



ANDY MCGIBBON

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Andy is a Naval Architect with over 17 years practical engineering and design support experience for marine related projects. He has a BEng in Naval Architecture and PG Dip in Marine Technology from the University of Strathclyde and on graduating in 1996 joined Strachan & Henshaw in Bristol as a project engineer. Andy also worked for UMC International, BVT and SeaTec before joining Brookes Bell Safety at Sea in October 2014. Andy has experience in ship and submarine structures and equipment that includes hull repair and conversion, stabilisers, rudders and thrusters, a large proportion involving design of equipment & procedures to facilitate afloat repair or replacement. He has been involved in structural and mechanical design, stress analysis using hand calculations & FEA, R&D and 3D concept integration work, and production of procedures and their associated risk assessments. Andy has considerable practical experience of dockyard, ship and offshore support that includes site management of dive teams, support staff, infrastructure and fitters, and more recently carried out 3D laser scanning (using FARO scanners) to create as built 3D CAD models using the captured data for integration of replacement equipment & new systems. Andy currently holds UK BOSIET & MIST qualifications valid until June 2017.

EDUCATION AND QUALIFICATIONS

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| 1996 | PG Dip Marine Technology University of Strathclyde, Glasgow, UK |
| 1995 | BEng (Hons) Naval Architecture & Small Craft University of Strathclyde, Glasgow, UK |

EXPERIENCE**Oct 2014- Present****Brookes Bell Safety at Sea Ltd
Naval Architect**

Scope of work:

Since joining Brookes Bell Safety at Sea in October Andy has been involved in a number of projects including the assessment of emergency response procedures for RORO ferries and a PFEER assessment of a Floatel for UKCS operation. More recently he has also been involved in support of repair & re-float procedures for wreck removal and shiplift failure investigation.

2009-2014**SeaTec UK Ltd (V Ships). Glasgow
Senior Naval Architect**

Scope of work:

Responsible for managerial and technical aspects of engineering tasks, involving preparation of budgets and tenders, client liaison, design reviews, structural design of ship structure, design of support equipment for engineering tasks, and onsite project management. Projects included technical reviews of bilge keel repair cofferdams for FPSO Terra Nova, MV Amurigyha wreck removal procedures and design of sealing concepts for tailshafts & cooling pipework on RN submarines, hull plating repairs on T45 destroyers, repairs to concrete caissons, and ROV installed blanks on Shell Prelude FLNG. Design of equipment, procedures & on-site support for afloat replacement of stabilisers on RN T23 frigate & T45 destroyers, Tongkang refurbishment Clarke Quay (Singapore) and hull insert repairs for FPV Balmoral (UK North Sea).

2008-2009**BVT. Portsmouth
Principle Structural Engineer**

Scope of work:

Working closely with a team of engineers in support of ship production, prioritising tasks to meet production deadlines, budgeting & monitoring of lifting & turning, blocking and shoring arrangements, unit transportation and full ship roll out for Oman & Trinidad OPVs. Technical aspects included checking calculations and drawings of lifting arrangements and liaison with external suppliers, progress meetings, checking and assessment of deliverables including QEC Transportation and Syncrolift Cradle for Oman.

2002-2008

UMC International Plc. Southampton
Special Projects/Design Engineer

Scope of work:

At UMC responsibilities involved tendering, budgets, supplier liaison and client relations in addition to design and modification of bespoke in house diving equipment, cofferdam structures, procedures, risk assessments & onsite management. Projects included on-site design & installation of temporary 5x8 m repair patch on MV Madrisa following ship collision in Guinea, on-site management of repairs to HMS Illustrious rudders & stabilisers, and development of scantling layouts for new accommodation, bulkheads, and tunnel & azimuth thrusters for Ice Maiden conversation project in Mobile Alabama.

1996-2002

Strachan & Henshaw Ltd. Bristol
Senior Designer/Design Engineer/Project Engineer

Scope of work:

As a project engineer responsibilities included support of dedicated waste processing machines for RN surface ships, this included manufacture support, revision & upkeep of manufacturing drawings, tendering for small support tasks, and liaison with suppliers. On joining the analysis department responsibilities included development of general arrangements (3D modelling) for weapon handling and discharge systems, towed array handling systems, and weapon & countermeasure discharge modelling, to integrate equipment into export submarine designs by HDW & IZAR. This involved an 18 month secondment to HDW (Kiel) & TNSW (Emden) and included investigation into structural borne noise in piping using ANSYS, development of a prototype countermeasure launcher and integration of torpedo discharge system into a naval research vessel to be used as a test platform.

Project Experience:

- 3D laser scanning (FARO scanners, FARO Scene scan stitching & webshare software) to create 3D as built CAD models using the captured data for integration of replacement equipment & new systems.
- Hull & compartment modelling using NAPA in support of Vessel Emergency Service.
- Design review of bilge keel repair cofferdams FPSO Terra Nova.
- Technical review of wreck removal procedures for MV Amurigyha.
- Design of sealing arrangements for cooling water pipework and tailshaft cofferdam for NDE inspection on RN submarines.

- Concept design for modular cofferdam to facilitate for afloat repairs to drydock caisson.
- Design review of transit cofferdam on Ocean Spirit, following grounding.
- Feasibility study investigating afloat brace installation for semi-submersible Buchan Alpha.
- Design of bow sonar and hull plating cofferdams for T45 Destroyer.
- Feasibility study into the design of ROV installed hull blanks for Shell Prelude FLNG.
- Structural design of foundations, boom rests and access platforms for replacement cherry picker cranes on Technip Wellservicer.
- Structural design, procedures, risk assessments, onsite management & support:
 - drydock & afloat replacement of RN T23 & T45 stabilisers.
 - modular floating dock for Tongkang refurbishment Clarke Quay (Singapore).
 - hull insert repair cofferdams for Premier Oil FPV Balmoral (UK North Sea).
 - afloat replacement of main shaft seals RN T23 & LPD.
 - azimuth thruster motor replacement on Technip Big Blue.
 - blanking of suction & discharge culverts for Thames Shell building.
 - tunnel thruster replacement MV AL Khor, Musca and Uranus.
 - shark tank support replacement for Atlantis Dubai.
 - spudcan repair cofferdam for jackup rig Sagar Kirian.
- Onsite management and hands on repairs to stabilisers and rudders, including development of afloat procedures HMS Illustrious.
- On site management and coordination of dive team and underwater welders, and design of temporary 5x8m repair patch on MV Madrisa (to facilitate draining of flooded hold for ship transit) following ship collision in Guinea.
- Production of policy paper and procedures for MoD Salvage & Marine Operations (SALMO) in support of RN Surface fleet.
- Structural integration for new accommodation block, internal bulkheads (damage sub-division), tunnel & azimuth thrusters for Ice Maiden project. Client & site liaison, providing conflict resolution and clarification on technical queries & lofting issues.
- Feasibility studies and R&D work for replacement of rudders and bow dome sonar for the Royal Navy, in-house development of new equipment including propeller cropping equipment and automated hull cleaning system.