



cleaning
systems
for liquids

Rinsing water from parts cleaning

Surface technology/parts cleaning

Case Study

A new approach to parts cleaning: MKR increases the service life of the washing bath by replacing the system

In the existing production line of a mechanical engineering company for special and process equipment, workpieces undergo parts cleaning after the hardening process. During this process, residues from hardening oil mainly enter the cleaning system. The parts cleaning system used to date is reaching its limits: due to the constantly increasing contamination of the washing bath, it has to be completely replaced on a regular basis, which not only causes high operating costs but also unnecessarily high resource consumption.

Initial situation

Workpieces are cleaned after the hardening process to remove residues of hardening oils, dirt particles, and metal abrasion. However, due to intensive use, hardening oil constantly entered the wash bath, causing its quality to deteriorate rapidly.

After just a few weeks, oil films and deposits formed, which led to reduced cleaning performance and increased maintenance costs. The washing bath therefore had to be completely replaced regularly—about every four weeks. These frequent water changes not only caused high disposal costs, but also led to production interruptions and additional chemical consumption.

Requirements

- Replacement of the existing parts cleaning system with a more efficient solution
- Significant extension of the service life of the wash bath (6 months)
- Reduction of process costs
- Ensuring more sustainable and resource-efficient operation

MKR Solution

To optimize the cleaning process, the existing system was supplemented with an MKR UC 1 ultrafiltration system for bypass maintenance. The bypass solution ensures that the washing bath is continuously freed of hardening oil and other contaminants without interrupting the cleaning process itself.

Project at a glance

Project:

Replacement of the existing parts cleaning system to extend the service life of the washing bath

System Technology:

- UC 1 ultrafiltration system

Customer:

Mechanical engineering company for special and process plants

Contractor:

MKR Metzger GmbH
Rappenfeldstraße 4
86653 Monheim

Contact person sales:

Marcus Rudolf
Marcus.rudolf@mkr-metzger.de

Results

- Service life of the washing bath significantly extended
- The cleaning quality remains consistently high
- Operating costs and consumption of fresh water and chemicals significantly reduced

