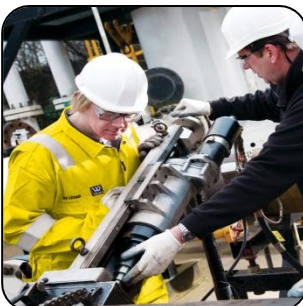




Hydratight Academy Technical Training

ECITB On-Site Machining Synopsis - 2022



ECITB Approved Training & Technical Testing

Hydratight has worked closely with the Engineering Construction Industry Training Board (ECITB) developing and delivering specialist bolting and on-site machining training programmes for more than 25 years and were finalists at the “ECITB Training and Development Awards 2022” in the “Approved Training Provider” and “Agility in Learning” award categories.

Our training programs follow a four-stage model for achieving and managing the competence of individuals involved in Joint Integrity Assurance activities and particularly those expected to undertake these duties in the workplace.

A blended learning approach is delivered, accommodating a full range of learning styles via a combination of instructor led technical theory, online eLearning options and hands-on practical exercises.

Hydratight is a leading and preferred training provider to major operators, contractors, and training management service companies due to our extensive field service experience, subject matter expertise and the occupational experience of our Training Instructors.

Key benefits to learners and employers include the achievement of industry recognised and transferrable certification via a highly commended ECITB training provider, reducing risk, increasing safety and preventing the loss of containment.

ECITB - On-Site Machining

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ECITB On-Site Machining - Instructor Led Training

Training Course	Max Class Size	Course Duration
OSM-01 - On-Site Cutting and Weld Preparation	4	2 Days
OSM-02 - On-Site Joint Face Machining – Full & Raised Face Flanges	4	2 Days
OSM-04 - On-Site Milling	4	2 Days
OSM-05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs*	4	3 Days

Satisfactory completion of an ECITB approved Stage 1 training course is recognised by an ECITB **“Training Certificate”** and issue of a Stage 2 ECITB **“Work Based Task Assignment(s)”**.

ECITB OSM **“Training Certificates”** are valid for a 12-month period only for Stage 3 technical testing application purposes and must be supported by Stage 2 ECITB OSM **“Work Based Task Assignment(s)”** completed within the same 12-month period.

If the 12-month training to technical testing period elapses, the full OSM process must be attended again from Stage 1.

*OSM 02 required as a pre-requisite.

ECITB On-Site Machining - Technical Testing

Technical Test	Test Duration
TOSM-01 - On-Site Cutting and Weld Preparation	1 Day
TOSM-02 - On-Site Joint Face Machining – Full & Raised Face Flanges	1 Day
TOSM-04 - On-Site Milling	1 Day
TOSM-05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs	2 Days

Successful completion of a Stage 3 technical test is recognised by issue of an ECITB **“Certificate of Achievement”** which is valid for 3 years.

