

## Advanced NDT techniques



In response to increasing demands for speed, accuracy, and reliability of NDT inspections, RWE Power International has developed the application of a number of advanced techniques as part of our Inspection Management portfolio. These techniques have extended the range of components that can be inspected, important for cost effective plant life management.

### Product

RWE Power International has expert knowledge of all aspects of Advanced NDT Techniques and can provide capabilities and experience, at a level to ensure equality with national/international experts. Our range of comprehensive inspections includes:

### Electro-magnetic

- PC-based electromagnetic techniques such as Remote Field Eddy Current (RFEC) for ferrous tubing and Array Eddy Current
- multi-frequency, multi-channel eddy current for non-ferrous tubing
- Meandering Winding Magnetometer (MWM) for gas turbine blades.

### Visual

- thermographic surveys
- borescope and fibre optic inspections
- miniature fibrescope inspections for HGP components with complex geometries.

### Ultrasonic

- ultrasonic imaging techniques using Phased Array and Time-of-Flight Diffraction (TOFD)
- PC-based ultrasonic imaging techniques.

### Materials

- compositional identification of creep, corrosion and oxidation resistant alloys, including welds
- characterisation of material degradation processes using NDT
- hardness evaluation of metal material.

### Benefits

- using our advanced NDT techniques will help to avoid in-service failures and contribute to cost effective plant life management
- availability of RWE Power International's competency in all aspects of Specialist Inspections
- provision of comprehensive reports for quality assurance
- rapid recommendations to make timely maintenance decisions
- confidence in NDT results on which to base engineering assessment of remnant life
- computerised data capture enables accurate repeatability
- identification of service degradation and avoidance of premature failure of high cost or safety critical components.