

DEFECTOARRAY sensor

Segmented encircling coil



Patented sensor technology for clearance compensation

With its newly developed segmented encircling coil, FOERSTER offers cutting-edge sensor technology for significantly better non-destructive materials testing. Designed in several segments, each with its own clearance coil, the patented DEFECTOARRAY sensor reliably detects defects, independent of whether the material is guided centrally or eccentrically. The innovative clearance compensation means that non-critical defects arising from eccentric material guidance do not cause the material to be rejected. This results in higher output of the inspected material.

Precise recording of defect positions

Highly sensitive multi-channel inspection enables very precise defect location on tubes or bars. The defect position is recorded not only in the longitudinal direction, as before, but now also in the circumferential. This means that, post-inspection, you can quickly locate the defects in the material – as well as draw valuable conclusions about the production process.

Eddy current technology of tomorrow

The improved sensor architecture consists of eight segments in multi-differential arrangement with one clearance winding per segment. Complex in its design, the entire sensor technology is contained within the familiar FOERSTER sizes I, II and III. Externally distinguishable only by its two connection ports, the new DEFECTOARRAY sensors fit into all existing holders and magnetizing yokes.

The benefits

- **Significantly higher reproducibility of test results** thanks to innovative clearance compensation. This automatically leads to higher output of inspected material.
- **Clearance compensation reduces negative influences** brought by dimensional variations and eccentricity.
- **Exact defect locations**, specified in both longitudinal and circumferential position.
- **Reduced risk of mechanical damage to test material and/or sensor:** the clearance compensation permits a bigger lift-off between material and coil.
- **Higher sensitivity compared to conventional encircling coils** enables reliable detection of the smallest defects on tubes and rods with larger diameters (improved interaction volume).
- **Coil and nozzle changeover only necessary in 3 to 5 mm increments**, depending on material diameter.
- **Compatible with all existing mounts** and magnetizing yokes from FOERSTER.
- **Available in three sizes:** Size I (nominal diameter 18-45 mm), II (nominal diameter 46-100 mm) and III (nominal diameter 104-180 mm).

For comprehensive advice on how DEFECTOARRAY sensors can be used specifically for your application, please contact us.

foerstergroup.com



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