PIPELINEAUTOMATEDULTRASONICS

Oceaneering Asset Integrity Pipelines Department provides the PipeWIZARD® Phased Array system for automated ultrasonic scanning and the rapid examination of large diameter pipeline girth welds, onshore and offshore.

Oceaneering is the market leader in the introduction and utilization of Phased Array ultrasonic technology. The systems is equally suitable for both onshore and offshore purposes with results being produced in real time. Inspection cycle times are greatly reduced compared with radiography and are typically in the range of 2-3 minutes.

With Phased Array's ability to size defects in two dimensions combined with an Engineering Critical Assessment (ECA) of defect acceptability, it is possible to safely increase the size of acceptable flaws, thus reducing repair rates.

PipeWIZARD® Features

- Automated ultrasonic inspection system
- Can replace radiography – no radiation hazard, no chemicals
- Accurate defect sizing and positioning
- Characterization of defect type
- Real time data analysis
- Rapid scanning – one inspection pass only
- Cycle time typically 2 minutes
- Automatic data storage
- Examination down to 4in diameter pipe
- Specialist channels for defect characterization
- B-scans for porosity
- TOFD for improved detection
- System acts as welding process control
- ECA may be used with lower repair rates probable
- Set-up for various weld types can be recalled from computer without changing scanner. No time loss at wall thickness changes.

OCEANEERING®

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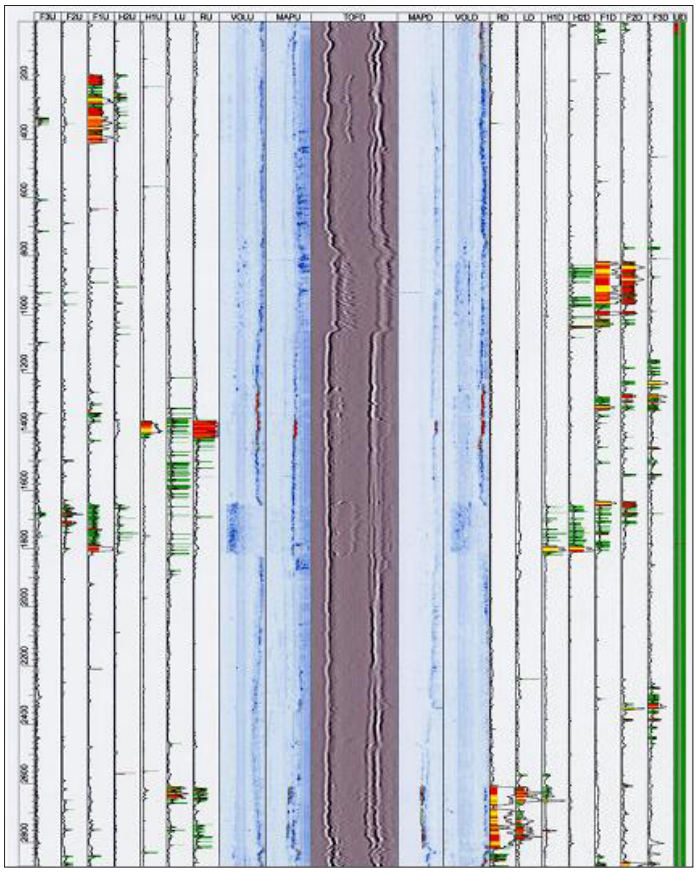
PIPELINE AUTOMATED ULTRASONICS

Inspection Parameters

Joint Type	Circumferential butt welds
Pipeline diameter	4in to 56in
Thickness	6mm to 36mm
Weld design	Automatic (CRC Evans etc.) or manual welding

Typical Defect Types

- Lack of fusion (surface or subsurface)
- Incomplete penetration
- Center-line solidification cracking
- Root undercut
- Hi-low
- Misfire
- Burn through
- Root porosity
- Cap and fill porosity



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