

## Structural Life Extension of Floating Offshore Structures

Today operators are faced with the challenges of ageing offshore installations and the consumed fatigue lives of their structural details. As contracts of offshore installations are renewed or extended, engineers are required to extend the fatigue life of assets for a time period it was once not intended for.

### COURSE OVERVIEW: WHAT WILL YOU GAIN?

This course will give a fresh and practical input to the way engineers go about solving structural fatigue issues on floating offshore installations to extend the fatigue life. Participants will learn how to accurately assess their vessels' current situations and how to produce a qualified action plan in order to achieve the required life extension.

The course participants will gain understanding in which steps to take when tackling structural fatigue problems and learn how to accurately safeguard the structural integrity of their installations through a proactive risk based approach model as used by the forerunners of the industry today.

Participants will learn what measures are most cost effective when assessing different methods of structural life extension.

### WHO SHOULD BE ATTENDING?

*Job titles*

Naval Architects/Engineers working with Structural Integrity of floating installations such as:

- Marine Co-ordinator
- Integrity Manager Engineer
- Project Offshore Installation Manager
- Section/Head of Maintenance
- Superintendent

*Industries*

- FPSOs
- FSOs
- FPU's
- Semi submersibles
- Drill Ships
- Shipyards

### METHODOLOGY

The course will use a number of recent "real life" core case studies and related exercises, drawing on the extensive global experience of the Course Director's 30 years of experience in material fatigue and as a pioneer in the field of structural life extension of offshore installations. These case studies and exercises are designed to involve participants in an interactive manner and stimulate discussion of the key issues, including sharing of experiences amongst the participants.

The case studies and exercises will be supplemented by power point presentations illustrating key data/principles and providing participants with additional examples. Participants will receive copies of all presentation material, including case studies and toolkit used during the course in both hard and soft copy forms for future reference.

### COURSE TUTORS:

#### Luis Lopez Martinez

With 30 years of experience in material fatigue Luis Lopez Martinez has been speaking at OTC (2010, 2011), OMAE (Rotterdam and Brazil) and IIW (1998, 2007, 2012). As a Technical Director for LETS Global, the company are pioneers in structural life extension by Ultrasonic Peening. The company, with the help of Luis, have developed the procedures and equipments needed to tackle the structural issues operators are facing today with ageing offshore installations. The methodology has been coined The Life Extension Concept and is implemented in the North Sea, the Gulf of Mexico and Brazilian offshore sector by leading organisations such as HESS, BP and Petrobras.

#### Malcolm Hedmar

Malcolm Hedmar graduated as a Maritime Officer from the Maritime University of Applied Science in Rotterdam, the Netherlands, and currently holds the position as Ultrasonic Peening Quality Assurance and Quality Control Manager at LETS Global. With 7 years of offshore experience Malcolm is in charge of the in situ life extension work performed at rigs in the North Sea, Gulf of Mexico and Brazilian offshore sector.

For more information or to register for this exclusive event, contact ACI  
By calling +44 (0) 207 981 2503  
Emailing: [cwilliams@acieu.net](mailto:cwilliams@acieu.net)

# FPSO Training Series: Structural Life Extension of Floating Offshore Structures



26th & 27th June 2012, London, UK



## DAY ONE: 26<sup>th</sup> June 2012

08.30 Registration and Coffee

### 09.00 Module 1 - Introduction to Structural Life Extension

The introduction will briefly cover the three pillars of the Life Extension Concept, Fatigue Assessment, Inspection and Weld-Improvement method. We will then look at how the concept is changing the way operators go about addressing future fatigue problems. We will compare it with other measures at hand such as hot work replacement to understand when it is appropriate to do what. Participants will learn why the Life Extension Concept is cost effective enough for operators to start to move away from a reactive approach to proactively safeguarding structural integrity.

10.30 Morning Refreshments

11.00 Module 1 Continues

12.30 Lunch

### 13.30 Module 2 - Fatigue Assessment

In Fatigue Assessment, we learn how to locate and evaluate fatigue hotspots with the risk based approach used by the industry today. Participants will learn how to interpret Finite Element (FE) Models and assess their accuracy by relating the theoretics of a model to the real structure, taking corrosion and weld quality into account. Examples will be presented to give participants confidence in assessing and using produced FE models. On the basis of FE models and shown examples participants will learn how to go about when producing risk based approach matrices. In such matrices the participants will learn how to assess the consequences of cracks in different sections of the installation, the selected hotspots, and address them with the appropriate measures covered in the introduction.

