ECITB TRAINING STANDARDS CATALOGUE

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www.ecitb.org.uk

Contents

Introduction

Training standards set out the training necessary to develop the knowledge and skills required to perform an activity in engineering construction. They do not form part of any recognised regulated qualification, but their contents are aligned with either the assessment requirements of a related ECITB RQF qualification, performance and/or knowledge criteria of an Occupational Standard or another nationally recognised standard/approved code of practice.

About the structure of training standards

1. Training standard documents are structured so that each learning outcome is supported by 'enabling objectives' (the sentence) and 'key learning points' (the list) which, when collectively achieved, will result in the fulfilment of the specified learning outcome.
2. The key learning points are there to both contextualise the enabling objective and state what should be known/understood or demonstrated by the learner upon completion of training.
3. Exercises and 'real-life' examples used in course materials must be contextualised to the learners' working environment e.g., the Engineering Construction Industry.
4. Practical elements of training should be underpinned by practical instruction in addition to sufficient study time for consolidation of learning.

Guidance for developing courses

Courses can be developed from one or more training standards to meet the training needs of a company. If a training standard is used as a basis for a course, then all of its content must be used. The learner must be able to provide evidence that they have achieved the learning outcomes through assessment of the enabling objectives. Some courses have training pre-requisites, and these are detailed on each training standard.

Learning consolidation

At the end of the training course, a consolidation activity must take place. This can be a knowledge test, submission of a personal action plan linked to the training by the learner or something else.

When a course is submitted for approval to PCAS it must include a consolidation activity at the end of the training. A rational for the consolidation activity along with an explanation of how completion of the activity will be ensured, must be included with the course PCAS submission. The consolidation activity must clearly cover all the learning outcomes and all enabling objectives – demonstrate this by including it in the mapping.

If the consolidation is a knowledge test, then ensure that the question paper includes a minimum of one multiple-choice or short answer question for each of the enabling objective IDs. Ideally short answer questions should have an emphasis on real examples and test the learners understanding of how to behave appropriately in each situation.

Provider course approval scheme –www.ecitb.org.uk/provider-course-approval/

- See information at www.ecitb.org.uk/provider-course-approval
- Obtain a training standards licence
- Any questions please contact programmeadmin@ecitb.org.uk

Craft and technical standards

Common

TS CO 02	Work safely and minimise risk in engineering construction
TS CO 03	Identify and deal with hazards and emergencies in the engineering construction work environment

Condition monitoring

TS CM 01	Review an engineering asset to determine the condition monitoring requirements
TS CM 02	Perform asset condition monitoring
TS CM 03	Review effectiveness of condition monitoring activities

Drone operations

TS IDO02	Foundation UAS training

Mechanical joint integrity

TS MJI 01	Mechanical joint integrity first principles
TS MJI 10	Hand torque bolted flange connections
TS MJI 11	Hand torque bolted clamp connections
TS MJI 18	Hydraulically tensioned bolted connections
TS MJI 19	Hydraulically torqued bolted flange connections
TS MJI 20	Hydraulically torqued bolted clamp connections
TS MJI 21	Hydraulically tensioned subsea bolted connections
TS MJI 22	Hydraulically torqued subsea bolted connections
TS MJI 23	Powered torque gun bolted connections
TS WT02-MJI33	Torque and tension wind turbine bolted connections

Moving loads

Appointed person moving loads

TS APML 01	Appointed person moving loads

Slinger/banksman

TS SB01	Slinger/banksman

Non-destructive testing

TS NDT 01	Inspect engineering construction components and plant for discontinuity using NDT eddy current testing
TS NDT 02	Deal with identified indications and defects in engineering construction components and plant using NDT eddy current testing
TS NDT 03	Inspect engineering construction components and plant for discontinuity using NDT magnetic testing
TS NDT 04	Deal with identified indications and defects in engineering construction components and plant using NDT magnetic testing
TS NDT 05	Inspect engineering construction components and plant for discontinuity using NDT ultrasonic testing
TS NDT 06	Deal with identified indications and defects in engineering construction components and plant using NDT ultrasonic testing
TS NDT 07	Inspect engineering construction components and plant for discontinuity using NDT radiographic testing
TS NDT 08	Deal with identified indications and defects in engineering construction components and plant using NDT radiographic testing

TS NDT 09 Inspect engineering construction components and plant for discontinuity using NDT penetrant testing
TS NDT 10 Deal with identified indications and defects in engineering construction components and plant using NDT penetrant testing
TS NDT 11 Inspect engineering construction components and plant for discontinuity using NDT visual testing
TS NDT 12 Deal with identified indications and defects in engineering construction components and plant using NDT visual testing

On-site machining

TS OSM 01 Pipe cutting
TS OSM 02 Seal joint facing (full faced raised flanges)
TS OSM 03 Drilling and thread tapping
TS OSM 05 Seal joint facing (RTJ flanges and clamp connector hubs)
TS OSM 06 Pipe preparation and weld excavation

