

# EC ITB\*



## ECITB TRAINING STANDARDS CATALOGUE

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## 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 a National 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 in order 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 rationale 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 candidates understanding of how to behave appropriately in each situation.

## Provider course approval scheme

- Obtain a training standards licence
- Design the course to meet the standard(s) including:
  - Course Scheme of Work
  - Lesson Plans
  - Slides and learner handouts/resources
  - Testing materials
- Complete the:
  - PCAS questionnaire
  - PCAS Learning Outcome matrix OR the right-hand column on newer standards
- Request a ShareFile link from [ray.skene@ecitb.org.uk](mailto:ray.skene@ecitb.org.uk) (craft & technical) or [catherine.lambert@ecitb.org.uk](mailto:catherine.lambert@ecitb.org.uk) (management & professional)
- Submit your course for approval

## Craft and Technical standards

### Abrasive wheels

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

### Grinding, profiling and polishing

TS GPP 01	Basic grinding, profiling and polishing
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### 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 IDO01	Industrial drone operations
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### Electrical

#### Engineering construction maintenance

##### Level 3 (A-level equivalent)

TS MPS Elec 01	Position and install engineering construction electrical plant and equipment
TS MPS Elec 02	Dismantle engineering construction electrical plant and equipment
TS MPS Elec 03	Carry out planned maintenance procedures on electrical plant and equipment in engineering construction
TS MPS Elec 04	Adjust electrical plant and equipment to meet operating requirements in engineering construction
TS MPS Elec 05	Remove components from electrical plant and equipment in engineering construction
TS MPS Elec 06	Replace components from electrical plant and equipment in engineering construction
TS MPS Elec 07	Monitor the performance and condition of electrical plant and equipment in engineering construction
TS MPS Elec 08	Assess the performance and condition of engineering construction electrical plant and equipment
TS MPS Elec 09	Diagnose and determine the causes of faults in engineering construction electrical plant and equipment
TS MPS Elec 10	Assemble components of electrical plant and equipment in engineering construction
TS MPS Elec 11	Repair components from engineering construction electrical plant and equipment
TS MPS Elec 12	Hand over engineering construction electrical plant and equipment
TS MPS Elec 13	Determine the feasibility of repairing components from electrical plant and equipment in engineering construction
TS MPS Elec 14	Test the performance and condition of engineering construction electrical plant and equipment
TS MPS Elec 15	Analyse the test results relating to the tested engineering construction electrical plant and equipment



#### Installing engineering construction plant and systems

##### Level 3 (A-level equivalent)

TS IPS Elec 01	Install engineering construction electrical wiring systems, wiring enclosures and equipment (plant)
TS IPS Elec 02	Connect engineering construction wiring systems and equipment using safe and approved methods (plant)
TS IPS Elec 03	Inspect and test an engineering construction electrical installation (plant)
TS IPS Elec 04	Diagnose and correct electrical faults (plant) in engineering construction

### Instrument & control

#### Engineering construction maintenance

##### Level 3 (A-level equivalent)

TS MPS I&C 01	Position and install engineering construction instrument and control systems
TS MPS I&C 02	Dismantle engineering construction instrument and control systems
TS MPS I&C 03	Carry out planned engineering construction maintenance on instrument and control systems

TS MPS I&C 04	Adjust instrument and control systems to meet operating requirements in engineering construction
TS MPS I&C 05	Remove components from instrument and control systems in engineering construction
TS MPS I&C 06	Replace components on instrument and control equipment in engineering construction
TS MPS I&C 07	Monitor performance and condition of instrument and control systems in engineering construction
TS MPS I&C 08	Assess the performance and condition of engineering construction instrument and control systems
TS MPS I&C 09	Assemble components of instrument and control systems in engineering construction
TS MPS I&C 10	Repair components from engineering construction instrument and control systems
TS MPS I&C 11	Hand over engineering construction instrument and control systems
TS MPS I&C 12	Determine the feasibility of repairing components from instrument and control systems in engineering construction
TS MPS I&C 13	Test the performance and condition of instrument and control systems in engineering construction
TS MPS I&C 14	Analyse the test results relating to the tested engineering construction instrument and control system
TS MPS I&C 15	Diagnose and determine the causes of faults in engineering construction instrument and control systems

