FOERSTER

CIRCOGRAPH DA

Contactless eddy current inspection for longitudinal surface defects on bright products

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Maximum defect detection. Reliable quality at production speed. The CIRCOGRAPH DA is a high-performance eddy current inspection system for the non-destructive detection of longitudinal surface defects on bright products such as tubes, bars, wire and profiles. Using rotating sensors, it reliably detects even the smallest surface-breaking defects while maintaining high inspection performance at production speed.

State-of-the-art digital electronics, signal digitization directly at the sensor and a sophisticated system architecture ensure outstanding reproducibility and maximum sensitivity while minimizing susceptibility to external interference.

The intuitive DEFECTOTEST DA ECT software supports fast setup, safe operation and comprehensive visualization of inspection data, providing operators with all relevant information at a glance.

Its modular design allows the CIRCOGRAPH DA to grow with changing inspection requirements. Additional sensor systems such as DEFECTOMAT DA can be integrated to extend the inspection scope, while advanced C-Scan visualization displays both the longitudinal and circumferential position of defects. This not only simplifies defect evaluation but also helps identify process-related defect patterns and optimize production quality.

YOUR ADVANTAGES AT A GLANCE

Maximum detection sensitivity: Reliably detects even the smallest longitudinal surface defects on bright products.

Superior signal quality: Signal digitization directly at the sensor minimizes electromagnetic interference and delivers outstanding reproducibility.

Flexible multi-channel inspection: Up to 256 real-time measurement channels without multiplexing ensure maximum inspection performance.

Wide frequency range: Continuously adjustable frequencies from 30 kHz to 1 MHz enable application-specific optimization.

Dynamic speed compensation: The patented digital speed shift filter automatically adapts to changing production speeds.

Enhanced process transparency: C-Scan visualization displays defect position and propagation for faster evaluation and optimized production processes.

Industry 4.0 ready: Modular Ethernet-based architecture and configurable interfaces enable seamless integration into modern production environments.

Future-proof modular design: Expand the system with additional FOERSTER sensor technologies such as DEFECTOMAT and replace modules quickly via plug-and-play for simplified service.

TECHNICAL INFORMATION

MEASUREMENT CHANNELS:	Up to 256 test channels in real time (without multiplexing)
EXCITATION FREQUENCIES:	30 kHz – 1 MHz (continuously adjustable in 100 Hz steps)
FILTERING PROCESS:	Digital speed shift filter: dynamic adjustment of the filter's position to the test speed
TESTING SPEED:	Up to 6 m/s
INTERFACES:	Industrial Ethernet and configurable I/O interfaces for production line integration
VISUALIZATION:	Test signal and C-Scan visualization
SENSOR MONITORING:	Broken wires, overload and automatic sensor recognition
PATENT:	The CIRCOGRAPH DA uses processes patented to Institut Dr. Foerster GmbH & Co. KG, including US 8907828 B2 "METHOD AND DEVICE FOR TESTING THE MATERIAL OF A TEST OBJECT IN A NONDESTRUCTIVE MANNER". Also protected in many other countries worldwide.

NORMS

DIN EN ISO 15549: Describes the general bases of eddy current testing.

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Headquarters
Institut Dr. Foerster GmbH & Co. KG

In Laisen 70
72766 Reutlingen
Germany

+49 7121 140 0
info@foerstergroup.com

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