Pipefitting

Welding pipe

TS WPL 07 Interpret welding procedures, specifications and standards in engineering construction
TS WPP 01 Join pipe in engineering construction by TIG welding
TS WPP 02 Join pipe in engineering construction by flux cored welding
TS WPP 03 Join pipe in engineering construction by TIG/MMA
TS WPP 04 Join pipe in engineering construction by MMA
TS WPP 05 Join pipe in engineering construction by MIG/MAG

Plating

Welding plate

TS WPL 01 Join plate in engineering construction by TIG welding
TS WPL 02 Join plate in engineering construction by flux cored welding
TS WPL 03 Join plate in engineering construction by TIG/MMA
TS WPL 04 Join plate in engineering construction by MMA
TS WPL 05 Join plate in engineering construction by MIG/MAG
TS WPL 06 Gouging in engineering construction for welding activities
TS WPL 07 Interpret welding procedures, specifications and standards in engineering construction

Pressure safety valves

TS PSV01 Fundamentals of pressure safety valves

Scaffolding (International only)

TS SCF01 Scaffolding labourer
TS SCF02 Scaffolding level 2
TS SCF03 Scaffolding level 3
TS SCF04 Scaffolding inspection
TS SCF05 System scaffolding

Small bore tubing

TS SBTC 01	Assemble and install small bore tubing assemblies – twin ferrule
TS SBTC 02	Assemble and install small bore tubing with cone & threaded medium and high-pressure module
TS SBTC 03	Assemble and install small bore tubing with cone & threaded medium and high pressure
TS SBTC 04	Hydrotest SBT assemblies

Welding

High integrity

TS HIW 01	Welding Metallurgy
TS HIW 02	Main steam pipe CrMoV high integrity manual welding (paired welder)
TS HIW 03	Main steam pipe CrMoV high integrity semi-automated welding (paired welder)
TS HIW 04	Tight access tube TIG welding
TS HIW 05	Tight access tube TIG/MMA (paired welder)
TS HIW 06	Stainless steel large bore pipe TIG/MMA welding
TS HIW 07	Nickel alloy large bore pipe TIG/MMA welding
TS HIW 08	High alloy ferritic, creep resistant steel TIG welding
TS HIW 09	Duplex steel TIG welding
TS HIW 10	High nickel alloy TIG welding
TS HIW 11	TIG welding with restricted visual access
TS HIW 12	TIG and MMA window welding
TS HIW 13	Non-purged welding of high alloy pipe
TS HIW 14	Stainless steel pipe welding (MMA root)
TS HIW 15	High alloy creep resistant MMA welding
TS HIW 16	Orbital welding

Pipe

TS WPL 07	Interpret welding procedures, specifications and standards in engineering construction
TS WPP 01	Join pipe in engineering construction by TIG welding
TS WPP 02	Join pipe in engineering construction by flux cored welding
TS WPP 03	Join pipe in engineering construction by TIG/MMA
TS WPP 04	Join pipe in engineering construction by MMA
TS WPP 05	Join pipe in engineering construction by MIG/MAG

Plate

TS WPL 01	Join plate in engineering construction by TIG welding
TS WPL 02	Join plate in engineering construction by flux cored welding
TS WPL 03	Join plate in engineering construction by TIG/MMA
TS WPL 04	Join plate in engineering construction by MMA
TS WPL 05	Join plate in engineering construction by MIG/MAG
TS WPL 06	Gouging in engineering construction for welding activities
TS WPL 07	Interpret welding procedures, specifications and standards in engineering construction

Wind turbines

General

TS HBR 01	Wind turbine hub rescue
TS WT02-MJI33	Torque and tension wind turbine bolted connections
TS WTT01	Simple composite blade repairs
TS WTT02	Wind turbine composite blade repairs

Statutory inspection

TS WT01-01	Wind core module
TS WT01-02	Wind turbine lift maintenance and statutory inspection
TS WT01-03	Compact and davit cranes
TS WT01-04	Inspection of working at height systems and equipment

Other standards in craft and technical, site operations and management and professional sections are also applicable to the wind industry.

Site operations standards

These training standards are specific to their area. They do not contain general site health and safety information. Centres wishing to deliver a general ECITB site health and safety course should apply to be a CCNSG Safety Passport provider.

