



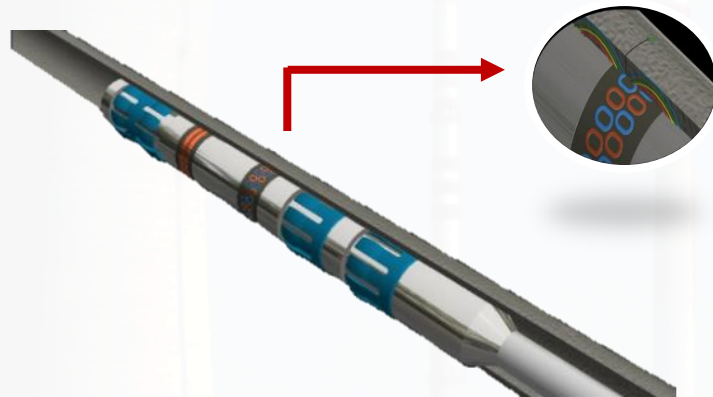
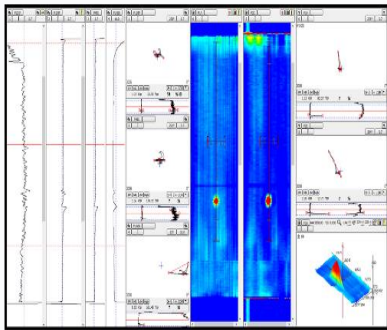
# ECA – EDDY CURRENT ARRAY TUBE TESTING



ECA can efficiently detect circumferential cracks at tube support plates and tube-sheets, something conventional bobbin probes notoriously fail at. It can also detect and size typical defects in any orientation such as wear, corrosion, and micro pitting, as well as detect Stress Corrosion Cracking (SCC). The probe's unique multichannel design offers the same performance as a rotating probe, but at bobbin probe speeds, all in a single pass.

## Method of Inspection

Eddy Current array groups several individual coils inside a probe, where they are excited in such a way as to eliminate the interference from mutual inductance between them. This is a process referred to as multiplexing, which enables the coils to work together to thoroughly sweep the interior surface of each tube. The ingenious coil configuration in an ECA tubing probe allows eddy currents to flow perpendicular to circumferential defects, making them much easier to isolate and characterize. By using advanced analysis software the additional data from the ECA probe can be displayed as C-scans.



## Inspection Capabilities

- In the region of 400 to 600 tubes inspected per 12-hour shift.
- Quantifying the circumferential extent of crack defects.
- Accurately locating and characterizing crack defects in the vicinity of the roll transition.
- Unlike rotating probes, the solution can be used for full-length tube examinations.
- C-scans give clients without extensive eddy current testing data analysis experience the necessary confidence about their inspection results.

