FOERSTER

SENSOR SYSTEM S

For eddy current testing of weld seams on metal tubes

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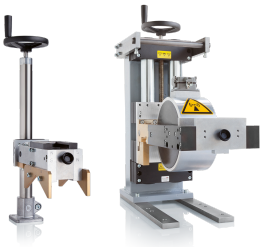

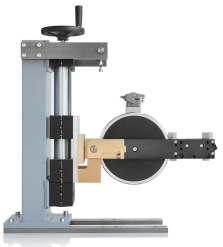

Precise eddy current testing directly in the weld zone. Sensor Systems S are designed for nondestructive eddy current testing of the weld zone of metal tubes. Using LMD segment coils, they inspect round and square tubes directly in the production line – for example, immediately after the tube welding machine and at any welding speed.

Different versions with and without DC field magnetization are available for different materials and testing requirements. This allows non-ferromagnetic and ferromagnetic materials as well as materials with low ferritic content to be inspected. Concave LMD segment coils are used for round tubes, while flat segment coils enable the inspection of square tubes.

Depending on the application, the sensor system can be positioned contactlessly above the test material or guided along the material surface using guide rollers. Height-adjustable versions allow precise adjustment of the distance between the segment coil and the material surface, supporting consistently high test sensitivity under industrial production conditions.

With SH 180, LSP 180 and LSM 180 as well as different segment coil carriages, various configurations are available to match the specific testing task. The standard diameter range extends from 10 to 180 mm, while special versions of the LSM 180 are available for diameters up to 500 mm.

YOUR ADVANTAGES AT A GLANCE

Wide range of materials: For non-ferromagnetic and ferromagnetic materials as well as materials with low ferritic content

Targeted weld inspection: Concave LMD segment coils for round tubes and flat LMD segment coils for square tubes

Application-specific magnetization: Versions without magnetization as well as with permanent or DC field magnetization; localized longitudinal magnetization with LSP 180 and LSM 180

Compact and adaptable: Short design, easily replaceable segment coils and robust height adjustment for integration into production lines

Protected test coil: Protective plates or replaceable pole shoes and an upward-pivoting coil holder protect the system during production

Wide diameter range: 10 to 180 mm as standard; LSM 180 available in a special version for diameters up to 500 mm

TECHNICAL INFORMATION

TEST MATERIAL:	Non-ferromagnetic and ferromagnetic materials as well as materials with low ferritic content
TEST MATERIAL DIAMETER:	10 – 180 mm; LSM 180 special version up to 500 mm
TUBE GEOMETRIES:	Round and square tubes
SENSOR SYSTEM SH 180:	— Non-ferromagnetic materials — without magnetization — with or without height adjustment
SENSOR SYSTEM LSP 180:	— Non-ferromagnetic and slightly ferromagnetic materials — permanent magnetization — with or without height adjustment
SENSOR SYSTEM LSM 180:	— Non-ferromagnetic and ferromagnetic materials — DC field magnetization — with or without height adjustment
SEGMENT COIL CARRIAGE:	— Non-ferromagnetic materials — 10 – 180 mm — with guide rollers
SEGMENT COIL CARRIAGE PM:	— Non-ferromagnetic and slightly ferromagnetic materials — 10 – 115 mm — permanent magnetization and guide rollers
MAX. SEGMENT COIL SURFACE TEMPERATURE:	110 °C*

*For applications in welding lines, customer-provided air cooling of the weld area may be required to ensure that the maximum permissible segment coil surface temperature is not exceeded

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