

#### 2021

Leave 2020 in your wake and sail forward with BRM to reach exciting new horizons in 2021

#### By PETER BROAD CEO & Managing Director

# Broadreach Marine Technical Consultants COMPANY PRESENTATION

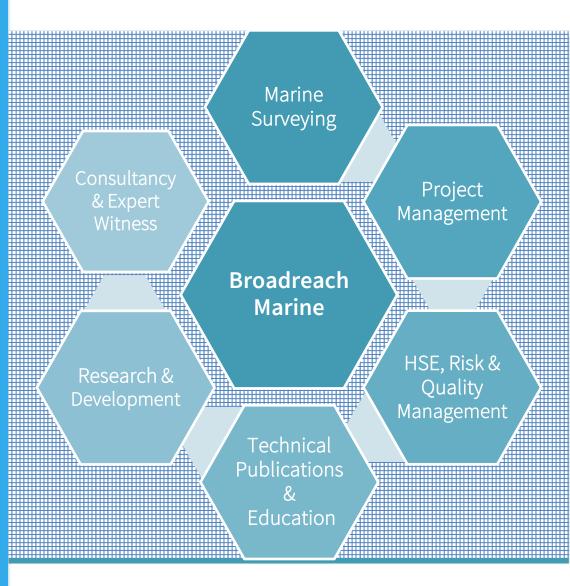
 UK +44(0)7826 521741
 South Korea +82 (0)10 6372 5105
 info@broad

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 Rev 17 - Jan 2021



## Welcome to Broadreach Marine

- Thirty years + history working in the marine industry
- > Set up in the UK in **2010**
- South Korean office opened in September 2017
- Managing multi-million dollar newbuild projects
- Offering plan approval, office, inspection and HSE services
- Providing training and education





### Welcome to Broadreach Marine

- July 2020 update
- We are pleased to announce that we have successfully achieved ISO 9001: 2015 with DNV-GL.
- Scope of Certification: 'The Provision of Training, Plan Approval and Supervisory Services for Ship Building Projects.'



DNV.GL

#### MANAGEMENT SYSTEM CERTIFICATE

Certificate No: 10000375756-MSC-KAB-KOR Initial certification date: 28 July 2020 Valid: 28 July 2020 - 27 July 2023

This is to certify that the management system of

#### BroadReach Marine Korea Co., Ltd.

Office 401, 110, Songjeong 5-gil, Yeoncho-myeon, Geoje-si, Gyeongsangnam-do, 53211, Korea

has been found to conform to the Quality Management System standard: ISO 9001:2015, KS Q ISO 9001:2015

This certificate is valid for the following scope: The Provision of Training, Plan Approval and Supervisory Services for Ship Building Projects.

Place and date: Seoul, 29 July 2020





For the issuing office: DNV GL – Business Assurance 18F, Kyobo Bidg., 1, Jong-ro, Jongno-gu, Seoul, Korea

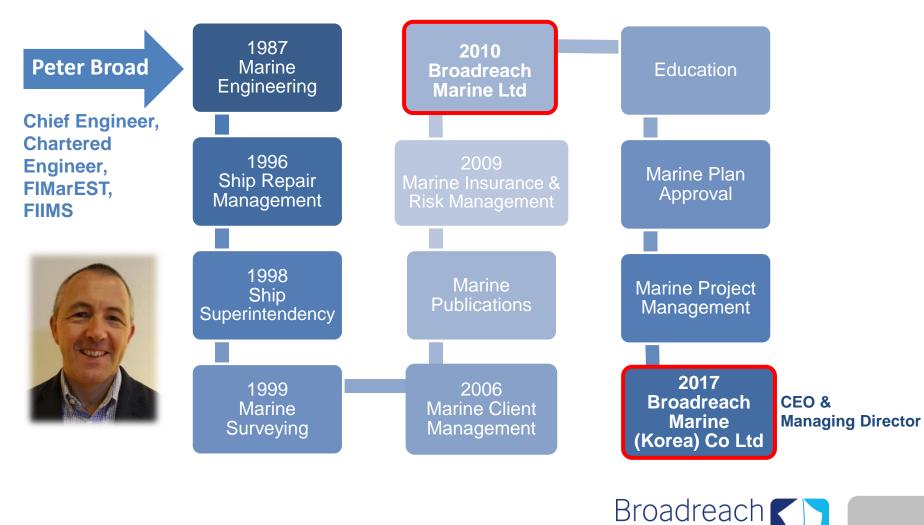
Management Representat

Lado of fulfiment of conditions as set out in the Certification Apreement may render this Certificate Invalid. DNV GL basiese Assurance Korea Lid is accredited by Korea Accreditation Boodt (OKAB) as a Quality Management System certification body (Accreditatio number: KAB-QC-10). ACCIENTIES UNIT: DNV GL basiese Assurance Korea Lid, 15F Kycbo Bidg, 1 Jong-ro, Jongro-gu, Seod, Naturbillor of Korea. TEL:+82 2 724 8413.