15.00 Afternoon Refreshments

15.30 Module 2 Continues

17.00 End of Day One

## DAY TWO: 27<sup>th</sup> June 2012

08.30 Registration and Coffee

### 09.00 Module 3 – Inspection

The Inspection module will cover the areas access to concerned areas, how to judge weld quality and actions to be taken if fatigue cracks are encountered. Participants will understand how to take access into account, including working on height with rope access or scaffolding and working in confined spaces. Participants will learn how the weld quality affects the fatigue life and the influence it has on weld improvement methods.

10.30 Morning Refreshments

11.00 Module 3 Continues

12.30 Lunch

### 13.30 Module 4 - Weld Improvement Method

With the combined knowledge of relating FE models to practice and inspection participants will learn what weld improvement method will be most suitable for achieving the fatigue life extension required. By looking at different weld improvement methods such as Ultrasonic Peening and Burr Grinding, where to apply these, the benefits and drawbacks the participants will gain understanding of the procedures and the possibilities they enable. Participants will leave the course with a thorough understanding of what preventive actions they can take in order to achieve the required life extension of their offshore installations.

15.00 Afternoon Refreshments

15.30 Module 4 Continues

17.00 End of Training

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## 5 EASY WAYS TO REGISTER

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## TERMS AND CONDITIONS

### How to Register

Registrations must be received in writing or electronically at our secure web site. Please complete and mail or fax a copy of registration form with a cheque or credit card number. Fee includes program materials, continental breakfast, networking luncheon and refreshments.

### Payment

Payment must be received within five business days of returning the signed contract. After receiving payment a VAT receipt will be issued. If you do not receive a letter outlining details two weeks prior to the event, please contact the Conference Co-ordinator at ACI Europe Ltd.

**Discounts are available for multiple/group bookings. Please call +44 (0) 207 981 2503 for more information**

### Cancellations

Substitutions are welcome up to 24 hours prior to the event. Cancellations must be received in writing no less than 3 weeks prior to the start of the conference; a full credit voucher towards a future ACI conference will be issued. Any cancellation received less than 3 weeks prior to the start of the event shall be deemed to be a breach of this contract by client, and accordingly, no credits will be given. Cancellations must be received in writing by mail or fax three weeks before the conference. Thereafter the full conference fee is payable. If for any reason ACI Europe Ltd decides to amend, cancel or postpone this conference, the conference fee will not be refunded. Furthermore, ACI Europe Ltd will not be responsible for covering airfare, hotel or other costs incurred by registrants. In the event that ACI Europe Ltd cancel or postpone the event, ACI Europe Ltd reserves the right to transfer this booking to another conference to be held in the following twelve months, or to provide a credit of an equivalent amount to another conference within the following twelve months. The construction, validity and performance of this agreement shall be governed in all respects by the laws of England to the exclusive jurisdiction of whose courts the Parties hereby agree to submit.

### About ACI

ACI, a UK owned company, have been running successful conferences for the last 15 years in the USA. Headquartered in Chicago with offices all around the States, they run forums in varied fields and are market leaders in Healthcare business conferences. Opening their European head office at the end of 2005, they have expanded rapidly and are launching a series of events covering the maritime industry, energy, oil and gas industries.

### Venue:

Central London, UK. Details to be confirmed.

The cost of accommodation is not included in the event fee. Preferential rates will be arranged with or near the event venue, and all confirmed delegates will be given details of how to book accommodation at this rate in due course.

### Prices and Payment Information

Conference (Includes Documentation Packet)  
Documentation Packet

**DATES OF CONFERENCE**  
Copies of all conference proceedings

**£1,995 (+ VAT)**  
£420

### Documentation Packet Available

You can purchase the **FPSO Training Series: Structural Life Extension of Floating Offshore Structures** papers at just £420. Simply tick the box on the booking form, send it with payment and your copy will be on its way to you after the meeting. This important manual will be a source of invaluable reference for the future.

### Discounted Registrations

Members and customers of all supporting organisations are entitled to a 15% discount off their conference package.

For more information please call: +44 (0) 207 981 2503.