FOERSTER

MAGNATEST D-HZP

Magneto-inductive testing of semi-finished products for material properties

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Fully automatic identification checking with the MAGNATEST D-HZP. The MAGNATEST D-HZP is designed for fully automated, nondestructive magneto-inductive testing of semi-finished products such as tubes, wires, billets, and bars. It reliably detects differences in magnetic and electrical material properties, enabling material mix-up testing as well as verification of heat treatment condition and other material characteristics directly in the production process.

Testing is performed in single-coil absolute mode without the need for a reference coil. An impressed excitation current ensures a constant magnetic field strength, while high excitation currents provide high sensitivity to even small differences in material properties. Multi-frequency testing further increases test reliability and allows the system to be adapted to different testing requirements.

Designed for seamless production-line integration, the MAGNATEST D-HZP provides eight digital inputs and outputs as well as Ethernet connectivity for remote access and data transfer to higher-level systems. Test piece statistics, histogram displays, and test data export support transparent documentation and evaluation of the results.

A wide range of robust test coils enables the system to be precisely adapted to different product geometries and diameters. Standard sensors cover material diameters from 5 to 200 mm, with customized solutions available for larger dimensions.

YOUR ADVANTAGES AT A GLANCE

Reliable material identification: Detect material mix-ups and differences in heat treatment or other material properties directly in the production line.

Single-coil absolute mode: Perform testing without an additional reference coil.

High test sensitivity: Use high excitation currents and targeted hysteresis control to reliably detect even small differences in magnetic material properties.

Increased test reliability: Combine different test frequencies and excitation settings for reliable evaluation of different material properties.

Reliable evaluation along the semi-finished product: Reduce outliers through median-based evaluation and reliably detect local variations.

Automatic sorting limits: Generate statistically assured sorting limits based on the available calibration parts.

Trend monitoring: Track changes in the sorting ranges during ongoing testing to identify shifts in the process.

Full process integration: Integrate the system into automated production lines via eight digital inputs and outputs, Ethernet connectivity, and remote access.

Flexible sensor selection: Choose from a wide range of test coils for semi-finished products from 5 to 200 mm, with customized solutions available for larger dimensions.

TECHNICAL INFORMATION

TEST FREQUENCY:	2 Hz to 128 kHz in 17 steps
INPUTS AND OUTPUTS TO THE LINE:	8
TRIGGER:	Manual, external
SORTING THRESHOLDS:	Circle, ellipse, rectangle, box regression
SORTING TEST:	Group analysis
EXCITATION:	Single-frequency, multi-frequency
STANDARD MATERIAL DIAMETER:	5 to 200 mm
LARGER DIMENSIONS:	Customized sensors available
LINE INTEGRATION:	Digital I/Os and Ethernet
REMOTE ACCESS:	Available via Ethernet

ACCESSORIES

MAGNATEST SENSORS
Sensors for magnetic induction testing of metallic materials in the automotive and aviation sectors and for semi-finished products

FOERSTER

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