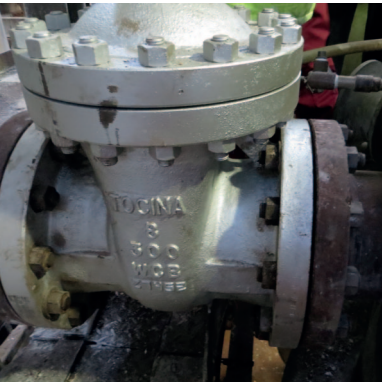
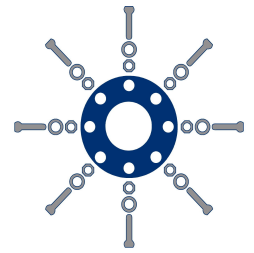


The Academy of Joint Integrity™

**WILLIAM JOHNSTON
& COMPANY LIMITED**



Training, Competence, and Awareness
Accredited Flange Assembly and Gasket Awareness Courses

www.academyofjointintegrity.com



Loss of Containment – Flanged Bolted Connections

Control of the Training and Competence Assurance of all personnel working on Bolted Flanged Connections is a **critical factor** in achieving and maintaining Leak Free Performance.



A bolted joint is one of many critical components of a pressurised system.

Dependent upon the contents, pressure, location and purpose of the system, leakage or failure of a single bolted joint, can have potentially catastrophic consequences. To meet this challenge, every operator of pressurised systems must have in place a system to positively and pro-actively manage the integrity of bolted joints. It is expected that such a system will be part of an asset and/or process integrity management system, and be built around the principle of continuous improvement, based on lessons learned. *Ref EI Guidelines.*

The duty holder should ensure that the integrity of bolted pipe joints over the whole life of the plant is addressed within the management system. This should be achieved as a matter of management policy, by specifically identifying management of bolted pipe joints within the engineering design, construction, maintenance and operation standards and procedures. An inspection of this topic should include reference to the latest industry bolted joint guidelines. *Ref: Loss of Containment Manual HID OSD3-Jan.*



| | | | |
|--|--|--|---|
| <p>SCAFFTAGS</p> <p>JOINT SERVICE / LEAK TEST</p> <p>READY FOR SERVICE / LEAK TEST</p> <p>JOINT REGISTER NO. _____</p> <p>REGISTERED / REGISTERED BY _____</p> <p>SEE REVERSE FOR DETAILS</p> | <p>SERVICE / LEAK TEST COMPLETED</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> <p>JOINT TORQUE/TENSIONED BY _____</p> <p>JOINT RE-ASSEMBLED BY _____</p> | <p>DISTURBED JOINT</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> | <p>FLANGED DATA</p> <p>DC No. _____</p> <p>FRONT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> |
| <p>READY FOR TORQUE / TENSION</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> <p>ENSURE JOINT IS TAPED</p> | <p>JOINT TORQUE / TENSIONED</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> <p>ENSURE JOINT IS TAPED</p> | <p>FLANGE ASSEMBLY</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> | <p>FLANGE ASSEMBLY</p> <p>DC No. _____</p> <p>FRONT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> |
| <p>JOINT BROKEN</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> | <p>JOINT BROKEN</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> | <p>FLANGE BREAK</p> <p>PRINT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> | <p>FLANGE BREAK DATA</p> <p>DC No. _____</p> <p>FRONT NAME SIGN & DATE</p> <p>ENTER DETAILS AND ATTACH TAG TO JOINT CONTROL RECORD</p> <p>HELD BY NRP</p> |



To ensure the optimum level of resources and verification is carried out on each joint, a criticality assessment will be carried out, which will consider the service, pressure and local conditions of each connection.

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|--------------------|---|
| LOW-RISK | Within alignment tolerances, existing controls are in place, eg procedures, vendor information, competent personnel; safe to proceed. |
| MEDIUM-RISK | Additional controls need to be identified, consider the use of specialist contractors, limit personnel in the area during testing and initial operation, improve access, re-check after completion. |
| HIGH-RISK | Engineering review of piping design and configuration, consider the use of a specialist contractor or vendor. |

A procedure will be developed and implemented to ensure that individual joint status is displayed visually on site, by use of a multi-part tagging system. This will include a focus on temporary joints and joints requiring reinstatement after testing or component replacement. Including contractor activity.

