

ACFM (Alternating Current Field Measurement) is an electromagnetic technique used for the detection and sizing of surface breaking cracks in metallic components that does not require any electrical contact with the surface being inspected.

ACFM systems have been developed for both topside and subsea applications. Developments include both manual and automated systems with specific equipment developed for applications such as drill string thread inspection, underwater node weld inspection by ROV as well as the more traditional applications such as structural steelwork, pressure vessels and pipe welds.

ACFM provides the following main advantages over more traditional inspection techniques:

- Able to size for length and depth at the same time.
- Detect and size defects through coatings up to 10mm thick.
- Suitable for inspecting most electrically conducting materials.
- Able to operate at elevated temperatures nominally in the range of 400° to 500°C.
- Provides a permanent record of results for



ACFM is ideally suited to in-service defect detection and is able to size a crack for length and depth without the need for further evaluation by techniques such as ultrasonics.

improved auditability and off-line analysis.

- Allows for a high degree of automation making the system very user-independent.
- Provides for real-time reporting and defect evaluation enabling engineering personnel to make site decisions which can affect plant operations.

