

FLANGE MANAGEMENT: CONTROLLED BOLTING TRAINING

2 Days | Shah Alam

**GOOD EXPLANATION
FROM THE INSTRUCTOR
WITH HANDS ON
TRAINING MAKES THE
SUBJECT EASY TO
UNDERSTAND.**

PROJECT ENGINEER,
SEAMOG GROUP SDN BHD

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 personnels. 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?

- ▶ Personnel that are directly involved with bolting services.
- ▶ Technicians, supervisors, engineers, inspector, and QA/QC personnel.
- ▶ Anyone interested to venture into bolting business.

Course Methodology

- ▶ Interactive Lecture
- ▶ Hands-on Practical Exercises
- ▶ Case Studies
- ▶ Practical Assessment

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

- ▶ Torque vs Tension
- ▶ How to Calculate Torque
- ▶ Introduction of Various Type of Torque Equipment

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