#### At the helm of Broadreach Marine

#### 2010 - 2021



## **BRM has pedigree**

- Staff backgrounds within the major classification societies
- Vast experience working for top international owners and technical managers
- Memberships of key professional bodies
- Extensive collective experience across the UK, Middle East and Far East
- Peter Broad, Managing Director, acts as In-Country Representative for the International Institute of Marine Surveyors and is currently Vice President

#### We are proud to be associated with these companies:

















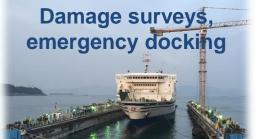
## BRM's USPs for your Far East projects

- Easy communication
  - English is our first language (mostly)
- Responses at short notice
  - We live locally
- No Visa delays
  - We all have local residency so enjoy freedom of travel in Korea, Japan and China
- High-quality cost-effective service
  - Competitive rates for survey attendance, reduced travel costs, real time communication within Asia, compared to equivalent qualified person resident outside the area
  - We are engaged locally
    - BRM is a Corporate Member of the IIMS and Peter acts as its In-Country Representative for Korea



Load outs, discharges, special cargos







Broadreach MARINE

## BRM's Marine Warranty & Insurance Surveys

- Special Cargos
- Towage Suitability Surveys
- Lifting and lashing plans
- Hull and Machinery
- Damage Surveys and Supervision
- Superintendency on behalf of Owners

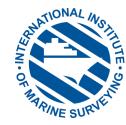
#### ENI CORAL FLNG at Samsung 2019 – 21 MWS







Damage surveys, emergency repairs



Extensive experience with international clients and shipyards

Pre-contract support

- Specification reviews
- Vendor selection and auditing
- Subcontractor auditing
- Assistance with shipbuilding contract terms & conditions
- HSE and Quality Risk Management

**Project management** 

- Newbuilds & Shiprepair
- Plan Approval
- Site Team selection and management
- Superintendency

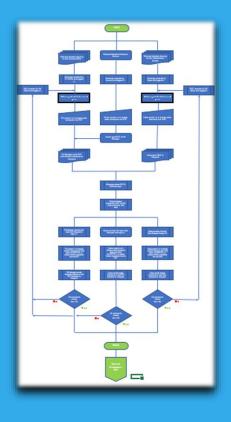
We are proud to have worked with the following shipping companies & shipyards:



## **Project Management**

Providing turnkey solutions to owners in Marine Project Management:

All work carried out to ISO 9001 standards.



- Plan Approval
- Document Control
- Site Office Management
- Inspection Test Plans
- Site Office comments punch lists
- Class Certification reviews
- Class Survey Master Lists review in association with Owners Planned Maintenance schedules and processes

Broadreach

Delivery protocols





### LNGC Construction expertise

Involvement to date in over 35 new construction projects for LNG vessels in Japan, Korea and China.

> Awilko Bonny Gas BP BW Celsius Chandris DynaGas K-Line Maran Gas MISC NLNG Qatar Gas Ras Gas Shell Teekay Woodside

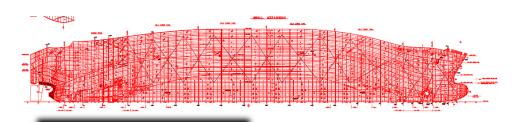


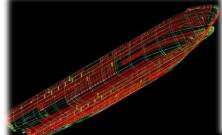


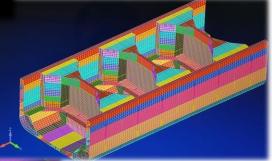
## Critical Design Reviews

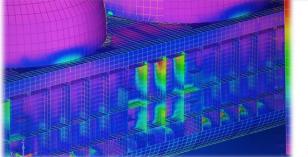
#### > FMEA

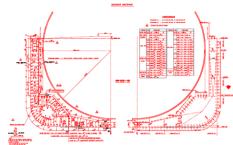
- Stress and Fatigue Analysis
- Reverse Engineering
- Conceptual design reviews
- Pre-production 3-D modelling
- Retro-fit systems and piping design
- Nesting plans
- Obsolescence studies
- Life extension surveys and repair mitigation