## Mechanical

### Engineering construction maintenance

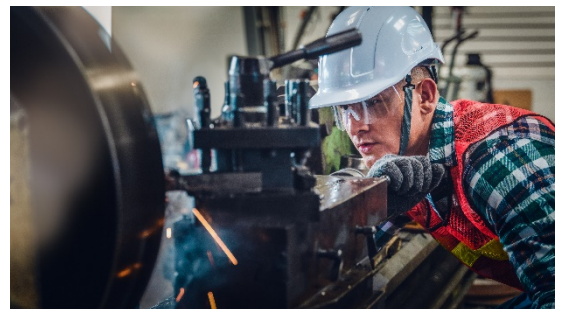
#### Level 3 (A-level equivalent)

TS IPS Mech 08	Position and install engineering construction mechanical plant and equipment
TS MPS Mech 02	Dismantle engineering construction mechanical plant and equipment
TS MPS Mech 03	Carry out planned maintenance procedures on engineering construction mechanical plant and equipment
TS MPS Mech 04	Adjust engineering construction mechanical plant and equipment to meet operating requirements
TS MPS Mech 05	Remove components from engineering construction mechanical plant and equipment
TS MPS Mech 06	Replace components in engineering construction mechanical plant and equipment
TS MPS Mech 07	Assess the performance and condition of engineering construction mechanical plant and equipment
TS MPS Mech 08	Diagnose and determine the cause of faults in engineering construction mechanical plant and equipment
TS MPS Mech 09	Assemble bolted joints to a specification in engineering construction
TS MPS Mech 10	Repair components from engineering construction mechanical plant and equipment to operational condition
TS MPS Mech 11	Hand over engineering construction mechanical plant and equipment
TS MPS Mech 12	Determine the feasibility of repairing engineering construction mechanical plant and equipment components
TS MPS Mech 13	Test the performance and condition of engineering construction mechanical plant and equipment
TS MPS Mech 14	Analyse the test results relating to the tested engineering construction mechanical plant and equipment
TS MPS Mech 15	Establish that an engineering construction maintenance process has been completed to specification

### Installing engineering construction plant and systems

#### Level 3 (A-level equivalent)

TS IPS Mech 01	Shape engineering construction mechanical components by material removal using hand tools engineering construction
TS IPS Mech 02	Prepare machine tools to achieve material removal for engineering construction requirements
TS IPS Mech 03	Mount and set work holding devices and work pieces for engineering construction
TS IPS Mech 04	Set and adjust engineering construction machine tools
TS IPS Mech 05	Shape engineering construction products by material removal using machine tools
TS IPS Mech 06	Mark out to the required engineering construction specification
TS IPS Mech 07	Assemble engineering construction mechanical components to meet specification
TS IPS Mech 08	Position and install engineering construction mechanical plant and equipment
TS IPS Mech 09	Test the performance and condition of installed engineering construction mechanical plant and equipment
TS MPS Mech 02	Dismantle engineering construction mechanical plant and equipment



## Supporting the installation of engineering construction plant & systems

### Level 2 (GCSE equivalent)

TS SIPS Mech 01 Shape engineering construction mechanical components by material removal using hand tools engineering construction

TS SIPS Mech 02 Support the assembly of engineering construction mechanical components

TS SIPS Mech 03 Support the positioning and installation of engineering construction mechanical plant and equipment

### 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 MJI 30	Hand torqued wind turbine bolted connections
TS MJI 31	Hydraulically tensioned wind turbine bolted connections
TS MJI 32	Hydraulically torqued wind turbine bolted connections



