MTM Pickling System for Steel Tools for Aluminum Processing

Otto Fuchs KG in Meinerzhagen is one of the world's leading suppliers in the aluminum vehicle construction field.

An important procedural step in tool care is pickling of the high quality steel tools for aluminum.

Aluminum is a special metal, because of its chemical composition. In its normal state, i.e., at room temperature, it has a thin aluminum oxide layer. The metal's reactive properties are the cause - it simply oxidizes very easily in the air.

It is also an amphoteric metal that easily dissolves at very high and very low pH values.

This property is used in aluminum pickling processes. Aluminum is treated in acids < pH 4.5 and alkaline solutions > pH 9.5.

MTM's Technology

In pickling systems, concentrated NaOH is often used to remove aluminum residues and oxides from steel tools.

MTM offers special solutions for this field. That's why Otto Fuchs KG selected MTM as its partner.

In 2004, Otto Fuchs KG decided to build a new extrusion press line. The required pickling system was desidgnet und manufactured with MTM GmbH.

Pickling system's construction

The central cleaning system is located off the new extrusion press line. It consists of two adjoining treatment basins for pickling and rinsing.

Using the factory crane, the tools, which weigh tons, are deposited from above in the respective treatment basin of the cleaning system (top-loading).

Special uptake euqipment was built, so the tools would be properly handled in the cleaning system.

Then, with a closed lid and an integrated suction device, the cleaning process runs fully automated.

The pump station with a fittings group, as well as the supply and disposal system, is set up in the floor below the extrusion press line. The liquid tanks hold a total of about 12,000 l of pickling and rinsing medium.

Special features

Other specialities of the technology developed by MTM and Otto Fuchs KG are various washing programs with selection of the procedure parameters for the pickling and rinsing process.

The cleaning can be run with variations using a process visualization that provides the system operator with precise information on the system's state at the control display.

Since March 2004, the pickling system has been running to the client's full satisfaction!