



ARRON MARK JACKAMAN
MBInstNDT, Level III (BS EN ISO 1792 Cert)

Director of Non-destructive Testing

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Arron Jackaman is a Level 3 Non-destructive Test Engineer and subject matter expert (SME) who has worked in the Heavy Industry Sector for 22 years. Primarily specialising in structural evaluation of marine vessels, offshore installations and ship building facilities. He has been with Brookes Bell since 2016 and is considered one of the U.K's industry leading experts in the field of ship structural surveying techniques.

He is certified by the British Institute of Non-destructive Testing (BINDT) in NDT/NDE, a branch of mechanical engineering that serves to use applied scientific and engineering techniques to measure the material state of physical assets or components.

Following a successful career in the field of material inspection and testing, Arron now acts as a project manager and consultant offering expert advice and technical support for key stakeholders in the maritime industry. These include ship Owners and Operators, Lloyd's Register Classification Society and the UK's Ministry of Defence and British Royal Navy. He advises on a variety of construction and in-service related issues concerning the failure of welded structures and corrosion control, repair and monitoring systems.

Arron leads Brookes Bell's NDT division and spearheads a team of industry leading engineers specialising in creating new best in class loss prevention technologies and surveying techniques used for damage assessment. Their work is focussed on the disciplines of ultrasonics and electromagnetics. Throughout his career, he has established a proven track record for developing advanced NDT/NDE technology used to provide unparalleled insights into the condition of merchant and naval vessels, informing predictive maintenance strategy and prolonging vessel lifecycles.

He acts as co-chair of the U.K Ministry of Defence's corrosion detection initiative, Pulsed Eddy Current Array (PECA) working group. Arron is co-creator of the maritime industries leading corrosion mapping analytical software suite Brookes Bell's CMAP and has conducted hundreds of structural corrosion mapping surveys globally. As a result, Arron has won industry awards, including the Mersey Maritime Industry Awards 'Technology and Innovation Award 2023' for Brookes Bell's CMAP software and services rendered to the maritime industry.

As an expert witness acting in matters of mediation and litigation for arbitration and court proceedings, Arron has given evidence up to the level of Supreme Court Hearings in shipping new build disputes and NDT/NDE related investigations.

NDT/NDE Qualification and Certification

Ultrasonic Testing (UT) Level III – Inspection Engineer

Phased Array Ultrasonic Testing (PAUT) Level II - Weld Inspector

Time of Flight Diffraction (ToFD) Level II - Weld Inspector

Eddy Current Tube Inspection (Eddy Current Array) Level II – Inspector

Ultrasonic Testing PCN Level II (3.1 Plate, 3.2 Pipe, 3.7 T-Joints, 3.8 Nodes, 3.9 Nozzles) – Weld and Corrosion Mapping Inspector.

Magnetic Particle Inspection Level II - Welds, Castings, Forgings

Academic Qualifications

FdSc Non-destructive Engineering

Diploma in Construction and the Built Environment

2330 Certificate in Electro Technical Engineering

BS 7671 17th Edition IEE Wiring Regulations (Industrial Plant)

2391 Certificate in Electrical Engineering Testing & Inspection

Professional Membership

Member of The British Institute of Non-Destructive Testing

NDT Surveying and Consultancy Experience

As an NDT/NDE Surveyor, specialising in advanced methods of inspection and testing. Worked extensively on projects involving structural engineering issues and mechanical engineering issues on complex pressurised systems. Carrying out condition and integrity assessment surveys of offshore assets, vessels and pipelines for Oil and Gas Supermajors in Europe, Africa and the Middle East (EMEA) along with South America (LAC) and the Gulf region.

As an Inspection Engineer and Surveyor working on ship structures hull, tanks and holds, performing Class UTM surveys and corrosion mapping surveys. In cases involving forensic engineering, carrying out failure investigations and casualty damage assessments and preparing subsequent reports for litigation. Providing expert witness testimony.

Notable projects include:

Aggressive cargo claims, structural damage and corrosion assessment of hull envelope, cargo holds and tanks: -

– Bulk Carriers

Handymax: up to 50,000 DWT

Supramax: up 60,000 DWT

Ultramax: up to 65,000 DWT

Panamax: 65,000 to 80,000 DWT

Capesize: 110,000 to 200,000 DWT

Very Large Ore Carrier (VLOC): 200,000 DWT

– Chemical and Crude Tankers

Handy max: up to 60,000 DWT

Panamax: up to 80,000 DWT

Aframax: 93,000 DWT

Suezmax: up to 200,000 DWT

– Casualty investigation:

Performing Root Cause Analysis (RCA), surveys and reports for litigation in new build disputes, and in service weld failure and latent defect investigations for a variety of ship types.

Consulting on QA/QC, NDT and welding procedures (WPS/WQPR) and protocols, to determine causation and extent of damage. With a focus on defect existence, detection methods and characterisation of defects.

– Container ships

Panamax: up to 5,000 TEU

Post Panamax: up to 10,000 TEU

ULCV: 18,000 TEU

– Dredgers

Spartacus cutter suction dredger – new build dispute into complex weld failures and insufficient NDT programmes.

Offshore – with a specialism in T, K, Y Constructions

Aker 3 semi-submersible drilling rigs
Floating accommodation platforms
Fixed installations, modules and topsides
HVDC converter platforms
T, K, Y constructed jackets for windfarms

– Superyachts

Root cause analysis of structural weld failures and casualty investigations for litigation.

From 35m to 150m length.

– Passenger Ships

Ro-Pax and Cruise up to 250m length.

– UK Ministry of Defence Work

Project lead engineer on the Surface Warship Fleets corrosion monitoring and repair programme using Pulsed Eddy Current Array technology and Brookes Bell's CMAP corrosion assessment software.

Surface warships enrolled on the programme:

Type 23 Frigates

Type 45 Destroyers

Landing Platform Dock's (LPD Carriers)