Local Service **Global** Support

EM&I

Delivering Integrity

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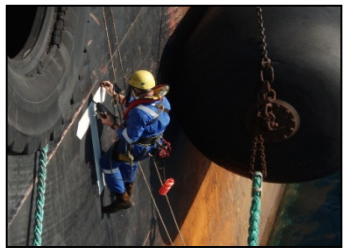
PROPRIETARY & SPECIALISED INSPECTION & REPAIR METHODS

PROPRIETARY & SPECIALISED INSPECTION METHODS
MASS (Marine Access, Survey & Safety)



A flexible package using specialist access, survey and reporting methods of inspection, NDE and condition monitoring.

PROPRIETARY & SPECIALISED INSPECTION METHODS

CYCLOPS – Helmet Mounted CCTV

CYCLOPS is a helmet mounted CCTV system. EM&I specialist technicians have the ability to transmit visual and audio survey data to a console, which allows communication between the technician and owner/ operator and/ or the regulator representative.

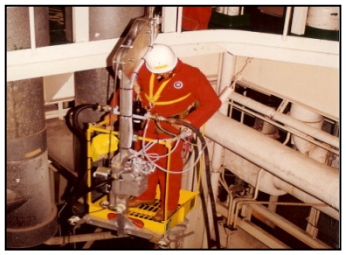
PROPRIETARY & SPECIALISED INSPECTION METHODS

COBRA – Difficult Access Inspection

COBRA is a miniature gas safe CCTV system which has been designed for the thorough examination and recording of difficult access areas such as pipework, pressure vessels, ship's bottom plating underneath bellmouths etc.

COBRA can use a variety of cameras including colour, black & white, low light and infrared.

PROPRIETARY & SPECIALISED INSPECTION METHODS
POWERMAP



POWERMAP is an air-powered platform that can provide safe access for Class Surveyors and Owner/Operator's representatives.

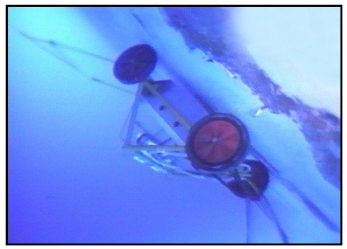
PROPRIETARY & SPECIALISED INSPECTION METHODS

MOLE – CUI Inspection

MOLE uses specially designed sub-miniature probes which detect moisture, temperature, coating condition and wall thickness in insulated piping and pressure vessels, and can alleviate the need for costly, timely and often unnecessary insulation removal when looking for corrosion under insulation (CUI).

PROPRIETARY & SPECIALISED INSPECTION METHODS

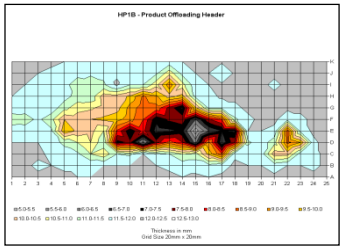
SNOOPY – In Water Inspection

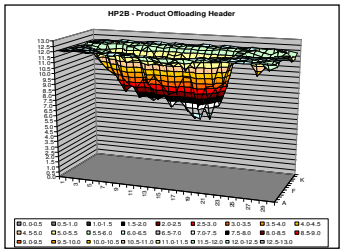


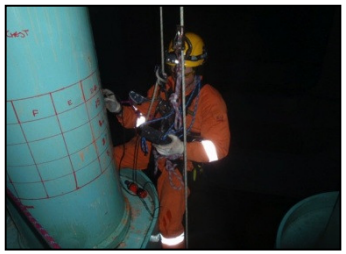
SNOOPY is a method of in-water and subsea visual and ultrasonic surveys for ships and floating and fixed offshore installations which avoids the need for support vessels, tank cleaning etc. Tanks can remain in service throughout the survey.

PROPRIETARY & SPECIALISED INSPECTION METHODS

ANALYSE

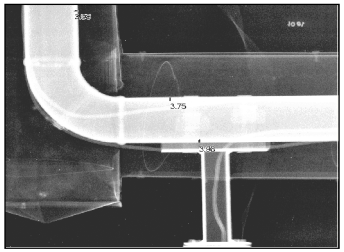


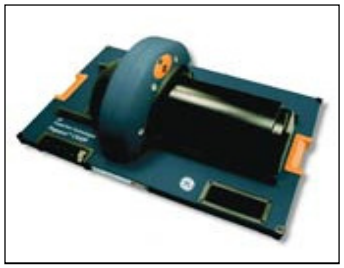


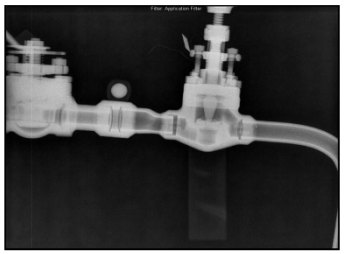


ANALYSE is a method which uses inspection data statistical analysis software to analyse where piping, pressure vessel and structural hot spots are located. It may be used in conjunction with corrosion mapping techniques to produce 2D and 3D images of corroded areas.

PROPRIETARY & SPECIALISED INSPECTION METHODS
COMPUTED RADIOGRAPHY

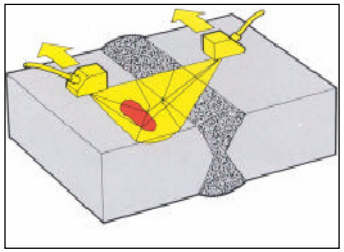


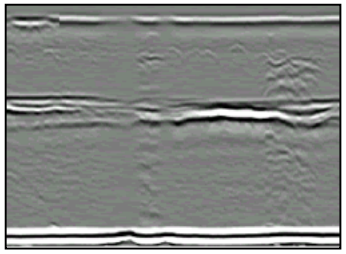




Similar to film radiography with distinct advantages such as digital images, less consumables, lower infrastructure cost, lower radiation, shorter exposure times, no darkroom and less retakes. Particularly useful for CUI and small bore pipework inspections.

