



CRITICAL WELD ASSESSMENTS IN CONFINED OR RESTRICTED LOCATIONS

SERVICES: NDT, Shutdown Planning & Execution

THE PROBLEM

Radiographic testing is typically used to test economiser welds. However, due to the proximity of welders during testing and the process of welding banks of tubes radiographic testing was not feasible. Welding banks of tubes requires testing and acceptance of each weld prior to proceeding to the next. The radiation hazard was unacceptable.



THE CHALLENGE

Develop a method for testing 1,000 economiser welds without disrupting the 24 hour per day, 7 day per week critical path welding schedule.

OUR SOLUTION

Develop an Ultrasonic Phased Array procedure using a Helix scanner. The scan is carried out in tight and confined spaces with greater test sensitivity without potential radiation exposure.

FEATURES

- Scans can be undertaken and the results evaluated within 5 minutes
- Wrap around probe system requires 40mm clearance either side of the weld and 12 mm clearance between adjacent tubes
- Highly portable and can be manipulated between adjacent banks of tubes
- Results are accurate, repeatable and recordable
- One person operation (versus 2 people for radiographic testing)
- System is completely self contained and does not require air, power or water

BENEFITS

- Radiation hazards eliminated thereby permitting 24 hour per day, 7 days per week welding cycles
- Welding defects were detected immediately and the locations documented, repaired and retested immediately without any significant down time
- Significant cost savings were obtained by a reduction in both testing and reporting time and no lost time cause by radiation exclusion zones