

# THE AMIGO

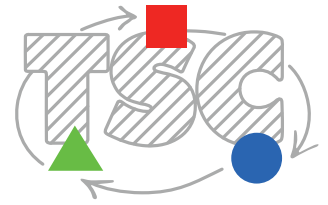
## INSPECT WITHOUT REMOVING PAINT & COATINGS

A Lightweight, Flexible, Site Instrument for Crack Detection and Sizing with ACFM®



**TSC Inspection Systems** is the originator of the Alternating Current Field Measurement (ACFM) technology. The **Amigo** is its top selling product: an instrument combining portability and ruggedness with multifrequency output and support for array technology.

**ACFM** provides reliable detection and sizing of surface breaking cracks in metallic components and can be used through paint and coatings several millimetres thick.



The rapid and reliable inspection capability of **ACFM** has led to it being used in the safety critical areas of theme park rides, cranes and bridges, where large cost savings have been recorded. It is also used in the rail, nuclear, power generation and aerospace industries.

### The benefits of ACFM include:

- Rapid inspection without the need for coating removal or cleaning
- Information on defect location, length and depth
- All data is recorded for review or audit

The **Amigo** takes advantage of developments in both probes and instrumentation to provide a lightweight rugged **ACFM** instrument with long battery life, and support for array probes. The **Amigo** also supports probe cable lengths up to 50 m, providing greater flexibility for two-man operation (such as rope-access deployment), and even underwater inspection using special marinised probes.

### The Amigo provides:

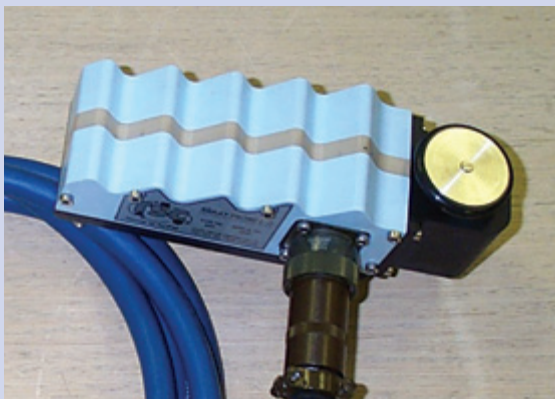
- Portability, weighing only 4.5 kg
- Long battery life – at least 8 hours on a typical inspection cycle
- Rugged and weather proof to IP54
- Support for up to 50 m probe cables
- A wide range of probes including special probes for thread inspection, high temperature inspection, underwater inspection
- Support for array probes with up to 32 channels and two orthogonal input fields

**ACFM** has been used primarily for fatigue cracks in ferritic steel but is also suitable for inspection of environmental cracks, such as hydrogen sulphide cracking, stress corrosion cracking, hydrogen induced cracking and thermal cracking. The high frequency option on the Amigo makes it possible to inspect for a wide range of flaws with improved sensitivity on stainless steels, titanium, nickel alloys, bronze alloys, aluminium and other non-ferrous metals.

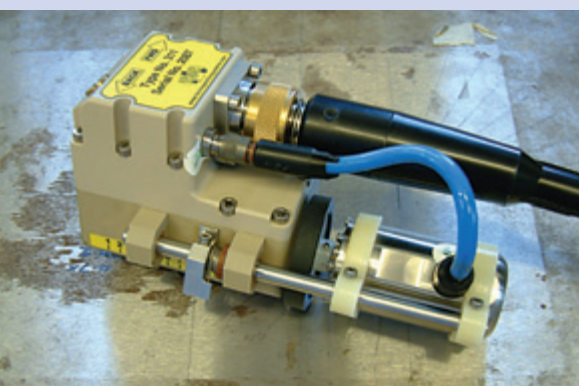
# TSC INSPECTION SYSTEMS

TSC's multi-sensor array technology allows single pass scanning of wide welds and rapid inspection of plates and cylinders, both topside and underwater. Arrays are available in a wide range of shapes and sizes and have been used for:

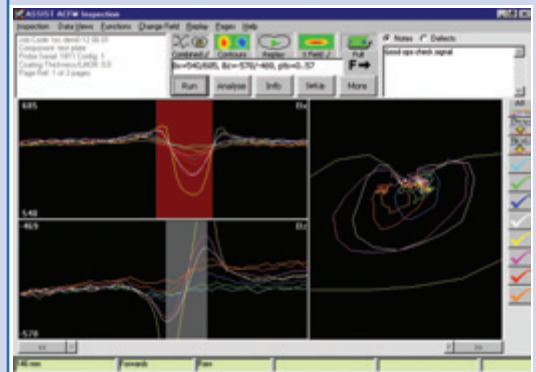
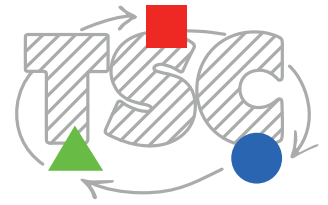
- Drillstring thread inspection
- Ship Hull and Propeller inspection
- Theme Park rides
- Risers and pipelines
- Turbine Fir tree roots
- J-tube welds in nuclear installations
- Tank floor and wall inspections
- Rail industry inspections



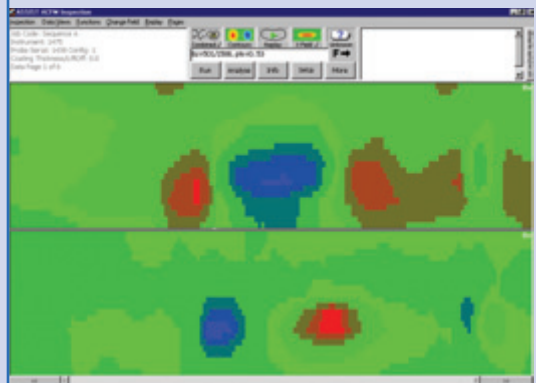
Special contoured array for turbine inspection



Special marinised array for propeller inspection



Standard display with defect marked



Alternative contour plot display

## TSC's Products

The Amigo is just one of a range of TSC's products which includes:

- Underwater ACFM Instrument for diver or ROV deployment
- ACPD Instruments for crack sizing and crack growth monitoring
- StressProbe for measurement of cyclic stresses and stress distributions

## TSC's Services

- Specialist site inspection services
- Development of inspection systems to suit customers specifications
- Engineering software development including real time control systems, databases and engineering analysis

Contact TSC to find out how you can reduce costs and improve reliability using ACFM.

## TSC Inspection Systems

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MIB1345 Produced by COI Communications – Commercial Publicity. Printed in England.