

CXB4 Condensate Heat Exchanger Inspection

Inspection Challenges

When tracking numerous complex indications at multiple locations in condensate Heat Exchangers (HX), challenges arise when the type and severity of the degradation is unknown due to the limited capabilities of certain bobbin probe technologies.

In this particular example, a customer was faced with several questions to answer about their component. What is the degradation and root cause? Have the historical bobbin results been adequate for future use of the HX? Can we provide qualifying information in order to extend the life of the component?

Recommended Solution

Zetec offered a solution to qualify the historical bobbin indications in this component. Zetec recommended using a CXB4 probe coupled with the Velocity software and MIZ-200 Eddy Current instrument.

Velocity software combined with the CXB4 probe provided two separate (axial / circumferential) cscan/waterfalls. Each display optimized the analysis process by providing the user the ability to differentiate between axial and circumferentially oriented indications. This technology is unique in the industry and delivers a simplified approach to determining the orientation of indications.

CXB4 Probe

Array and Bobbin technology combined

- Ability to detect and differentiate between Axial, Circumferential and Volumetric indications
- Fast inspection speeds with accurate, detailed results
- Ridged design for improved probe life
- Excellent detection of indications at expansion transitions and support structures



MIZ-200 Eddy Current Instrument

Fully integrated portable performance

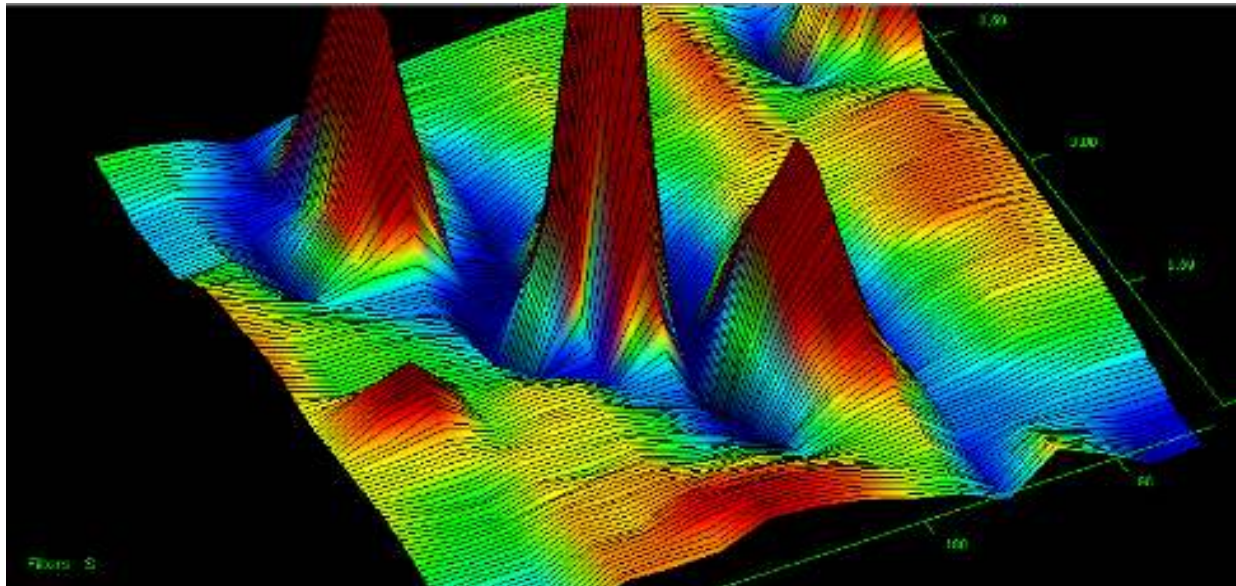
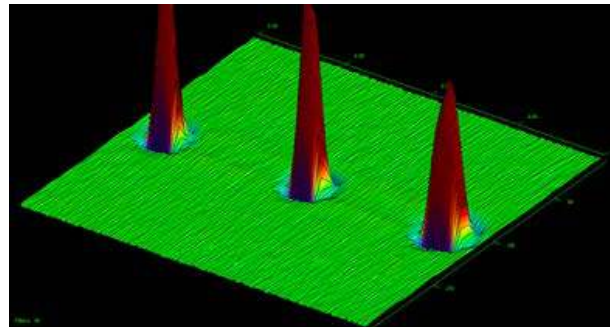
- Compact & Lightweight
- Industry-leading Signal to Noise Ratio (SNR) with fast sampling
- Sealed (IP65), A/C & battery powered



Velocity Acquisition and Analysis Software

Acquisition, Analysis and Data Management

- Auto Acquire
- Industry leading enhanced cscan presentations – Derived from software
- Tubesheet builder



Multiple wear indications at a significant bulge location

Solution Advantages

- Excellent detection of cracking regardless of orientation
- Provides Array and Bobbin inspection in a single pass
- Leading signal to noise ratio in the industry
- Remarkable cscan presentations
- High level of detection in a rapid inspection

The Zetec Advantage

Zetec is a global leader in nondestructive testing (NDT) solutions for the critical inspection needs of industries the world counts on every day—including power generation, oil and gas, transportation, heavy industry and manufacturing. By integrating design and engineering with our own manufacturing, Zetec delivers solutions that optimize productivity, safety and total cost of ownership.

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