



The Academy of Joint Integrity™

COURSE CONTENT – JI010

COURSE DESCRIPTION / CODE

JI010 – Assembly & Hand Torque of Bolted Flanged Connections – 1 day

Course Aims:

The trainee is aware of the importance of Health and Safety in the Workplace.

The course delivers the theoretical and practical elements involved in the Hand Torque tightening of Bolted Connections and provides an assessment of delegate's competence in applying these procedures. It covers the selection of components for the various types of flange connections found in the Oil and Gas, Petrochemical and Processing Industries materials focusing on gaskets/sealing elements and bolting materials.

Target Audience:

Mechanical Engineers /Technicians/ Apprentices looking to enhance their skills.

Engineers and Technicians from a non mechanical discipline requiring multi skill or refresher training.

Graduates looking to understand key failure mechanisms within the field of Joint Integrity.

Course Content:

- Key safety issues within the Joint Integrity Industry
- Introduction to Flanges /Types used within the Oil and Gas/Processing Industries
- Fastener selection and identification.
- Special Clamps and Flanges
- Inspection process. Fasteners/Nuts/Flange Faces/Gaskets.
- Gasket types, applications, material selection and identification
- Gasket Installation procedures and requirements.
- Axial Alignment of Pipe Flanges/Flange Gap/Bolt Hole Alignment.
- Assembly Best Practice Procedures/Standards
- Tightening Methods, Applied Torque Values/Bolt Loads/Lubricant Effect
- Bolt Elongation and Yield.
- Theory and Practical issues ref Hand Tightening
- Tightening Methods/ Uncontrolled/Partially Controlled

- HSE and Industry initiatives toward Hydrocarbon leak Reduction, and Staff Training and Competence.

Delivery:

Classroom and Workshop based.

Venue:

Aberdeen, Teesside, Humberside, Yorkshire, Ellesmere Port, Midlands, Humberside, South West
Also delivery available on site utilising mobile training rig.

Certification:

IChemE

Special Requirements:

Delegates are requested to provide their own PPE

Supporting Information:

All delegates receive a Joint Integrity training pack.