

Optimizing cleaning, coating and quenching processes using inline analytical technology

Performance up, costs down

The cleaning, coating and hardening of industrial components and surfaces is a critical process step, which affects the quality of the final product. Using inline analytical technology, the processes can be monitored continuously and in real-time, for example, in degreasing, preservative or quenching baths, to comply with the increasing demands on process safety and efficiency. The LiquiSonic[®] sensors from SensoTech are installed into the baths or pipes of any size. The sensors measure continuously and directly in the process the concentration of, for example, cleaning, anti-corrosive or quenching agents. This makes an immediate and exact replenishment possible to ensure an optimum process performance and product quality. Furthermore, costs savings can be realized by avoiding an excessive consumption of raw materials resulting from overdosing, and by avoiding failed productions due to insufficient re-dosing. In addition to the concentration measurement, the LiquiSonic[®] sensors determine the contamination degree in cleaning baths. This enables the efficient control of bath changes, optimizing the component cleanliness while saving resources.

The LiquiSonic[®] technology is based on sonic velocity measurement, providing accurate and every second updated measurement results. Moreover, sonic velocity measurement devices are particularly robust and continuously provide stable results. The sensor design requires neither moving parts nor seals or "windows" to the process, so the sensors are completely maintenance-free. The measurement is inline and the real-time information is available online for PCs and process control systems. In the LiquiSonic[®] controller the measurement values are displayed and stored completely. The comprehensive documentation is as direct proof of compliance with the quality related parameters bath concentration and bath temperature. The possible trend view provides a quick overview of the process flow. Via various interfaces, the controller can be integrated into the corporate network or in controls.



As the pioneer and leading provider of analytical technology for online bath monitoring, SensoTech has given first impetus to optimize the bath preparation and maintenance by inline measurement systems, making the processes more safe, efficient and reliable. The LiquiSonic[®] technology is successfully used in various industries such as automotive and aerospace, electronics, optics and many more. With over 25 years of experience, extensive technical know-how and innovative solutions, SensoTech is the expert in the field of online bath analysis.

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SensoTech:

For more than 25 years SensoTech has been focused on the development, manufacturing and sales of inline analysis systems for process liquids. With worldwide installed, highly precise and innovative measuring systems for monitoring of concentrations, compositions and changes of chemicals as well as properties directly in the process, SensoTech has significantly contributed to the enhancement of the state of the art. In addition to the measurement of concentration and density, the phase interface detection as well as the monitoring of chemical reactions like polymerization and crystallization are typical applications. SensoTech inline analyzers set standards in the technological and qualitative valence, user friendliness and reproducibility of process values. Special calculation methods and sophisticated sensor technologies enable reliable and precise measuring results even under the most difficult process conditions. The knowledge and the experiences of the highly motivated and committed SensoTech staff are the result of many different applications supported by well-known customers from the chemical and pharmaceutical industry, food technology, semiconductor technology, automotive and metal industry as well as many other industries. In addition, these experiences also open up unimagined solution possibilities for new measuring challenges.

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