Credibility

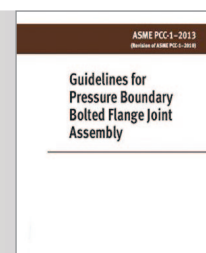
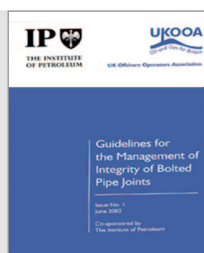
The Academy are the only UK member of the ASME Post Construction Committee, and have years of experience on site conducting Flange Integrity Surveys, providing recommendations to all industries.

Latest EN1591-1 Software permits unique dynamic assessment of flanged joints, taking into account temperatures and materials. Also unique gasket constants to determine loading and tightening method to achieve and maintain performance.

Irrespective of International Design Codes, control of the Training and Competence assurance of personnel working on mechanical joints (including contractors) is critical in achieving asset integrity.

All Training Courses offered by the Academy are constantly updated to align with latests industry Best Practice with ECITB/EI/ASME/EN1591-4 - Certification.

Unique bespoke courses are designed specifically for site, also utilising state of the art mobile rigs.



Legislative Compliance
– Industry Best Practice
Standards



IChemE – Management of the Integrity of Flanged Bolted Connections

Modules include:

| | |
|--------------|---|
| J1010 | Dismantle, Assemble and Hand Torque Flanged Joints |
| J1018 | Dismantle, Assemble and Tensioning Bolted Connections |
| J1019 | Dismantle, Assemble and Hydraulically Torque Flanged Joints |
| J1020 | Gasket Identification / Materials – Flange Assembly Best Practice |
| J1021 | Flange Management for the Engineer – Technical and Practical |

Courses can be bespoke to meet your site needs.

Further courses available on request.

All IChemE Approved Training Courses utilise our unique Mobile Training Rig (FADU – Flange Assembly Demonstration Unit) and are underpinned by latest ASME PCC-1/BS EN1591-4 Best Practice Standards.

ECITB Mechanical Joint Integrity Courses

| | |
|------------------------|---|
| MJI10 | Hand Torque Bolted Connections |
| MJI10/19 | Hydraulically Torque Bolted Connection |
| MJI18 | Hydraulically Tension Bolted Connections |
| MJI10/18/19 | Hydraulically Torque and Tension Bolted Connections |
| Technical Tests | TMJI10/11/18/19/20 |
| E-Learning | Refresher Training |

Training can be offered at our UK locations in Aberdeen, Teesside (Middlesbrough), Yorkshire, Ellesmere Port, Midlands, Humberside and the South West (Bridgend)

We can also deliver training on-site by utilising our unique Mobile Training Rigs (FADU – Flange Assembly Demonstration Unit).

The Academy of Joint Integrity is a division of The Flexitallic Group.

We have contributed to the latest Energy Institute Guidelines specific to Training and Competency Issues, and are represented on various International Committees within the Sealing Industry, including ASME PCC-1 and EN1591/4.

All Training Courses are aligned to Industry Best Practice as recognised in the latest Energy Institute Guidelines, and provide a blend of sealing technology and practical elements associated with flange assembly.

BOOK TODAY:

Head Office: 0141 620 1666

www.williamjohnston.co.uk

For further information please contact us at: sales@williamjohnston.co.uk



Disclaimer

Please note, failure to select the correct materials or products we supply ("the Products") may result in damage to plant, equipment or property. In some instances, it may cause death or personal injury. We are not designers and do not give advice about design related matters concerning the Products. We can help and assist with the technical specifications for the Products. In specific applications, particularly where critical conditions exist, we will try to assist you within the limitations of the services that we offer. All information supplied by us is intended as technical co-operation outlining the specifications of the different Products which we supply. To the extent permitted in law, no warranty is given in respect of any information supplied by us. The customer must satisfy themselves as to the suitability of the Products for their intended application and use. The correct fitting of Products is the responsibility of the customer. Your statutory rights remain unaffected. Save in respect of death, personal injury or fraud, our entire liability to you, however arising from the supply of Products shall be limited to the £10M indemnity amount provided by our insurers.