

## QUALITY & TECHNICAL CERTIFICATIONS

October 2021



### ODIN® Underwater Inspection in Lieu of Drydocking

I am writing in regard to the:

EM&I **ODIN** System

For Underwater Inspection in Lieu of Drydocking.

ABS has witnessed this system as it was used on two ABS Classed, Bahamas Flag, Floating Production Units. The UWILD surveys on both units were carried out to the satisfaction of the attending ABS Surveyors and found acceptable for Class.

This is to certify that

### EM&I (Australia) Pty Ltd

Having been audited by ABS and having given a satisfactory practical demonstration of the service listed below, is recognised by ABS to provide the following service which ABS surveyors may rely on to make decisions affecting classification or statutory surveys.

### Hull Gauging Firm

Certificate No: 16-FM3118483-X  
Expires on 7th July 2022

“This is to confirm that ABS Surveyors have witnessed the testing and operation of the **M.A.S.S.** system at the manufacturer’s establishment in Aberdeen and onboard a ship in order to determine the equipment suitability as a method of fulfilling the requirements of Part 1, Appendix 1/B & 1/C of ABS Rules for Steel Vessels with regard to Close-Up Surveys (including Ultrasonic Thickness Measurements)”

This is to certify that the Quality Management System of:

### EM&I Group

has been assessed by ABS Quality Evaluations Inc. and found to be in conformance with the requirements set forth by:

### ISO 9001: 2015

The Quality Management System is applicable to: Engineering and Integrity Management Services to the Marine, Offshore, Petrochemical and Energy Industries including Inspection, Maintenance and Repair.

Certificate Number: 35924  
Expires on 31st July 2024

Copies of original Certification available on request





Report No.: ICCP-RP-000-001 (Rev A1) dated June 2013  
Doc Ref: ICCP/BOF-001 Rev a dated 23/07/2013

**HullGuard**

ABS would have no objection to the use of this system on Floating Production Storage and Offloading (FPSO) vessels or Floating Storage and Offloading (FSO) Vessels provided the installation is submitted for engineering approval for each vessel that the System is used on and the installation is carried out under the supervision of a Surveyor to this Bureau.

This is to certify that

**EM&I (UK) Ltd**

Having been audited by ABS and having given a satisfactory practical demonstration of the service listed below, is recognised by ABS to provide the following service which ABS surveyors may rely on to make decisions affecting classification or statutory surveys.

**Hull Gauging Firm**

Certificate Number: 16-AD3165203-X  
Expires on 5th July 2022

**Certificate of Recognized External Specialist**

This is to certify that: **EM&I (Holdings) Ltd**  
Located at 18 Farburn Terrace, Dyce, Aberdeen, AB21 7DT

Having been audited by **ABS** and having given a satisfactory practical demonstration of the service listed below, is recognised by ABS as a Service Provider to provide services which ABS Surveyors may rely on to make decisions affecting classification or statutory surveys.

**Remote Inspection Techniques**

Certificate Number: 20-4470592-B  
Expiry Date: 02 Dec 2023

**Certificate of Recognized External Specialist**

This is to certify that: **EM&I (Holdings) Ltd**  
Located at 18 Farburn Terrace, Dyce, Aberdeen, AB21 7DT

Having been audited by **ABS** and having given a satisfactory practical demonstration of the service listed below, is recognised by ABS as a Service Provider to provide services which ABS Surveyors may rely on to make decisions affecting classification or statutory surveys.

**In-Water Survey**

Certificate number: 20-4470592-A  
Expiry Date: 02 Dec 2023

Copies of original Certification available on request





**Certification of a Firm engaged in Thickness Measurements of Hull Structures**  
**EM&I (Australia) Pty Ltd**  
 is certified by the Society to carry out and report on **thickness measurement of hull structure** of ships classed with Bureau Veritas, within the scope of rules, part A - chapter 2.  
 Attestation No: SGP0/JEC/201608031935 PM  
 Valid until: 05 August 2022

**M.A.S.S. (Marine Access Survey Safety) Method**  
 "This is to confirm that the Society's Surveyors have witnessed the testing of the above system at the firm's establishment in Aberdeen and in London in order to determine the equipment suitability as a method for complying with the requirements of Chapter 2 of the Rules for Classification of ships with respect to close up surveys"

**Agreement of Diving Team for In-Water ROV Surveys**  
 This is to certify that **EM&I (UK) Ltd** are agreed by the Society to perform **In-Water Surveys**, in lieu of periodical bottom survey in drydock, in presence of surveyors of the Society.  
 Attestation No: LDR0/PRO/20160708135445  
 Valid until: 04 July 2019

**ODIN Alternative UWILD**  
 This letter is intended to advise that Bureau Veritas have no objection in principle to the 'Alternative Underwater Survey Techniques in Lieu of Bottom Survey in Dry-Condition' of EM&I.

