

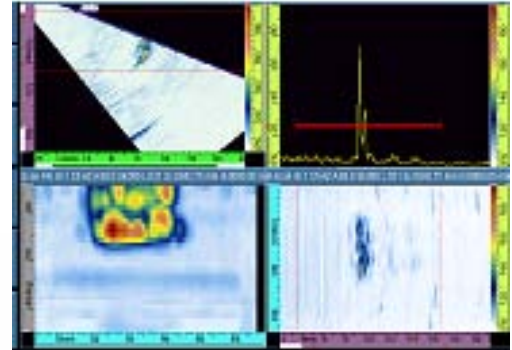


Ultrasonic Phased Array Inspection

provides faster, more accurate results

MISTRAS Group Inc., is pleased to offer Ultrasonic Phased Array inspection. Phased Array is the latest advanced Ultrasonic technology that operates by a computer controlled excitation of individual elements in a multi-element transducer. In short, Phased Array generates multiple ultrasonic signals, in nanoseconds, that produce controllable angles, focus depths and/or wide coverage from one inspection point. It has many advantages including, excellent repeatability, increased inspection speeds, more accurate results and the ability to inspect complex geometries. The versatility of the system allows for simultaneous views of different presentations such as Sectoral views, A-Scan, B-Scan and C-Scan representations. The technology also produces multiple measurements that are synchronized and cursor/gate associated, making the detection, location and characterization of defects much more reliable and exact than the results obtained with conventional shear wave inspection.

This technology has many applications across a variety of



Results showing a crack in the root of the weld.

industries including:

Petrochemical

- Corrosion mapping
- Detection of HIC and SOHIC
- Weld Inspection of pressure vessels, piping and tubing
- Vessels and piping fabricated with composite materials

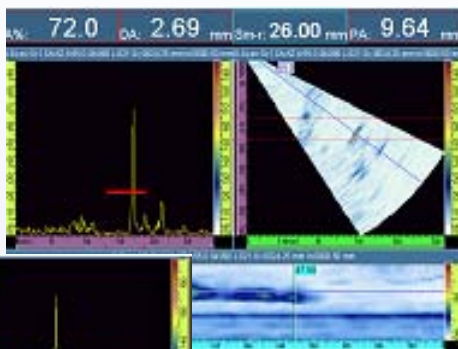
Power Generation

- Turbine blades and christmas tree designs
- Pressure vessel and piping welds
- Erosion/corrosion mapping

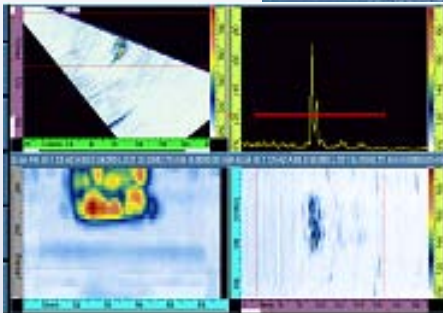
Aerospace

- Friction stir welds
- Composite panels
- Landing gear cylinders
- Titanium billets, forgings and castings

Our highly qualified automated ultrasonic engineers/technicians operate the system in both manual and automated scanning modes. The transducer can be fitted to one of our proprietary scanning systems for remote, automated pipe and vessel weld inspection or erosion corrosion surveys. Call your local advanced NDT experts at MISTRAS Services to prescribe the appropriate technology to use for your specific inspection requirements. MISTRAS Services is *Your Total NDT Solutions Provider*.



Other welding defects characterized are lack of penetration (left) and porosity (right).



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