Class Size - 1 candidate per test session

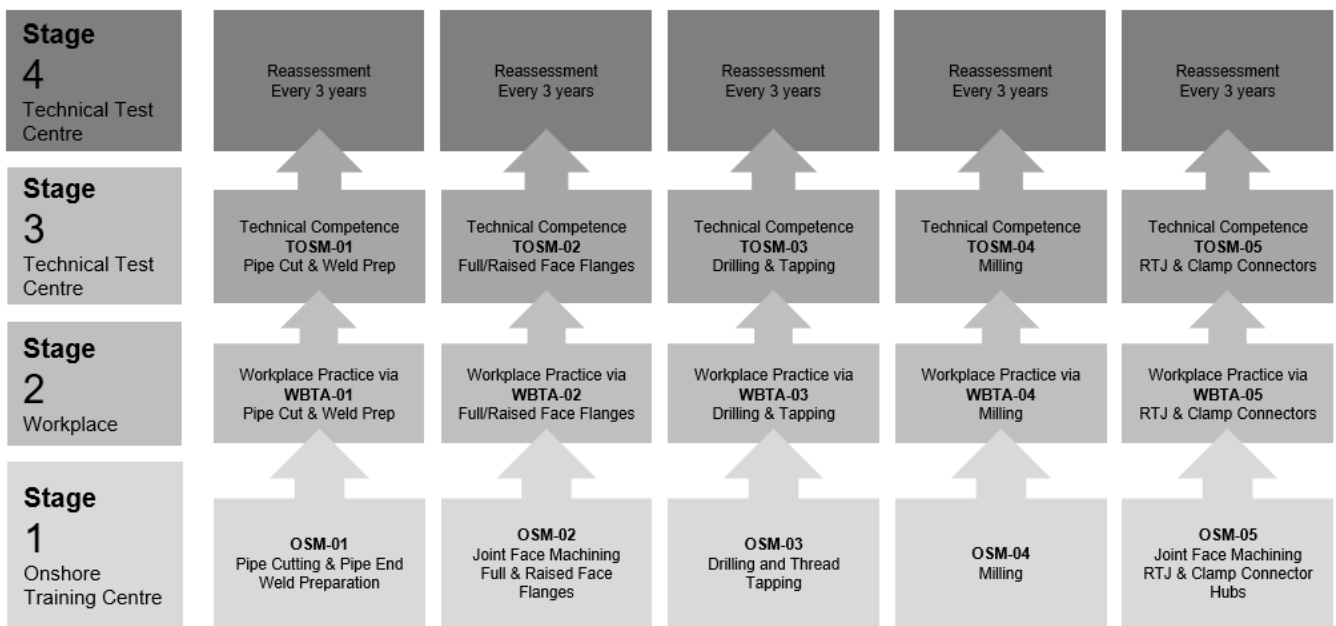


ECITB On-Site Machining Overview:

The ECITB provides a method of training and validating skills in the specialist area of on-site machining with approved training courses derived from the ECITB On-Site Machining technical training standards.

The training standards cover joint facing and milling of flanged and clamp connectors, pipe cutting and weld preparation and drilling and thread tapping operations.

ECITB On-Site Machining Route to Competency Model



ECITB OSM Training Standards

The technical training standards are:

- TS OSM 01 - On-Site Cutting and Weld Preparation
- TS OSM 02 - On-Site Joint Face Machining – Full & Raised Face Flanges
- TS OSM 03 - On-Site Drilling and Thread Tapping
- TS OSM 04 - On-Site Milling
- TS OSM 05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs

ECITB OSM Approved Courses (onshore training centre based)

There are five ECITB approved OSM course combinations which are derived from the training standards:

- OSM 01 - On-Site Cutting and Weld Preparation – 2 days duration
- OSM 02 - On-Site Joint Face Machining – Full & Raised Face Flanges – 2 days duration
- OSM 03 - On-Site Drilling and Thread Tapping – 2 days duration
- OSM 04 - On-Site Milling – 2 days duration
- OSM 05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs - 3 days duration

These courses are grant aided for ECITB registered employers.



Work Based Task Assignments

A new approach to the workplace consolidation of knowledge has been developed; Work Based Task Assignments. Each assignment lists the activities to be undertaken by the learner and validated by the supervisor.

Five work-based task assignments have been approved by the ECITB:

- OSM 01 - On-Site Cutting and Weld Preparation
- OSM 02 - On-Site Joint Face Machining – Full & Raised Face Flanges
- OSM 03 - On-Site Drilling and Thread Tapping
- OSM 04 - On-Site Milling
- OSM 05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs

The task assignments are normally completed between three to twelve months after the initial training course and the learner can then undertake an ECITB approved Technical Test.

ECITB OSM Technical Tests (onshore test centre based)

Technical Testing with an associated ECITB certificate of achievement plays a key role in validating an Individual's skill, ability, and job knowledge in a specific task area.

Each test consists of a knowledge test and practical activity test against identified test criteria.

