

## Inspecting Welds on Steel Pipes

### Challenge

In a highly volatile and competitive Market, maintenance planning and shorter outage times play a significant role in a profitable operation. The capability of inspecting welds in a shorter time, while still being able to collect reliable data needed for NDT inspectors to evaluate welds for rejection/repairs is in high demand in today's market. Most reliable tools available today are time consuming and complicated, involving long set-up procedures and highly trained technicians. The industry needs to make efficient use of its trained inspectors and a tool that will help get welds evaluated quickly, anticipating costly damages and down times.

### Solution



The Acoustocam™ by Imperium solves this challenge by providing instant, high resolution video images of subsurface indications without sacrificing quantification data. To use the system, an inspector quickly calibrates the system to the desired incident angle and scans the weld according to a simple scan plan, while real time C-scan and A-scan data is generated. The total time to setup, calibrate, and scan a 12" x 12" area is under 4 minutes. The system requires minimal training. The result is an enhanced user experience, faster turnaround time, and increased uptime. This efficient use of resources permits more comprehensive data driven inspections to be completed each day. Inspections can be monitored in person or wirelessly in real time for remote collaboration with other personnel. Data can also be downloaded and reviewed in a computer, for a more comprehensive data analysis and may also be exported to a spreadsheet application.

### Acoustocam™ i700

#### Benefits:

- ✓ Make inspector more efficient
- ✓ Reduce reliance on experts
- ✓ More repeatable, accurate data
- ✓ Consolidate multiple inspections
- ✓ Immediate setup
- ✓ Easy to understand, easy to operate
- ✓ Reduce training costs

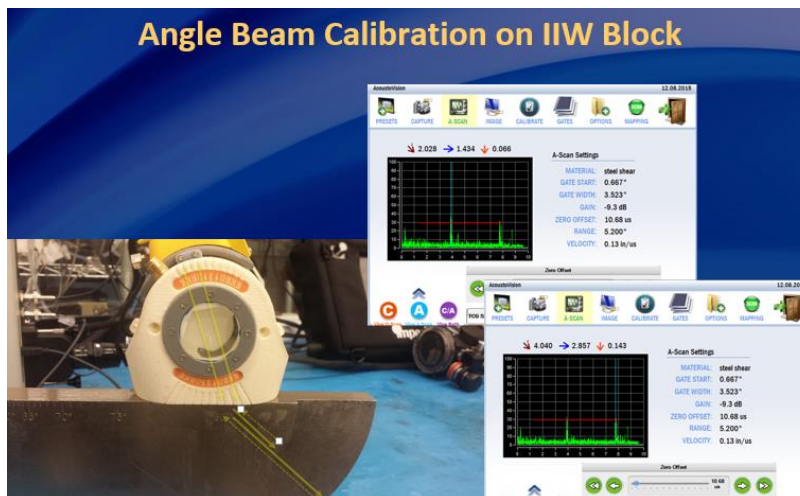
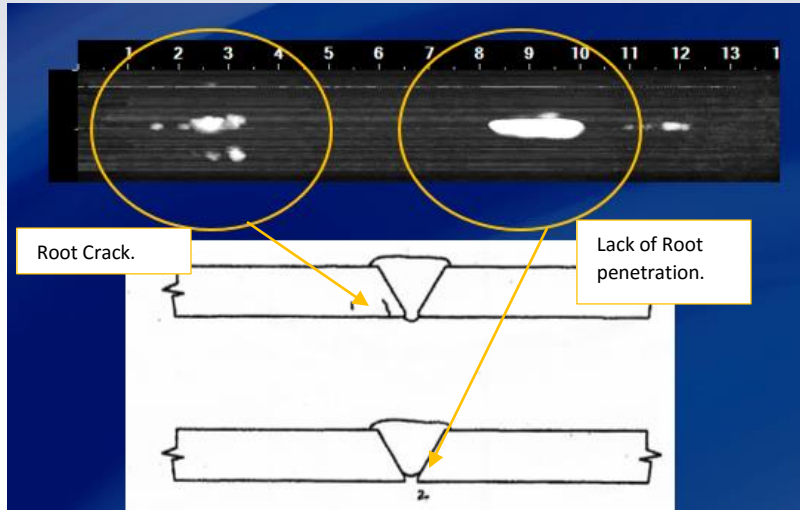
#### The Imperium Analyzer.

- Scanned area map can be downloaded and analyzed by experienced inspectors remotely.
- Data can be exported to a Spreadsheet application, with all A-Scan readings and their coordinates.
- Interactive area map, with all A-scan data.

## Acoustocam™ Results

Powered by Imperium's patented Digital Acoustic Video (DAV™) technology, the Acoustocam™ is the NDT industry's easiest and fastest portable imaging device. It captures A-Scan readings and high-resolution ultrasound C-scan images at 30 frames per second. Pictured below are results of ultrasound C-scan images, using shear wave, of a section of a Sample weld plate, with defects as seen with the mapping feature of the Acoustocam™.

### Screen Presentation.



### Acoustocam™ Features

- Faster coverage of areas – With a typical scan speed of 6"/second, a 12" x 12" area can be fully characterized in under 4 minutes.
- Reduced training costs – The training on the device is just 2 days, much less than other advanced techniques
- Rugged, battery powered design
- Compliant with ASTM E317, ASME V and AWS D1.1
- Higher Probability of Detection (POD)
- User friendly touchscreen interface
- Flat or curved surfaces
- Built in delay line ideal for near surface defects up to several inches thick
- Sub-millimeter resolution
- Wireless remote monitoring connectivity
- 100% of the data can be exported to a computer for offsite analysis
- NDT and non-NDT folks love images - No more explaining away spreadsheets, send engineers an image they can actually understand!

Visit us at [www.imperiuminc.com](http://www.imperiuminc.com)

Schedule a demo today at (301) 431-2900 or [sales@imperiuminc.com](mailto:sales@imperiuminc.com)

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