharge in accordance with official regulations
- High flexibility thanks to variable acceptance systems (IBC, suction trucks)
- Automated process control for stable discharge values
- Future-proof alternative to chemical-physical treatment

