

ELOTHERM

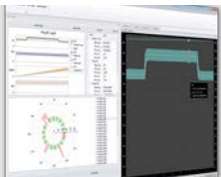
SMS group

EloConnect

The future of induction



EloProcess
EloFresh
EloMind



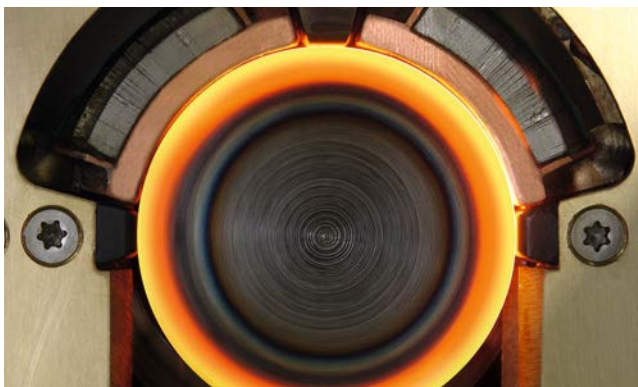
QUALITY CONTROL IN INDUCTION HARDENING

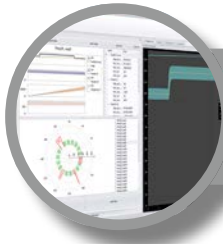
Induction hardening is known for its high level of repeatability. However, even here the quality can be affected by a number of disturbance variables.

In addition to the geometry, alloy and heat treatment/processing history of the workpiece, these primarily consist of the heat treatment parameters during hardening.

Consistent quality control of all components of the induction hardening process stabilises repeatability, prevents downtime, and as a result increases the productivity of the system significantly.

SMS Elotherm has developed the EloConnect modular system for the implementation of this quality control and data processing. EloConnect includes three new processes for data collection/processing and for influencing the controlled variables: EloProcess, EloFresh and EloMind.





EloProcess

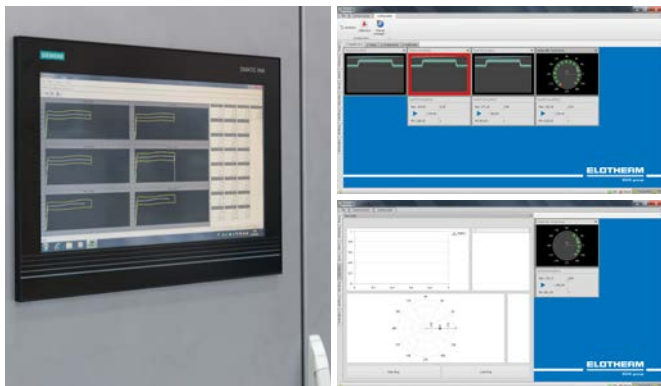
Quality Management

The inductor, as a tool, crucially determines the geometry of the hardening zone during heating. Even minor deviations can have a considerable impact on product quality. In order to record and evaluate these deviations, SMS Elotherm has developed the precise online quality control process EloProcess.

In a two-stage process, both the power at the inductor without the workpiece and during hardening with the workpiece is determined. EloProcess thereby ensures stable product quality, fewer rejects and long-term error analysis.

Advantages of EloProcess

- Online quality control and workpiece inspection
- Finishing of workpieces despite process interruption
- Monitoring of the distance between workpiece and inductor
- Monitoring of the inductor position and clamping



EloFresh

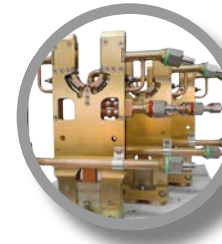
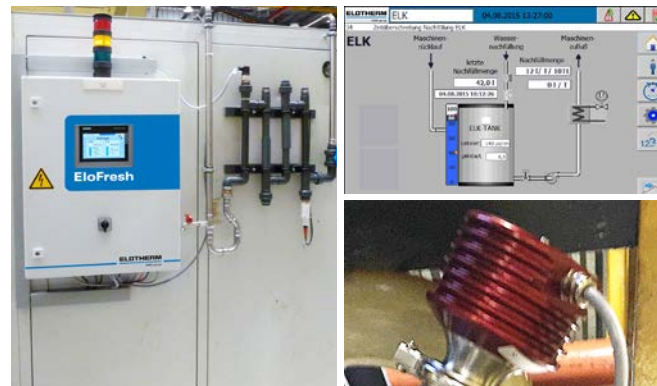
Process Media Management

EloFresh monitors two types of cooling water media using multiple sensors: the circuit for cooling electrical components and the circuit for quenching the workpiece. Depending on the values measured, the controlled variables are manipulated during operation so as to ensure optimal conditions at all times.

This high-precision control of the cooling water composition ensures a longer service life of the inductors and minimises the amount of maintenance required – the right step towards lowering costs and ensuring a fast return on investment.

Advantages of EloFresh

- Longer service life of the inductors
- Enables faster reaction in the event of water problems
- Long-term damage is avoided
- Monitoring of the water consumption
- Notification in the event of inductor leakage
- Existing systems can be retrofitted



EloMind

Inductor Management System

The innovative inductor management system EloMind from SMS Elotherm is the benchmark for the integration of induction hardening technology into your digital system landscape.

Based on state-of-the-art RFID technology, EloMind provides a range of functions that increase your process reliability and the service life of the inductors in the long term.

Advantages of EloMind

- Foolproof inductor recognition
- Access to all service life data
- History and prognoses
- Your direct line to Elotherm Service



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