SONEMAT

Water-cooled EMAT - 1000˚C HWS2235-WCT

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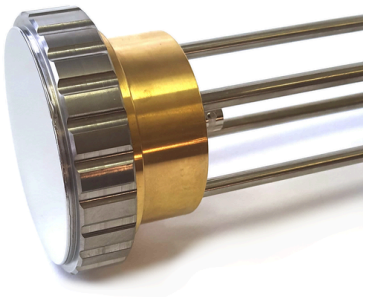
Product Features

- No couplants or surface preparation
- High temperature operation, works at temperatures up to 1000°C with water-cooling
- Generates and detects at 3-5 MHz centre frequency
- Compatible with all Sonemat's all bulk wave electronics

Water cooled version of Sonemat's popular HWS2225-GC shear wave EMAT, for use in inspection of hot surfaces up to 1000°C. The water-cooling mechanism allows the internal components to be kept cool, while maintaining a good signal-to-noise on most metallic/magnetic samples.

This EMAT generates and receives radially polarised bulk shear waves with operation in pulse-echo mode. It is designed for inspection of high temperature components either for continuous exposure via condition monitoring, portable inspection to monitor multiple locations or for high temperature scanning.



Applications

Energy Generation | Nuclear | Tanks and vessels | Pipelines | Oil and Gas

The HWS2235-WCT is suitable for a range of industrial applications, in non-destructive testing (NDT) in sectors such as energy generation, petrochemical and oil & gas. Its broadband frequency response and adaptability make it perfect for material characterization, flaw detection, and thickness measurement.

- Thickness gauging (± 0.1mm)
- Corrosion monitoring
- Acoustic birefringence
- Crystallographic texture
- Boiler tube inspection
- Defect detection

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Specifications

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Feature	Description
Probe Configuration	Pulse-Echo, can be used in pitch-catch with two probes
EMAT Working Principle	Lorentz force mechanism Magnetostrictive effect (if sample is magnetostrictive)
Weight	1.4kg
Dimensions	300mm length x 84mm diameter (max. at front face)
Operating Temp.	0 - 1000 °C
Water-Cooling	Water flow rate at a min. of 1.5 litres/min of water at 25 °C max.
Working Voltage	300 - 1000V pulse
Excitation Frequency	Broadband (spike) optimised for peak energy around 3-5 MHz
Wear Face	Metallic foil (as standard, composite can be used)
Connections	BNC socket (50Ω)
Magnet Type	Neodymium Iron Boride (NIB); field normal to sample
Recommended Electronics (Driver and Amplifier)	Sonemat's GS2020, PR5000 or PR5020 Contact us for more information

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