There are five ECITB approved Technical Tests covering the On-Site Machining:

- TOSM 01 - On-Site Cutting and Weld Preparation – 1-day duration
- TOSM 02 - On-Site Joint Face Machining – Full & Raised Face Flanges– 1-day duration
- TOSM 03 - On-Site Drilling and Thread Tapping – 1-day duration
- TOSM 04 - On-Site Milling – 2 days duration
- TOSM 05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs – 2 days duration

These tests are grant aided for ECITB registered employers.

ECITB On-Site Machining Technical Test Application Procedure

Stage 3 requires each individual to complete a formal assessment of their job knowledge, skills, and ability in each On-Site Machining subject area. The ECITB technical competence validation tests are standards-based consisting of a bank of online knowledge questions and a practical task to validate the learner's skills, knowledge, and ability.

Successful candidates attain the ECITB certificate of achievement which is valid for a period of 3 years.

Stage 3 must be completed within **12 months** of Stage 1 and unsuccessful candidates must wait a minimum period of **4 weeks** between an unsuccessful test session and the next test session to allow for a period of training to address any skills or knowledge gaps.

Newly Trained Workers must have successfully completed Stages 1 and 2 and must submit their completed Work Based Task Assignments and OSM Approved Course certificate to the Test Centre prior the test session. **Stage 3 Technical Testing must be completed within 12 months of Stage 1 training.**

Experienced Workers are defined as an individuals with a mechanical background typically via an apprenticeship and experience in the engineering construction industry, with verifiable relevant and sustained recent experience in on-site machining activities. The individual would hold safety certificates such as the CCNSG Safety Passport or BOISET/MIST certificates.

Employed Experienced Workers will require:

1. A company letter of endorsement confirming attendance of on-site machining training and that the individual has workplace experience relevant to the OSM subject area to be tested in.



2. Copies of pertinent ECITB certificates (where applicable) and preferably any Non-ECITB on-site machining training certificates (where applicable) relevant to the OSM subject area to be tested in.

Private Individual Experienced Workers will require:

1. A detailed CV with two referees verifying that OSM activities are carried out regularly and workplace experience has been obtained relevant to the OSM subject area to be tested in.
2. Copies of pertinent ECITB certificates (where applicable) or Non-ECITB on-site machining training certificates relevant to the OSM subject area to be tested in.

Experienced Workers who attend an OSM training course as “refresher training” will be required to wait a minimum period of 4 weeks before being granted access to the relevant technical test.

Stage 4 requires an individual to re-validate the ECITB technical competence validation test certification achieved at Stage 3 upon expiry after 3 years.

The Test Centre will confirm the following information with the employer/candidate before arranging the test session:

- **Previous TOSM certificate of achievement** must be submitted for review before arranging the test session.
- **Candidates with expired TOSM test certificates** must submit a Company letter of endorsement confirming OSM activities are regularly carried out. Private individuals will be required to submit a detailed CV with two referees confirming OSM activities are carried out regularly.



Program Title

- ECITB On-Site Machining

Course Title

- **OSM-01 – On-Site Cutting and Weld Preparation**

Course Summary

- ECITB technical training standard covering the in-situ machining, health, safety, quality, technical and practical learning objectives relevant to pipe cutting and end weld preparation of pipework using portable machine tools.

Certification

- ECITB Training and Technical Test Certification
- Training Certificates - 12 months validity for technical test application purposes
- Technical Test Certificates - 3 years validity

Course Duration

- 2 Days

Class Size

- Maximum 4 delegates

Course Content

- Instruction and practice in observing health and safety requirements and approved working practices
- Equipment safety and safety valve operation
- Types of tools and methods
- Inspection, measurement and drawing interpretation
- Equipment component identification
- Equipment and cutting tool selection
- Basic tool maintenance
- Practical use of clamshell tools
- Practical use of various tool slides, boring attachments and tooling to carry out additional prep/counter bore/excavation profiles
- Instruction and practice in the selection and grinding of cutting tools
- Reporting and Quality Assurance

Pre- requisites

- Preferred relevant previous machining as a toolmaker, turner, fitter/turner

Related Technical Test

- TOSM-01 - On-Site Cutting and Weld Preparation



Program Title

- ECITB On-Site Machining

Course Title

- **OSM-02 – On-Site Joint Face Machining – Full & Raised Face Flanges**

Course Summary

- ECITB technical training standard covering the in-situ machining, health, safety, quality, technical and practical learning objectives relevant to basic flange facing of full and raised face flanges using portable machine tools.

