SHIPINSPECTOR

Detection of Safety Critical Cracks and Corrosion in Ships using Novel Sensors and Systems based on Ultrasonic Linear Phased Array Technology.

End Users: Class NK (UK), HSE (UK), American Bureau of Shipping (UK), Lloyds Bureau of Shipping (UK)

Project Website: www.shipinspector.eu

Summary:
To develop novel ultrasonic linear phased array techniques, sensors and systems for finding defects and corrosion in safety critical areas of ships and tankers without taking the vessel out of the water. The Ship-Inspector technology will help operators, classification societies and regulatory agencies worldwide to manage risk more effectively.

The Ship-Inspector Consortium will disseminate the technology and associated training to the SMEs represented by the participant SME-AGs from the 12 000 companies involved in the €50 billion inspection and maintenance sector. Furthermore, the Ship-Inspector technology will reduce the risk to which inspectors are exposed whilst working.

The objectives are:

- Development of novel linear phased array techniques
- New more powerful flaw detectors with the ability to drive sensors as phased arrays.
- New and novel dry contact sensor technology based on Macro-Fibre Composites, (MFCs) that generate more power but that are also cheaper to manufacture.
- Methods of application for "one off" and continuous condition monitoring.
- Sensor array designs that are capable of measuring motion in all three planes.
- Awareness programmes both for managers in SME inspection service providers and for large enterprise end-user companies.
- Guidelines for equipment specification, application, and operator training and certification (a basis for future standards).
- Training programmes in linear phased array techniques.