Initial situation:

The targeted adjustment of the optimum concentrations of free acid fractions and metals in industrial steel pickling baths is of great importance for a consistently high product quality and plant productivity. With manual concentration monitoring, this is only possible to a limited extent because of the personnel and material expenditure. The BFI has developed online measuring technology "DynAcid®" for continuous concentration monitoring in pickling baths.

Objectives:

- Continuous information on acid and metal salt concentration
- Automated pickling bath control
- Optimized pickling bath composition for a consistently high pickling result
- Increase product quality and productivity
- Saves time and cost-intensive chemical analysis

Solution:

- Determination of concentration on the basis of a physico-mathematical model
- Robust, expandable measurement solution
- Available for HCl and H_2SO_4 pickling solutions and as prototype for acid mixtures HNO_3-HF metals, HCl-Fe^{2+}-Fe^{3+} as well as zinc containing acid process bathes (H_2SO_4-Zn-Fe and HNO_3-H_2SO_4-Zn)
- Innovative process control of pickling lines, automated acid dosing

Our portfolio:

- Presentation of the applicability of the measuring system in operational tests
- Adjustment of the calibration of the characteristic field to operational conditions
- Support during planning and realization of the installation of the measuring system
- Continuous service of the installed measuring system – e.g. half or quarterly

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