PALFINGER INDUSTRIAL SERVICES

Nicholas Hubbard

WHAT IS NDT?

NDT stands for Non-Destructive Testing. It refers to an array of inspection methods that allow inspectors to evaluate and collect data about a material or component in the same state without permanently altering or damaging it.

WHAT IS ROPE ACCESS?

ROPE ACCESS IS THE MEANS BY WHICH AN INSPECTOR CAN GET INTO POSITION TO CARRY OUT HIS DUTIES WITHOUT THE NEED FOR CONVENTIONAL ACCESS METHODS.

BENEFITS

01
No Scaffold required

02
Quicker

03
Safer

04
Minimal Impact to operations

05
Cost effective

WHY DO YOU NEED NDT?

Asset integrity

Preventive Maintenance

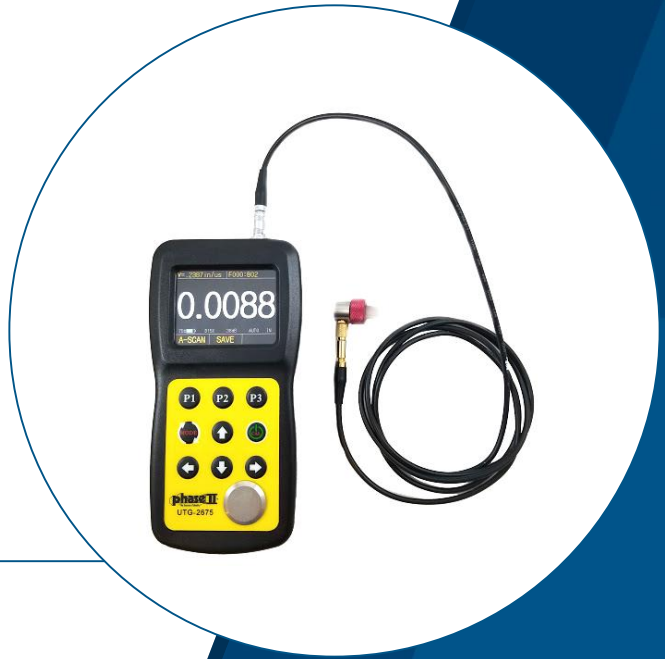
Safe operation

Save Money

CONVENTIONAL NDT METHODS APPLICABLE TO MARINE

Ultra-Sonic Thickness Gauging (UTG)

UTG is the process of sending sonic waves from a probe through a ferrous material and back to give a thickness reading based upon the energy and time of flight of the reflected ultrasound.



UTG CAN BE AS ACCURATE AS 0.01MM WHEN ASSESSING MATERIAL LOSS.

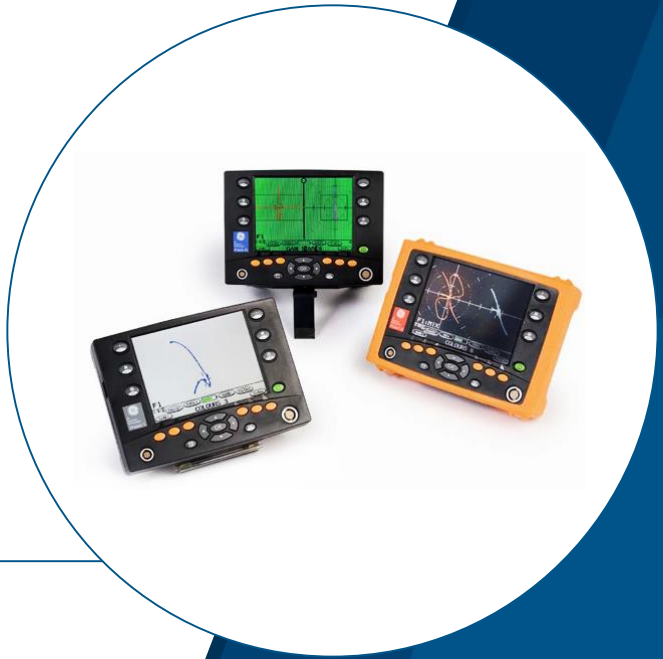
ADVANCED NDT METHODS APPLICABLE TO MARINE

Alternating Current Field Measurement (ACFM)

Alternating current field measurement **(ACFM) is an electromagnetic inspection technique** that introduces an alternating current into the surface of a component to detect surface-breaking cracks.

ACFM CAN DETECT A DEFECT CRACKS THROUGH A PAINTED SURFACE.

ACFM CAN MAP THE SIZE OF THE DEFECT ALONG WITH ITS EXACT LOCATION AND DEPTH.



UTG – HULL GAUGING

A HULL GAUGING SURVEY ALLOWS A SMALL TEAM OF INSPECTORS TO ACCURATELY MAP THE HULL OF A VESSEL AND GIVE A CONDITION REPORT HIGHLIGHTING ANY AREAS THAT ARE OUT OF REGULATIONS.

BENEFITS

01
Minimal interruption to operations

02
It can be done without removing any coatings

03
Save time in dry dock

04
Ensue vessel is safe and within class regulations

05
Prolong the life cycle of the vessel

UTG / ACFM PEDESTAL CRANES

Thickness gauging of crane pedestals can be carried out by a single inspector and can accurately map the pedestal for any internal corrosion that could potentially cause a failure.

ET / ACFM can be used to verify the integrity of deck connection welds and lattice welds.

