

Liquid analysis as part of surface treatment

Hug Oberflächentechnik AG relies on the Teqwave T



The core business of Hug Oberflächentechnik AG includes pickling, electropolishing and passivating stainless steel. The company has more than 40 years of experience in stainless steel processing. The company motto "Stainless steel surfaces from dull to glossy" roughly describes the production processes, which have been continuously optimized over the years. The surface treatments have been designed for a wide variety of products, from simple parts to high-quality products for medicinal technology, the pharmaceutical industry and sterile technology.

"The Teqwave T from Endress+Hauser fulfilled each and every one of our expectations with respect to functionality, performance and technical design."

Marcel Hug
Managing Director
Hug Oberflächentechnik AG
Wolfwil, Switzerland

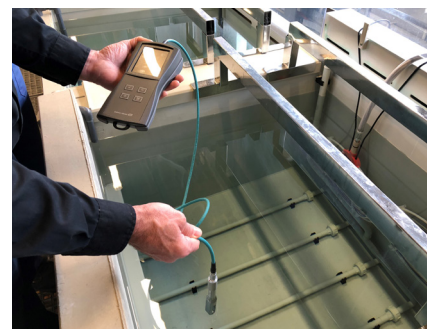


The team at Hug Oberflächentechnik AG

Hug Oberflächentechnik AG uses the Teqwave T as a new, versatile solution for monitoring its passivation and degreasing baths. The Teqwave uses special sound waves to create an acoustic "fingerprint" of the high-quality concentration solutions. This allows it to take very precise measurements of the specific concentration and density that the liquid has during the treatment process.

The result

- To ensure absolute process quality, the Teqwave measures in real time and the treatment baths can be readjusted at any time based on this measurement.
- Now, all employees at Hug Oberflächentechnik AG can use the Teqwave easily and efficiently. The result: the guarantee of consistent measurements – no matter which employee is using the device.



Measuring the concentration in the passivation bath using the Teqwave T

- The automatic documentation practically eliminates the risk of errors that go along with manual record-keeping of the measured concentration values.

The challenge

The old method involved indexing the concentration in the baths each day using an aerometer, also known as a plummet or spindle. This process included documenting the concentration values, which are crucial in achieving the desired process stability. The previous measuring and documentation methods were very time-consuming and could only be done by one specialist. Both the manual reading and documentation steps were prone to errors.



The portable Teqwave T

Our solution

Hug Oberflächentechnik AG was convinced by the Teqwave T from Endress+Hauser and its smart, highly versatile solution for mobile concentration measurement. It only takes one measuring device to monitor concentration values at numerous measuring points. As a result, product quality can be maximized at minimum operational expenditure. The mobile transmitter of the Teqwave T can operate for up to 8 hours without any external power supply. Thanks to its customizable app design and preconfigured measuring points, it can be adapted to meet specific production requirements.

Passivation solution

The passivation solution being used is a high-quality product based on citric acid or nitric acid. It is used to passivate stainless steels.

Degreasing solution

The degreasing solution is an alkaline cleaner with a complex composition. It contains substances such as surface-active substances and inhibitors, which prevent corrosion of the component surface. This type of surface cleaning is the most frequently used cleaning method in the metalworking industry.

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