PROPRIETARY & SPECIALISED INSPECTION METHODS
TIME OF FLIGHT DIFFRACTION

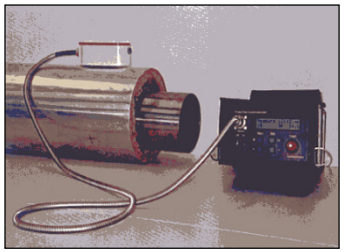




Time of Flight Diffraction (ToFD) is a high-performance computed ultrasonic technique particularly useful for detecting weld defects in process pressure equipment, storage tanks, structures etc, and in multi-skip mode for obstructed areas such as under clamps, structural supports etc.

Images courtesy of Sonovation

PROPRIETARY & SPECIALISED INSPECTION METHODS
PULSED EDDY CURRENT

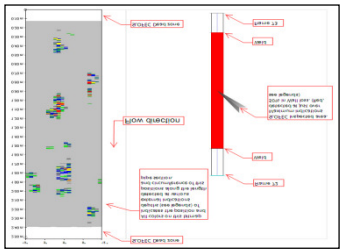


Pulsed Eddy Current (PEC) is an inspection technique that can measure wall thickness of steel objects such as pipes and pressure vessels without making contact with the steel surface, through coatings, insulation materials and even corrosion products.

Images courtesy of Sonovation & Applus RTD

PROPRIETARY & SPECIALISED INSPECTION METHODS

SLOFEC



Saturation Low Frequency Eddy Current (SLOFEC) is a non-invasive eddy current inspection technique used for rapid screening for internal and external wall thickness loss on process pressure equipment, storage tanks, structures etc.

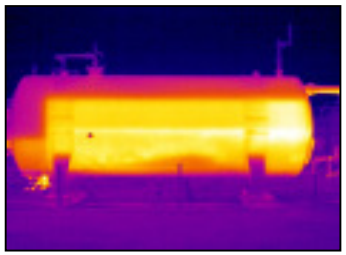
Images courtesy of Innospection

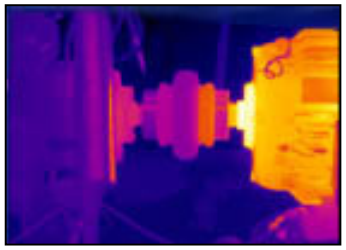
PROPRIETARY & SPECIALISED INSPECTION METHODS
LONG RANGE ULTRASONIC TESTING (LRUT)

Long range ultrasonic testing is a low frequency ultrasonic technique used to detect defects and imperfections some distance away from the ultrasonic source in a range of components. Particularly used in the detection of corrosion and metal loss in pipes and pipelines.

Images courtesy of TWI

PROPRIETARY & SPECIALISED INSPECTION METHODS
THERMOGRAPHY

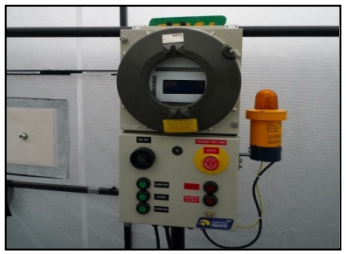




A non-contact infrared imaging technique for detecting temperature variations in a wide range of components, structures & materials. May be used for detecting wet insulation, solids build-up, electrical faults, bearing faults etc.

Images courtesy of FLIR

PROPRIETARY & SPECIALISED INSPECTION METHODS
IGLOO HABITATS



IGLOO maintains a controlled overpressure habitat for hot work and is available with a fully automatic or semi-automatic control system. The control system reduces the POB needed to operate IGLOO as well as enhancing safety by reducing the risk of operator error.

IGLOO can also be combined with air handling and heating/cooling/dehumidifier units to control environmental conditions such as humidity, temperature and air quality as well as controlling vented fumes.

PROPRIETARY & SPECIALISED INSPECTION METHODS

TOPCAT

TOPCAT is a tailor made lightweight staging system that can be installed by rope access teams and, once in place, provides a stable working platform that enables one or more technicians to perform tasks such as blasting, coating repairs, steel repairs / renewals etc.

TOPCAT can be used in conjunction with IGLOO providing a combination of a habitat and a working platform. TOPCAT/IGLOO is therefore particularly suited to areas where it is difficult to erect fixed habitats or to scaffolding.

PROPRIETARY & SPECIALISED INSPECTION METHODS MAP

A one man lightweight staging system installed by rope access teams to provide a stable work platform for carrying out steelwork repairs/ renewals, blasting and painting and other remedial work.

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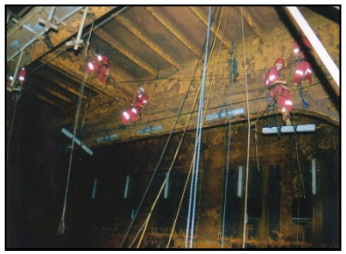
PROPRIETARY & SPECIALISED INSPECTION METHODS
SeDAC IC CONTROL & MONITORING



SeDAC is a system of electronic data acquisition and control which offers an advanced total solution for computerized impressed current cathodic protection, control and monitoring for a variety of infrastructures e.g. marine structures, shipping, concrete structures, tanks, pipelines, jetties etc.

EM&I can also provide corrosion engineering and management services, retrofit ICCP systems to FPSOs, install sacrificial anodes and carry out impressed current surveys to establish rate of corrosion taking place.