BENEFITS

01
Minimal impact to operations, typically can be done in 3-4 hours

02
Ensure safety and integrity of the cranes

03
Prevent downtime by finding issues before they become problems

UTG / ACFM ON LIFEBOAT AND LIFE RAFT DAVITS

NDT AND LOAD TEST IS REQUIRED AFTER INITIAL INSTALLATION, REPAIR OR MODIFICATION TO A DAVIT SYSTEM.

Process for Initial Installation

ACFM of all structural welds

Load Test

ACFM post load test of all structural welds

SUMMARY

PALFINGER INDUSTRIAL SERVICES provides a broad range of Non-Destructive Testing services as a standalone service or as part of other integrity check.

01 **Hull and Leg Ultrasonic Thickness Gauging inspections** as per class/client requirement

02 **Marine equipment inspections of Davit systems**, boats, lifting equipment - pedestal cranes etc.

03 **Close Visual Survey/Inspection** – Video and Photographic surveys

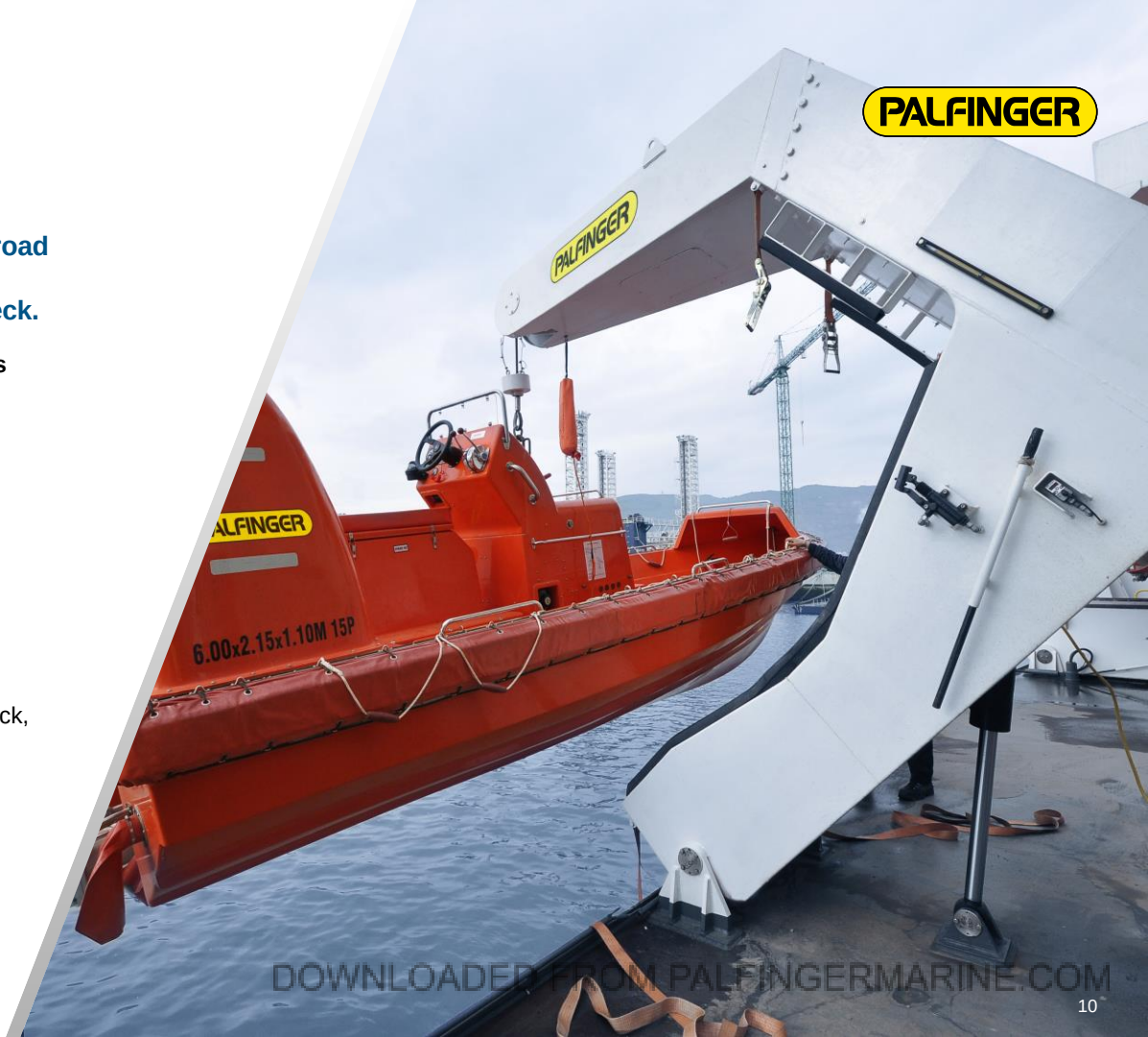
04 **Magnetic Particle Inspection (MPI)-** Permanent and Electromagnetic Yoke Techniques

05 **Alternating Current Field Measurement** (ACFM) Technique

06 **Various forms of Ultrasonic Testing**; e.g. Lamination check, Weld scan etc.

07 **Advanced Ultrasonic Testing-** Phased Array (PAUT) and Time of Flight Diffraction (TOFD) Technique

08 **Dye Penetration** (Visible and UV Blacklight Techniques)



Q & A

CONTACT

NICHOLAS HUBBARD

Regional Director

Email n.hubbard@palfinger.com

PALFINGER MARINE EUROPE B.V. (DUBAI BRANCH)

Workshed 149, 150, 151 • Dubai Maritime City • Dubai • UAE

www.palfingermarine.com

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