### Moving loads

#### Appointed person moving loads

TS APML 01 Appointed person moving loads

#### Inspection

TS WRI-01 Wire rope inspection

#### Lifting and positioning engineering construction loads

##### Level 2 (GCSE equivalent)

TS LAPL 01	Principles of moving engineering construction loads
TS LAPL 02	Performing simple lifting and positioning operations in engineering construction
TS LAPL 03	Move engineering construction loads under supervision

#### Lifting, positioning and installing structures, plant and equipment

##### Level 3 (A-level equivalent)

TS ML 01	Prepare loads for moving or lifting and positioning in engineering construction
TS ML 02	Move loads in engineering construction
TS ML 03	Determine resource requirements to achieve moving, lifting and positioning objectives in engineering construction
TS ML 04	Lift and position loads in engineering construction
TS ML 05	Determine technical requirements to achieve moving, lifting and positioning objectives in engineering construction
TS ML 06	Dismantle engineering construction assemblies for movement
TS ML 07	Contribute to the organisation of work activities in relation to the movement of loads in engineering construction
TS ML 08	Contribute to technical leadership in the movement of loads in engineering construction

#### Slinger/banksman

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

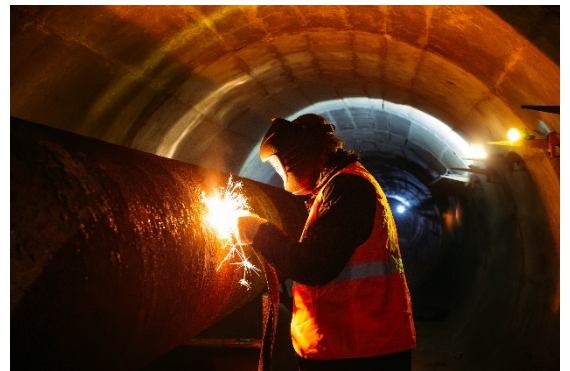
TS OSM 01	On-site pipe cutting and pipe end weld preparation
TS OSM 02	On-site joint face machining - full & raised face flanges
TS OSM 03	On-site drilling and thread tapping
TS OSM 04	On-site milling
TS OSM 05	On-site joint face machining - RTJ & clamp connector hubs

## Pipefitting

### Installing engineering construction plant and systems

#### Level 3 (A-level equivalent)

TS IPS Pipe 01	Shape engineering construction pipework components by material removal using hand tools
TS IPS Pipe 02	Assemble engineering construction pipework components to meet specification
TS IPS Pipe 03	Position and install engineering construction pipework
TS IPS Pipe 04	Mark out to the required specification for pipefitting activities in engineering construction
TS IPS Pipe 05	Establish compliance of engineering construction installation with the specification
TS IPS Pipe 06	Test the integrity and condition of installed pipework in engineering construction
TS IPS Pipe 07	Shape engineering construction pipework components by manually applied pressure
TS IPS Pipe 08	Dismantle and remove engineering construction pipework components



### Supporting the installation of engineering construction plant & systems

#### Level 2 (GCSE equivalent)

TS SIPS Pipe 01	Shape engineering construction pipework components by material removal using hand tools.
TS SIPS Pipe 02	Support the assembly of engineering construction pipework components
TS SIPS Pipe 03	Support the positioning and installation of engineering construction pipework

## 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

### Installing engineering construction plant and systems

#### Level 3 (A-level equivalent)

TS FSS 01	Shape components of fabricated steel structures by material removal using hand tools in engineering construction
TS FSS 02	Assemble components of steel fabrications to meet specification in engineering construction
TS FSS 03	Manually form components to specification in engineering construction
TS FSS 04	Join materials by manually controlled welding process in engineering construction



## Supporting the installation of engineering construction plant & systems

### Level 2 (GCSE equivalent)

- TS SFSS 01 Shape components of fabricated steel structures by material removal using hand tools in engineering construction
- TS SFSS 02 Support the assembly of components for steel fabrications in engineering construction

