

1.3.55. MANUAL PHASED ARRAY ULTRASONIC TECHNIQUES FOR PIPE WELD INSPECTION IN NUCLEAR POWER PLANTS

Delannoy L., GE Sensing & Inspection Technologies, Limonest, France;
Hayes P., GE Sensing & Inspection Technologies, Lewistown, USA

The Electric Power Research Institute (EPRI) is tasked with ensuring that qualified techniques for inspections are uniformly applied at their constituent utility power plants, and have instituted the Performance Demonstration Initiative (PDI) to help carry out this task. PDI is a process where a technique and technician is verified to be capable of finding and characterizing target defects with a very small margin of error.

General Electric Inspection Technologies has worked with EPRI to develop a qualified manual phased ultrasonic technique to inspect pipe welds in nuclear power plants. When a technician is trained in the techniques it is anticipated that phased array technology and advanced imaging will ensure a significantly higher pass rate for the test than the current $\pm 50\%$ rate for manual methods.

The methods have been developed to use the best of available technology in hardware, software and probes, but be very easily learned by a typical manual ultrasound technician.