Program Overview

Controlled bolting is the system/technique used in dismantling, replacement and installation of bolt connection flanges. This training will cover heavily on the equipment used for controlled bolting in order to achieve leak free installation. The participant will be introduced to the various type of bolting equipment that is used in the oil & gas industry and they will be trained on each type during the course.

Course Benefits

Incorrectly bolted flanges are one of the main causes of hydrocarbon releases, which can have a serious impact on the environment, operating costs and the safety of personnel. This course will give you an understanding of how mechanical joints work and how to use or select the right bolting equipment.

The knowledge gained in this course will help you understand how to dismantle, remove and install components correctly to minimize the leaks and safety concerns associated with incorrectly bolted flanges. It will give an overview of the torque equipment and how it should be properly used.

By properly making up bolted joints, you contribute to the integrity of the asset, and the safety of your fellow workers and yourself. A reduction in hydrocarbon releases means a reduced environmental impact and reduced losses of revenue.

Who Should Attend?

Suitable participants are people who wants to work as a joint maker and mechanical fitter, Bolting Technician, and Supervisor.

Learning Objectives

- Describe the specifications covering dismantling, preparation and securing of bolted connections
- Introduction to bolted mechanical joints
- Explain how torque is calculated
- Describe the components of typical torque equipment
- Explain the operation of typical torque equipment

Key Modules

- Hand Torque (Manual Torque Wrench – MTW)
- Pneumatic Torque (Pneumatic Torque Wrench – PTW)
- Hydraulic Torque (Hydraulic Torque Wrench – HTW)
- Hydraulic Tensioning (Hydraulic Bolt Tensioner – HBT)
TORQUE VS TENSION

HOW TO CALCULATE TORQUE

INTRODUCTION OF VARIOUS TYPE TORQUE EQUIPMENT

- **Manual Hand Torque Bolted Connection**
  - Type of manual/hand torque wrench available
  - How each type work
  - Operation and handling (the do and the don’ts)
  - Application and limitation
  - Maintenance and calibration
  - Bolting Procedures during dismantling and installation
  - Theory Test
  - Hands on testing and observation

- **Pneumatic Torque Bolted Connection**
  - Introduction of Pneumatic Torque Wrench
  - How it work
  - Operation and handling (the do and the don’ts)
  - Application and limitation
  - Maintenance and calibration
  - Bolting Procedures during dismantling and installation
  - Theory Test
  - Hands on testing and observation

- **Hydraulic Torque Bolted Connection**
  - Introduction of Hydraulic Torque Wrench
  - How each type work
  - Operation and handling (the do and the don’ts)
  - Application and limitation
  - Maintenance and calibration
  - Bolting Procedures during dismantling and installation
  - Theory Test
  - Hands on testing and observation

- **Hydraulic Tension Bolted Connection**
  - Introduction of Hydraulic Bolt Tensioner
  - How each type work
  - Operation and handling (the do and the don’ts)
  - Application and limitation
  - Maintenance and calibration
  - Bolting Procedures during dismantling and installation
  - Theory Test
  - Hands on testing and observation

For more information, visit us at: www.paceup.com.my
### TRAINING DETAILS

<table>
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<tr>
<th>Name</th>
<th>Job Title</th>
<th>Telephone</th>
<th>Email</th>
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**Title**: Mechanical Joint Integrity Training: Flange Management  
**Date**: 24 - 25 May 2021  
**Venue**: Shah Alam

### PARTICIPANTS

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<tr>
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**Note**: Please attach a list of participants if insufficient space.

### PAYMENT DETAILS

1. Participants are required to pay before or on the first day of the course.

2. (Please Tick Where Applicable)

   - Check made payable to Pace Up Sdn. Bhd.
   - Credit Card

   **Bank Details**:
   **Bank**: Malayan Banking Bhd.
   **Branch**: Taman Setiawangsa Branch, Wisma Prima Peninsular, 2, Jalan Setiawangsa 11, Taman Setiawangsa, 54200 Kuala Lumpur
   **Account No.**: 562188319491
   **Swift Code**: MBBEMYKL

   **Other**: (All bank charges to be borne by payer. Please ensure that Pace Up receives the full invoiced amount.)

3. We do not give refunds for cancellations. However, you may substitute participant(s) at any time.

4. If we receive cancellations in writing more than (7) days before the training course, you will receive a 100% credit (valid for one year) to be used for another training course.

5. Cancellations received less than seven days before to the training course may result no credit for future training.

6. If we postpone training course, participant payments for the postponed course will be 100% credited towards the course at a rescheduled date.

7. We shall assume no liability whatsoever in the event this training course is cancelled, rescheduled or postponed.

### IN HOUSE TRAINING SOLUTION

- Yes, I would like to organise this training course in-house and save up to 50% of total course fees! Please send me more information.

### REGISTRATION FORM

**Title**: Mechanical Joint Integrity Training: Flange Management  
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**Venue**: Shah Alam

<table>
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<tr>
<th>Normal Price</th>
<th>Grouping Price (min. 3 pax)</th>
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<tr>
<td>RM 950.00/pax</td>
<td>RM 900.00/pax</td>
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**Special RM 100 Discount for MOGEC Member**

**Register before 7 May 2021**

**Please complete this form and fax to +603 4256 9286 or, scan and email to azmirul@paceup.com.my**

**For more info, please call Azmirul at +60 19 275 4900**