**Certification of a Firm engaged in Survey using Remote Inspection Techniques (RIT) as an alternative means to close-up survey**  
**EM&I (UK) Ltd**  
 is certified by the Society to perform and report surveys using **Remote Inspection Techniques (ROV underwater drone)** of the structure of ships and mobile offshore units classed with the society, within the scope of rules, Part A.  
 Attestation No: RTD0/RGI/20200917110613  
 Valid until: 11 August 2023

Copies of original Certification available on request





Examination of plating (i.e. bottom shell or inner bottom) in way of cargo oil structure strums

It is considered that the proposed system of inspection using the **COBRA** method appears to be a suitable "other means for visual inspection" as permitted by the Regulation.

Therefore in principle there is no objection to the use of the COBRA method as a means of examination of the bottom shell plating and adjacent bulkheads in way of cargo oil suction strums.

"This is to confirm that, due to continued satisfactory operational experience with the Society's Surveyors using the **M.A.S.S.** (Marine Access Survey Safety) system at the company's establishment in Aberdeen and onboard ships, at various locations and times, the equipment continues to be acceptable as a method of fulfilling the requirements of Part 1, chapter 3, section 7 of the Rules and Regulations for the Classification of Ships with respect to Close-Up Surveys."

This is to certify that:  
**EM&I (Australia) Pty Ltd**  
Has been assessed and approved in accordance with the requirements of Lloyd's Register as a service supplier for the provision of:  
**Thickness Measurements of Hull Structure**  
Made in accordance with LR's relevant Rules and Regulations for Classification as amended from time to time. The thickness measurements may be used by the surveyors or ship owners' representatives when making decisions affecting classification, statutory certification or the operation of the ship.  
Certificate No: MNDE/2019/9243  
Expiry Date: 26 May 2022

This is to certify that:  
**EM&I (UK) Ltd**  
Has been assessed and approved in accordance with the requirements of Lloyd's Register as a service supplier for the provision of:  
**Thickness Measurements of Hull Structure**  
Made in accordance with LR's relevant Rules and Regulations for Classification as amended from time to time. The thickness measurements may be used by the surveyors or ship owners' representatives when making decisions affecting classification, statutory certification or the operation of the ship.  
Certificate No: MNDE/2019/9245  
Expiry Date: 28 May 2022

This is to certify that the Management System of:  
**EM&I (UK) Ltd**  
Has been approved by Lloyd's Register to the following standards:  
**ISO 14001:2015**  
Approval number: ISO 14001-00027814  
Expiry Date: 17 November 2023

Copies of original Certification available on request





**ODIN—ROV Operator General Acceptance Statement**

This is to advise that DNVGL would have no objection to let EM&I perform ROV inspections during in-water surveys of Mobile Offshore Units classed by DNVGL..

The **ODIN** system as presented is considered to be in line with applications as for ROV as defined in the guideline on UWILD.

This is to certify that the Management System of

**EM&I (Australia) Pty Ltd**

of  
Level 5, 160 St Georges Terrace, Perth WA 600D

Has been found to conform to THE Occupational Health and Safety Management System standard:

**ISO 45001:2018**

For Engineering and Integrity Management Services to the Marine, Offshore, Petrochemical and Energy Industries including Inspection, Maintenance and Repair.

This is to certify that  
**EM&I (UK) Ltd Aberdeen**  
is granted acceptance for

**Ultrasonic Thickness Measurements of Ship's Structure,**

classed by the Society in accordance with Approval Programme No. 402A and IACS UR Z17, as amended.

Category 1: Authorised to do measurements on all types and sizes of ships classified by DNV.

Re: Surveys assisted by the **M.A.S.S.** method

We refer to survey onboard "Mobil Aladdin" 3rd—19th November 1994 and your letter of 22nd January 1995.

DNV look upon the M.A.S.S. method as a tool which may assist the surveyor in carrying out his duties.

This is to certify that the Management System of

**EM&I (Australia) Pty Ltd**

of  
Level 5, 160 St Georges Terrace, Perth WA 600D

Has been found to conform to:-

**AS/NZS 4801 2001**

For Engineering and Integrity Management Services to the Marine, Offshore, Petrochemical and Energy Industries including Inspection, Maintenance and Repair.

This is to certify that the Management System of

**EM&I (Australia) Pty Ltd**

of  
Level 5, 160 St Georges Terrace, Perth WA 600D

Has been found to conform to:-

**AS/NZS 9001:2008**

For Engineering and Integrity Management Services to the Marine, Offshore, Petrochemical and Energy Industries including Inspection, Maintenance and Repair.

