Materials and Welding Challenges for Offshore Oil & Gas Industries

08 - 12 Dec 2019, Dubai
06 - 10 Dec 2020, Dubai
Materials and Welding Challenges for Offshore Oil & Gas Industries

Introduction

Offshore Oil and Gas industries always operate in highly demanding environment. Materials Selection, Welding & Corrosion challenges are immense and require excellent knowledge and expertise.

This GLOMACS training course is an extensive, in depth 5 day course on welding, metallurgy, and corrosion aspects of various materials used in Offshore Oil and gas Industries and is targeted to develop the skills in handling these underlined issues.

This GLOMACS training course discusses in great details, various alloys, their metallurgical properties, design requirements as per the construction codes, welding practices, damage mechanisms, mitigation in offshore oil and gas production environments. It narrates materials selection criteria, welding problems, corrosion requirements and the best ways to achieve best results under most demanding offshore oil and gas production environments.

Objectives

This GLOMACS training course focuses on the best and worst case scenarios with respect to Oil and Gas, metallurgy, welding and corrosion issues and improves the attributes as listed below:

- This GLOMACS training course is designed to increase knowledge base of the participants with respect to the above titled issues
- Make them aware of various materials used in Offshore O&G environments and associated welding engineering challenges
- Make them aware of corrosion issues in Offshore O&G environments and associated Life Cycle engineering challenges
- Get familiarized with the world class engineering standards. e.g., NACE, EEMUA, ASME / ASTM, Norsok, Various Leading Oil and Gas Design / Materials Selection Standards
- At the end. apply the right design, materials engineering to the best interest of the organization & projects related to O&G engineering

Training Methodology

This GLOMACS training course combines structured and focused presentations and discussions of topics covered with relevant examples and question & answer sessions to maximize the benefits to the participants.

Participants will be provided with comprehensive hard copy of course notes & all presentation material. Relevant computer simulations and videos will be utilized to help with the understanding of the various topics.

Organisational Impact

- Ability to handle complex engineering issues involving extremely high end metallurgy and corrosion issues as well associated welding engineering related problems in O&G engineering production environments
- Less dependence on external service providers for solving problems, adding values, saving dollars for the employers
- Knowledgeable employees would be able to effectively supervise or mentor the external contractors, improving quality, reliability, integrity (for operating companies)

Personal Impact

- Enlighten engineering personnel, develops their knowledge base about engineering issues in offshore, oil and gas environments
- Helps to develop competent personnel within any organization dealing with Materials/Welding/Corrosion Engineering issues
- Participants will increase their basic knowledge in related topics such as fabrication and heat treatment of various complex steels and exotic alloys
- Participant will enhance their knowledge, regarding material section, welding challenges, corrosion, damage mechanisms, and integrity assessment
- Participants will enhance their competence and productivity thereby improving their performance level and making additional value added contributions to their organizations

Who Should Attend?

This GLOMACS training course is designed for Welding, Metallurgical, Corrosion, Inspection and Integrity Engineers. The course content had been carefully compiled to make this to be an excellent knowledge base even for current applications and as future reference for all offshore Oil & Gas welding & metallurgy. The course is designed to provide a broader and in-depth picture of Oil & Gas design guidelines, industry practices.

The target audience would be:

- Welding Personnel
- Metallurgy Personnel
- Inspection Personnel
- Equipment Engineers
- Maintenance Engineers and Planners
- Design Engineers
- Service Company Representatives

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<thead>
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<th>DAY 1</th>
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<tbody>
<tr>
<td><strong>Introduction to Guidelines for Materials Selection for Offshore O&amp;G Production Equipment</strong></td>
<td><strong>Materials for Offshore O&amp;G Environments, Metallurgy and Welding Issues (Continuation)</strong></td>
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| - EEMUA Publication 194, Guidelines for materials selection and corrosion control for subsea oil and gas production equipment | - Nickel Alloys  
  - Introduction  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences |
| - ISO 21457-2010-Materials selection and Corrosion Control for Oil and Gas Production System | - Clad Steels  
  - Introduction  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences |

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<th>DAY 2</th>
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<td><strong>Materials for Offshore O&amp;G Environments, Metallurgy and Welding Issues (Continuation)</strong></td>
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</table>
| - Petroleum, Petrochemical, and Natural Gas Industries – Materials for use in H2S containing environments in oil and gas production  
  - NACE MR 0175-ISO 15156, 2015  
  - Norsok M001 | - Martensitic (13Cr) Stainless Steels  
  - Introduction  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences  
  - Precipitation Hardenable Stainless Steels  
  - Introduction  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences |

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<th>DAY 3</th>
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<td><strong>Materials for Offshore O&amp;G Environments, Metallurgy and Welding Issues</strong></td>
<td><strong>Materials for Offshore O&amp;G Environments, Metallurgy and Welding Issues (Continuation) &amp; Corrosion, Service Experiences, Failure Analysis</strong></td>
</tr>
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</table>
| - **Duplex Stainless Steels**  
  - Introduction to Duplex Stainless Steel  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences  
- **Super Austenitic Stainless Steels**  
  - Introduction  
  - Physical Metallurgy  
  - Welding Considerations  
  - Super Austenitic vs. Duplex Stainless Steel  
  - Design and Fabrication Pros and Cons  
- **Weldable Super Martensitic Stainless Steels**  
  - Introduction  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences | - Austenitic Stainless Steels  
  - Introduction  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences  
- **Titanium Alloys**  
  - Introduction  
  - Metallurgy  
  - Welding Issues  
  - Case Histories, Application Experiences |
REGISTRATION DETAILS

LAST NAME:________________________________________
FIRST NAME:_______________________________________
DESIGNATION:_____________________________________
COMPANY: ________________________________________
ADDRESS: ________________________________________
_____________________________________________________________________________________
CITY:______________________________________________
COUNTRY: ________________________________________
TELEPHONE:______________________________________
MOBILE: __________________________________________
FAX:________________________________________________
EMAIL:_____________________________________________

AUTHORISATION DETAILS

AUTHORISED BY:___________________________________
DESIGNATION:_____________________________________
COMPANY: ________________________________________
ADDRESS: ________________________________________
_____________________________________________________________________________________
CITY:______________________________________________
COUNTRY: ________________________________________
TELEPHONE:______________________________________
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FAX:________________________________________________
EMAIL:_____________________________________________

PAYMENT DETAILS

☐ Please invoice my company
☐ Cheque payable to GLOMACS
☐ Please invoice me

CERTIFICATION

Successful participants will receive GLOMACS’ Certificate of Completion

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<th>Code</th>
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<tr>
<td>MC006</td>
<td>08 - 12 Dec 2019</td>
<td>Dubai</td>
<td>$4,950</td>
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<td>$4,950</td>
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4 WAYS TO REGISTER

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Email: info@glomacs.com
Website: www.glomacs.com

TERMS AND CONDITIONS

• Fees – Each fee is inclusive of Documentation, Lunch and refreshments served during the entire seminar.
• Mode of Payment – The delegate has the option to pay the course fee directly or request to send an invoice to his/her company/ sponsor. Credit card and cheque payments are both acceptable.
• Cancellation / Substitution – Request for seminar cancellation must be made in writing & received three (3) weeks prior to the seminar date. A US$ 250.00 processing fee will be charged per delegate for each cancellation. Thereafter, we regret that we are unable to refund any fees due, although in such cases we would be happy to welcome a colleague who would substitute for you.
• Hotel Accommodation – is not included in the course fee. A reduced corporate rate and a limited number of rooms may be available for attendees wishing to stay at the hotel venue. Requests for hotel reservations should be made at least three (3) weeks prior to the commencement of the seminar. All hotel accommodation is strictly subject to availability and terms and conditions imposed by the hotel will apply.
• Attendance Certificate – a certificate of attendance will only be awarded to those delegates who successfully completed/ attended the entire seminar including the awarding of applicable Continuing Professional Education Units/Hours.
• Force Majeure – any circumstances beyond the control of the Company may necessitate postponement, change of seminar venue or substitution of assigned Instructor. The Company reserves the right to exercise this clause and implement such amendments.
• Fair Access / Equal Opportunities – In the provision of its services as a world-class Training Provider, the Company is committed to provide fair access / equal opportunities throughout the delivery of its courses and assessment leading to the completion of training seminars, or 3rd party qualifications/certifications.