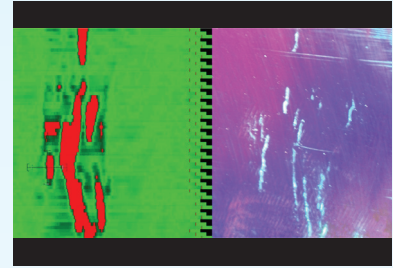


## Electromagnetics



The use of electromagnetic inspection techniques has vastly improved the integrity of surface inspections on critical components in the power generation industry.

### The Problem

Traditional surface techniques such as magnetic particle and dye penetrant inspection have dominated the inspection of power plant components for many years. It is known however especially for critical components such as rotating plant that the reliability of both MPI and DPI is sometimes reduced due to human factors and technique limitations. As plant becomes older and exceeds design life, inspection plays a crucial role in determining remaining life. Where new surface techniques can improve defect detection and through wall sizing, together with providing hard copy information for future assessments, components can potentially stay in-service longer and more safely whilst providing economic benefits.

### The Challenge

To develop high integrity eddy current inspections on critical plant components where improved defect detection/sizing is required often on complex geometries with difficult access.

### Our Solution

The development of eddy current technology which will enabled high integrity, high speed scanning of critical components. Used for both in-service inspections or as a pre-service screening tool for quality control.

### Products

- eddy Current Array probes which contain multiple coils working in absolute, differential or transmit/receive modes enabling detection of surface defects in any orientation used for example on rotor bore inspections
- electronic data storage and high resolution scanning enabling C-scan images and 2-D isometric views as well as traditional strip charts and lissajou data displays
- swept eddy current system for high resolution lift off measurements for TBC.

### Benefits

- significant cost savings from fast high integrity scanning
- alternative to MPI and DPI especially for inaccessible areas
- improved plant life management from better detection parameters and accurate, repeatable data for metallurgical appraisal
- high speed sorting tool for TBC assessment on gas turbine blades enabling accept/reject criteria during the inspection
- hard copy data reports
- fully electronic interpretation, analysis and storage.