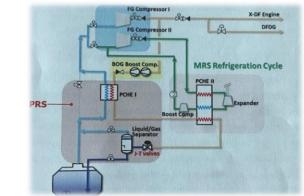
## Leading edge involvement

#### Gas containment

Partial re-liquefaction and methane re-liquefaction

#### LNG bunkering containment

- Full re-liquefaction
- PRS
- MRS



Following recent developments in LNG Bunkering and Tank Design

- Lattice
- Solidus
- Brick





## HSE, Risk and Quality Management

Extensive experience supporting our service offering.

#### **HSE** Auditing

- Sub-contractors and vendors
- Management systems verification and control in shipyards

Risk assessments and mitigation

Memberships held by staff:

- > IOSH
- > IIRSM
- > NACE
- > NEBOSH
- KSSS (building robust shipyard standards in Korea)

HSE Performance Recognition certificate from K Line/DSME

Our Staff are qualified and active members of the following professional bodies:



Korean Shipbuilding Safety Standards (KSSS) is the latest initiative for standardisation of HSE in all Korean yards



## Technical Publications and Education

Approved Training Provider for

- ➢ IMarEST
- > NI
- > IIMS

Papers delivered internationally

- Canadian Government
- Marine Insurance companies
- Risk Management companies

#### **Global recognition**

- Published in the open market
- Presentations at international Marine
   Conferences

Training modules approved by the IIMS for students

- > HND
- ➢ BSc
- ➤ Masters



# Government of Canada











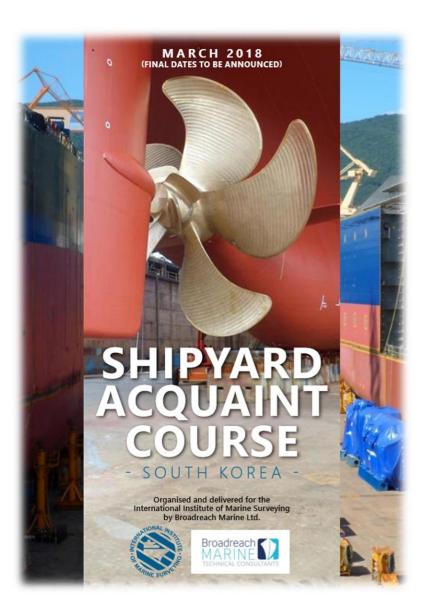
## Shipyard Acquaint Training Course

#### Running in 2021

A unique course providing expert online tuition, for all the processes involved in modern shipbuilding, in association with IIMS.

#### Accredited by

- The Institute of Marine Engineers, Science and Technology
- > The Nautical Institute
- The International Institute of Marine Surveying for CPD Points





### **Research & Development**

## HØGLUND Marine Automation AS

## Direct involvement with cutting edge LNG technology

- Containment conceptual designs
- Propulsion System development
- LNG as a fuel process management and integration

#### University cooperation

Associated with the Faculty of Marine Science at Southampton University and the Hydro Team annual challenge

#### Supporting Working Group

 Korean Advanced Institute of Science and Technology





## KONGSBERG





## Consultancy

- Provision of Technical
   Consultancy advice and
   solutions to Owners and
   Technical Managers
- Management of multi million-dollar newbuild projects to the highest quality and safety standards
- Expert Witness

- Pre-Contract Specification reviews
- Pre-Contract Vendor selection advice
- Plan Approval
- Shipyard HSE and Quality Auditing
- HSE and Quality Risk Management
- HSE Gap Analysis
- Vendor auditing
- Sub-contractor auditing
- Site Team set up and recruitment
- Site Team Management
- Production process Quality System development and Inspection Test Plans
- Attendance at Sea and Gas Trials on behalf of Owners or Charterers



## **Broadreach Marine**

An international company with offices in the UK and South Korea., trading as Broadreach Marine Ltd and

#### Broadreach Marine (Korea) Co Ltd

Operating as one global company sharing resources and technical expertise.





## Broadreach MARINE

### **Broadreach Marine**

E-mail:

info@broadreachmarine.com Website:

www.broadreachmarine.com



#### Don't look Back



Corporate Member and In-Country Representative for South Korea



Look FORWARD with BRM

