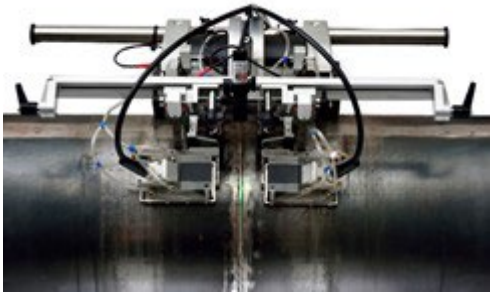
Automated Ultrasonic Testing (AUT)

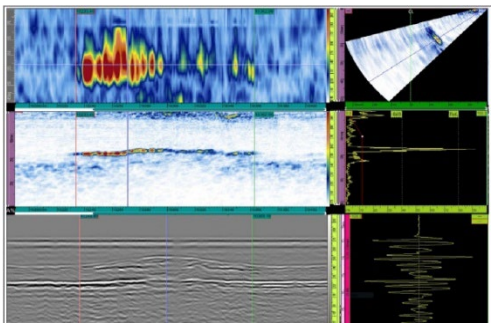
Mako Offshore offers a range of Automated Ultrasonic Testing (AUT) services including Time of Flight Diffraction (ToFD), Phased Array Ultrasonics (PAUT), corrosion mapping, and complete weld inspection. AUT of welds is accomplished by the mechanisation of a portable scanner deployed with ultrasonic probes and a sophisticated data acquisition system. AUT is widely recognized as the most accurate method of detecting and sizing weld flaws in high-production environments.

Advantages

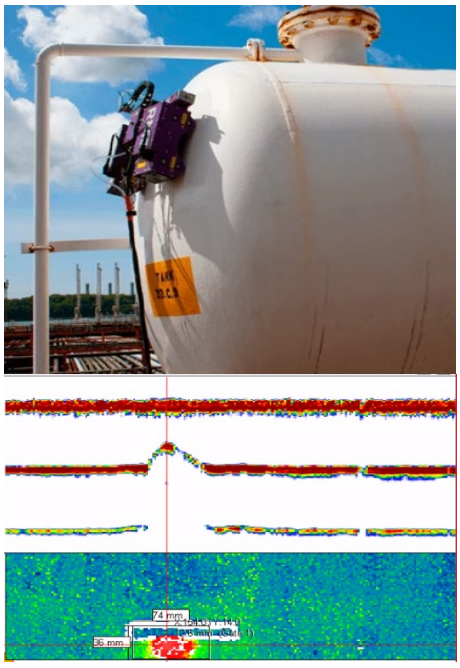
- Increased speed vs. conventional corrosion mapping
- Increased Probability of Detection (PoD)
- Increased sizing accuracy
- Enhanced defect characterization
- No radiation hazard, no chemicals
- Increased productivity
- Real-time analysis from smart output display
- Data and inspection reports electronically recorded
- Better control of welding process - lower rejection rate



Single axis weld inspection crawler.



Data collected single axis weld inspection crawler.



Dome End AUT Corrosion Mapping.

Automated systems functionality is useful when inspecting large ferromagnetic surfaces, such as pressure vessels and tanks, where the area to be inspected is out of the operator's reach. The scanner can be configured for corrosion mapping with a motorized raster arm or for weld inspection (both longitudinal and circumferential) with a probe holder rack. The scanner is controlled using an intuitive touch screen remote control.

Detection capabilities include general corrosion and erosion, microbiological induced corrosion (MIC) and hydrogen blistering (HB) with non-intrusive inspection (NII). This solution is deal for storage tanks, pressure vessels, pipelines and other critical structures susceptible to corrosion in harsh environments including oil & gas, offshore and assets at temperatures up to 200 degrees Celsius.