### 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

### 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

### Steel Erecting

#### Erecting steelwork components

##### Level 2 (GCSE equivalent)

- TS SE 01 Contribute to effective working relationships in steel erecting
- TS SE 02 Work safely and minimise risk in steel erecting
- TS SE 03 Identify and deal with hazards and emergencies in steel erection
- TS SE 04 Move structural steel sections under supervision
- TS SE 05 Install Structural Steelwork Components
- TS SE 06 Work safely at height on steel structures
- TS SE 07 Assemble bolted joints in structural steelwork
- TS SE 08 Dismantle structural steelwork components



#### Lifting, positioning and installing structures, plant and equipment

##### Level 3 (A-level equivalent)

- TS Erecting 01 Prepare structural steel loads for moving in engineering construction
- TS Erecting 02 Move structural steel loads in engineering construction
- TS Erecting 03 Position and erect steel structures in engineering construction
- TS Erecting 04 Erect structural steel sections in engineering construction
- TS Erecting 05 Dismantle structural steel sections in engineering construction
- TS Erecting 06 Check that the steel structure is installed to specification in engineering construction
- TS Erecting 07 Determine technical requirements to achieve steel erecting objectives in engineering construction
- TS Erecting 08 Determine resource requirements to achieve steel erecting objectives in engineering construction

### Supporting engineering activities

#### Grinding, profiling and polishing

- TS GPP 01 Basic grinding, profiling and polishing

#### Supporting general engineering construction activities

##### Level 2 (GCSE equivalent)

- TS SECA 01 Prepare work areas in support of engineering construction activities
- TS SECA 02 Prepare materials in support of engineering construction activities
- TS SECA 03 Prepare equipment in support of engineering construction activities
- TS SECA 04 Move engineering construction loads using manually operated equipment
- TS SECA 05 Reinstate the work area after completing engineering construction activities

## Supporting the installation of engineering construction plant & systems – Mechanical

### Level 2 (GCSE equivalent)

- TS SIPS Mech 01 Shape engineering construction mechanical components by material removal using hand tools engineering construction
- TS SIPS Mech 02 Support the assembly of engineering construction mechanical components
- TS SIPS Mech 03 Support the positioning and installation of engineering construction mechanical plant and equipment

## Supporting the installation of engineering construction plant & systems – Pipefitting

### Level 2 (GCSE equivalent)

- TS SIPS Pipe 01 Shape engineering construction pipework components by material removal using hand tools.
- TS SIPS Pipe 02 Support the assembly of engineering construction pipework components
- TS SIPS Pipe 03 Support the positioning and installation of engineering construction pipework

## Supporting the installation of engineering construction plant & systems – Plating

### Level 2 (GCSE equivalent)

- TS SFSS 01 Shape components of fabricated steel structures by material removal using hand tools in engineering construction
- TS SFSS 02 Support the assembly of components for steel fabrications in engineering construction

## Supporting welding activities in engineering construction

### Level 2 (GCSE equivalent)

- TS SECO 01 Support welding operations in engineering construction
- TS SECWA 01 Support welding activities in engineering construction

## 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 MJI 31	Hydraulically tensioned wind turbine bolted connections
TS MJI 32	Hydraulically torqued 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

Standards in sections xx xx xx and xx are also applicable to the wind industry sector.



## Health & safety 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.

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### 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

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### Fire watching

FW01	Fire watcher
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### Manual handling

TS MH 01	Manual handling
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### Working at height

TS WH 01	Working at height
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### Working safely with tools

WST01	Working safely with hand tools
WST02	Working safely with power tools
WST03	Working safely with equipment



## 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

#### Level 3 (A-level equivalent)

TS DD 01	Read and extract information from engineering construction drawings and specifications
TS DD 02	Produce detailed engineering drawings to specified draughting conventions
TS DD 03	Identify, evaluate and understand factors affecting designs in engineering construction
TS DD 04	Produce engineering construction design options
TS DD 05	Evaluate engineering construction design options
TS DD 06	Complete engineering construction designs
TS DD 07	Communicate engineering construction designs

#### 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
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### 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
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### 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
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### Supervising excavations

IES 03	Supervising excavations
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