Copies of original Certification available on request





This is to certify that  
**EM&I (UK) Ltd Aberdeen**  
Is granted acceptance for:

Survey using remote inspection techniques (RIT) as an alternative means for close-up survey of the structure of ships and mobile offshore units but limited to:  
**Laser scanner deployed manually or attached to NoMan robotic arm.**

in accordance with Class Programme  
DNVGL-CP-0484

This is to certify that  
**EM&I (UK) Ltd Aberdeen**  
Is granted acceptance for:

Survey using remote inspection techniques (RIT) as an alternative means for close-up survey of the structure of ships and mobile offshore units but limited to:  
**Unmanned Robot Arm - NoMan Inside-the-Hull Remotely Operated Vehicle ODIN Diverless UWILD**

in accordance with Class Programme  
DNVGL-CP-0484

This is to certify that the Management System of  
**EM&I (Australia) Pty Ltd**  
of  
Level 5, 160 St Georges Terrace, Perth WA 600D  
Is granted acceptance for  
**Ultrasonic Thickness Measurements of Ship's Structure,**  
classified by the Society in accordance with approval programme no.  
402A and IACS UR Z17 as amended.  
Category 1: authorised to do measurements on all types and sizes of ships classified by DNV.

This is to certify that the Management System of  
**EM&I (Australia) Pty Ltd and EM&I (Singapore) Pty Ltd**  
Level 5, 160 St Georges Terrace, Perth WA 600D  
Has been found to conform to the Quality Management System Standard:  
**ISO 9001:2015**  
For Engineering and Integrity Management Services to the Marine, Offshore, Petrochemical and Energy Industries including Inspection, Maintenance and Repair.

This is to certify that  
**EM&I (Australia) Pty Ltd**  
Is granted acceptance for:  
**Thickness Measurements on Ships**  
in accordance with Class Programme  
DNVGL-CP-0484  
Category I: Authorised to do measurements on all types and sizes of ships.

This is to certify that  
**EM&I (UK) Ltd Aberdeen**  
is granted acceptance for  
**In-water survey on ships and mobile offshore units by diver or Remotely Operated Vehicle (ROV) .**  
in accordance with Class Programme  
DNVGL-CP-0484.

Copies of original Certification available on request





**EM&I (UK) Ltd**  
 is certified by Germanischer Lloyd as approved firm engaged in  
**Thickness Measurements of Hull Structure**  
 of vessels classed with Germanischer Lloyd.  
 This company is assessed regarding their capability of taking and reporting  
 thickness measurements in accordance with the requirements of the Society.



National Association of Testing Authorities Australia has  
 accredited  
**EM&I (Australia) Pty Ltd**  
 Following demonstration of its technical competence to  
 operate in accordance with  
**AS/NZS ISO/IEC 17020**  
 As a type A inspection body  
 For Pressure Equipment and Lifting Equipment



National Association of Testing Authorities Australia has  
 accredited  
**EM&I (Australia) Pty Ltd  
 Perth NDT**  
 Following demonstration of its technical competence to  
 operate in accordance with  
**ISO/IEC 17025**  
 This facility is accredited for the tests shown on the Scope  
 of Accreditation issued by NATA

Copies of original Certification available on request



# ClassNK

This is to certify that  
**EM&I (UK) Ltd**  
Is approved as a firm engaged in  
**Thickness Measurements**  
on ships under the Rules for Approval of  
Manufacturers and Service suppliers of the Society.  
Certificate No: 16TZ024  
Valid until: 20 01 2019

**M.A.S.S. (Marine Access Survey Safety) Method**

This is to confirm the Society's Surveyors have witnessed the testing and operation of the above system at the firm's establishment in Aberdeen and onboard a ship in order to determine the equipment suitability as a method of fulfilling the requirements of 3.1.4 Part B of the Rules for the Survey and Construction of Steel Ships with respect to close up survey.



This is to certify that **EM&I**  
has been approved in compliance with the  
**RINA "RULES FOR THE CERTIFICATION OF SERVICE SUPPLIERS"**  
For the supply of the following services to ships and other units classed by RINA:  
**A—Thickness Measurements on Ships**



This is to certify that **EM&I (Canada) Ltd**  
Holds Certificate No:  
**FS 580272**  
And operates a Quality Management System which complies with the requirements of ISO 9001:2015 for the following scope:  
**Inspection, repair and maintenance services to the Marine, Offshore, Petrochemical and Energy Industries.**

Copies of original Certification available on request

