Galeo: Subsea Automated Ultrasonic Testing (AUT)

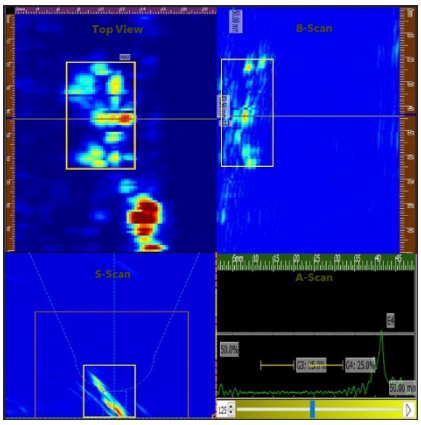
Mako Offshore offers a range of Subsea Automated Ultrasonic Testing (AUT) services including Time of Flight Diffraction (ToFD), Phased Array Ultrasonics (PAUT), corrosion mapping, and complete weld inspection. Mako's systems can be deployed by either divers or ROVs providing complete flexibility when project planning.



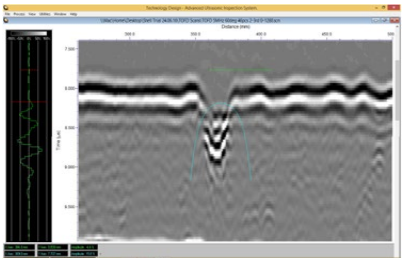
Diver AUT System

Advantages

- Diver or ROV Deployable in water up to 3,000m deep
- Inspect through 3LPP and FBE Coatings up to 4mm thick
- 1mm x 1mm scan resolution
- Magnetic and Clamshell Scanners Available
- Increased Probability of Detection (PoD)
- Increased sizing accuracy
- Enhanced defect characterization
- Inline Inspection Data Verification for subsea pipes
- Inspection of non-piggable/scrapable lines
- Real-time analysis from topside control
- Data and inspection reports electronically recorded

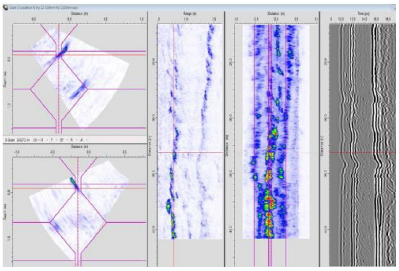


Subsea Phased Array Weld Inspection Data



Subsea ToFD Data

Automated system functionality is useful when performing inspection of subsea risers, rigid pipes and flexible pipes. The system achieves full coverage across the scan area around the complete pipe circumference providing fully recorded real time inspection data as the output. Each scanner can be configured for corrosion mapping of weld inspection using a variety of techniques to suit the application at hand. The scanner is remotely controlled from the vessel or platform which minimises the complexity of operation for the diver or ROV



Combined ToFD and PAUT Data

Detection capabilities include general corrosion and erosion, microbiological induced corrosion (MIC) and cracking. This solution is ideal for non piggable/scapable lines where spot inspection at probable damage locations can inform pipeline integrity strategy. Another ideal application is the verification of inline inspection data where understanding the exact type, size and location of an anomaly determines if, and when, an intervention will be required.