Abrasive wheels

TS AW 01	Principles of abrasive wheels
TS AW 02	Hand-held abrasive wheels
TS AW 03	Mounted abrasive wheels

Confined space working

TS CS 01	Working in low risk confined spaces
TS CS 02	Working in medium risk confined spaces
TS CS 03	Working in high risk confined spaces
TS CS 04	Confined space appreciation
TS CS 05	Principles of operating in confined spaces

Fire watching

FW01	Fire watcher

Grinding, profiling and polishing

TS GPP 01	Basic grinding, profiling and polishing

Manual handling

TS MH 01	Manual handling

Working at height

TS WH 01	Working at height

Working safely with tools

TS WST04	Working safely with hand and power tools

Management & professional standards

Commercial awareness

TS CA 01-01 An introduction to commercial awareness for the engineering construction industry
TS HCA1-01 Setting up engineering construction projects in a modern contracting environment
TS HCA1-02 Understanding key commercial contract terms and provisions in an engineering construction project
TS HCA1-03 Managing commercial expectations of an engineering construction project
TS HCA1-04 Managing commercial performance of an engineering construction project

Commissioning and start up

TS CSU01 Commissioning and start up manager
TS CSU02 Commissioning and start up engineer

Design and draughting

Plant layout and design

PLD 01 Principles of plant equipment layout
PLD 04 Cranes and access
PLD 08 Pipe racks and sleepers
PLD 10 Flares
PLD 12 Storage tanks
PLD 13 Piping design
PLD 24 Horizontal, vertical and sloping vessels
PLD 25 Heat exchangers and air coolers
PLD 26 Pumps and turbines
PLD 28 Fired heaters

Diversity and inclusion

TS DI-01 Introduction to diversity and inclusion
TS DI-02 Unconscious bias

Human performance

TS HuP 01 Human performance - foundation

Managing welding operations

TS MWO 01 Identify and assess the hazards arising from welding operations
TS MWO 02 Review an engineering activity to determine welding requirements
TS MWO 03 Determine and secure resource requirements to achieve welding objectives
TS MWO 04 Deploy resources to welding activities
TS MWO 05 Monitor welding activities
TS MWO 06 Solve problems in weld production
TS MWO 07 Participate in welding quality control and quality improvement
TS MWO 08 Promote productivity improvement in welding activities
TS MWO 09 Develop the welding team

Offshore decommissioning

TS OSD 01 Introduction to offshore decommissioning

Project control, estimating, planning & scheduling

Level 2 (GCSE equivalent)

PC TS02-01 Introduction to project controls
PC TS02-02 Introduction to Commercial Awareness and Risk
PC TS02-03 Gather and Process Data for Project Control Activities
PC TS02-04 Introduction to Monitoring, Forecasting and Reporting
PC TS02-05 Introduction to Quality Management Systems and Change Management
PC TS02-06 Introduction to Estimating
PC TS02-07 Introduction to Planning and Scheduling

PC TS02-08 Introduction to Cost Engineering
PC TS02-09 Communicating with Stakeholders
PC TS02-10 Introduction to Health & Safety, Environmental, Ethical and Behavioural Procedures
PC TS02-11 Introduction to Self-development

Level 3 (A-level equivalent)

PC TS03-01 Project control overview
PC TS03-02 Breakdown and coding structures
PC TS03-03 Project control reporting and related governance systems
PC TS03-04 Monitoring risk, opportunity and uncertainty
PC TS03-05 Monitoring, tracking, forecasting and reporting project progress
PC TS03-06 Commercial awareness and planning procurement activities
PC TS03-07 Financial controls and techniques
PC TS03-08 Estimating practice
PC TS03-09 Planning and scheduling practice
PC TS03-10 Budgeting and cost control practice
PC TS03-11 Supporting construction or manufacturing planning
PC TS03-12 Optimisation and efficiency
PC TS03-13 Generating and using statistical data
PC TS03-14 Using learning curve models
PC TS03-15 Communicating with stakeholders
PC TS03-16 Professional ethics
PC TS03-17 Professional development

Level 5 (Foundation degree equivalent)

PC TS05- 01 Manage effective application of quality processes and IT
PC TS05- 02 Scoping and requirements definition
PC TS05- 03 Acquiring and acting on information
PC TS05- 04 Risk analysis and management (including opportunity and uncertainty)
PC TS05- 05 Maintaining, controlling and reporting on project progress
PC TS05- 06 Task & project close-out
PC TS05- 07 Advanced estimating practice
PC TS05- 08 Advanced planning and scheduling practice
PC TS05- 09 Advanced budgeting and cost control practice
PC TS05- 10 Interpreting and applying financial controls
PC TS05- 11 Leading the establishment of construction or manufacturing plans
PC TS05- 12 Earned value management
PC TS05- 13 Advanced optimisation and efficiency practice
PC TS05- 14 Analysing and interpreting statistical data
PC TS05- 15 Developing and calibrating learning curve models
PC TS05- 16 Continuous improvement
PC TS05- 17 Bids, tenders and commercial contracts
PC TS05- 18 Managing procurement activities
PC TS05- 19 Claims and dispute resolution
PC TS05- 20 Stakeholder management
PC TS05- 21 Professional ethics
PC TS05- 22 Continuing professional development (self and others)
PC TS05- 23 Managing and developing others

Root cause analysis

TS RCA 01 Root cause analysis

Supervising excavations

IES 03 Supervising excavations