Certification

- ECITB Training and Technical Test Certification
- Training Certificates - 12 months validity for technical test application purposes
- Technical Test Certificates - 3 years validity

Course Duration

- 2 Days

Class Size

- Maximum 4 delegates

Course Content

- Instruction and practice in observing health and safety requirements and approved working practices
- Equipment safety and safety valve operation
- Types of tools and methods
- Inspection, measurement and drawing interpretation
- Interpretation of manufacturer technical data sheets
- Equipment component identification
- Equipment and cutting tool selection
- Basic tool maintenance
- Practical use of equipment to machine flat and raised face applications
- Overview of various tool slides, boring attachments and tooling to carry out additional profiles
- Instruction and practice in the selection and grinding of cutting tools
- Reporting and Quality Assurance

Pre-requisites

- Preferred relevant previous machining as a toolmaker, turner, fitter/turner

Related Technical Test

- TOSM-02 - On-Site Joint Face Machining – Full & Raised Face Flanges



Program Title

- ECITB On-Site Machining

Course Title

- **OSM-04 - On-Site Milling**

Course Summary

- ECITB technical training standard covering the in-situ machining, health, safety, quality, technical and practical learning objectives relevant to milling of pump beds and shaft keyways using portable machine tools.

Certification

- ECITB Training and Technical Test Certification
- Training Certificates - 12 months validity for technical test application purposes
- Technical Test Certificates - 3 years validity

Course Duration

- 2 Days

Class Size

- Maximum 4 delegates

Course Content

- Instruction and practice in observing health and safety requirements and approved working practices
- Equipment safety and safety valve operation
- Types of tools and methods
- Inspection, measurement and drawing interpretation
- Interpretation of manufacturer technical data sheets
- Equipment component identification
- Equipment and cutting tool selection
- Basic tool maintenance
- Practical use of portable milling equipment
- Instruction and practice in the selection and grinding of cutting tools
- Reporting and Quality Assurance

Pre-requisites

- Preferred relevant previous machining as a toolmaker, turner, fitter/turner

Related Technical Test

- TOSM-04 - On-Site Milling



Program Title

- ECITB On-Site Machining

Course Title

- **OSM-05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs**

Course Summary

- ECITB technical training standard covering the in-situ machining, health, safety, quality, technical and practical learning objectives relevant to advanced joint facing of RTJ flanges and clamp hubs using portable machine tools.

Certification

- ECITB Training and Technical Test Certification
- Training Certificates - 12 months validity for technical test application purposes
- Technical Test Certificates - 3 years validity

Course Duration

- 3 Days

Class Size

- Maximum 4 delegates

Course Content

- Instruction and practice in observing health and safety requirements and approved working practices
- Equipment safety and safety valve operation
- Types of tools and methods
- Inspection, measurement and drawing interpretation
- Interpretation of manufacturer technical data sheets
- Equipment component identification
- Equipment and cutting tool selection
- Basic tool maintenance
- Practical use of equipment to machine RTJ flanges and clamp connector hubs
- Overview of various tool slides, boring attachments, back facing heads, extensions and tooling to carry out additional joint profiles
- Instruction and practice in the selection and grinding of cutting tools
- Reporting and Quality Assurance

Pre- requisites

- Preferred relevant previous machining as a toolmaker, turner, fitter/turner
- OSM-02 - On-Site Joint Face Machining – Full & Raised Face Flanges

Related Technical Test

- TOSM-05 - On-Site Joint Face Machining – RTJ Flanges & Clamp Connector Hubs