

Welding Apprenticeship Standards – Levels 2 and 3

Employer Occupational Brief (EOB)

The EOB is referred to in the Apprenticeship Standards and its purpose is to give details about the education and training requirements of the apprenticeship programmes in order to ensure that there is clarity about the required standards of learning, and that there is uniformity in the implementation and delivery of the programme.

1. Recommended criteria for Training Bodies (TBs)

Curriculum development

Before applying for approval, the TB must ensure that it has developed a timetable of classes and teaching staff that will deliver the Apprenticeship Standard in accordance with the standard itself and with the curriculum outlined below.

Facilities

Theoretical training shall be held in a, well-lit, well ventilated and comfortable room with adequate desk space for the documents and welded specimens being used. Classrooms shall be equipped with modern teaching aids, such as a whiteboard, computer and data projector, as appropriate to the teaching being carried out. The lectures must be supported by good quality visual aids, for example: PowerPoint presentations.

Practical training shall be conducted in a fully equipped work area. The range of welding and auxiliary equipment and consumables available must be sufficient in quantity to cover the maximum number of apprentices being trained concurrently. All equipment must be in good working order and fit for purpose. Instruments for checking of welding parameters must be available and calibrated, validated or verified as appropriate (for example to ISO17662).

It is the responsibility of the employer to ensure the correct protection of the apprentice.

It is essential that the facility has sufficient risk assessments in place which define the necessary requirements for the apprentices' planned activities. Risk assessments must also consider the presence of the instructor and any supporting people in close proximity to the training activity.

Risk assessments shall include (but not be limited to) welding equipment, protective screening, ventilation, welding fume extraction, personal protective equipment, welding fume COSHH assessment data, manual handling, working at heights and associated activities and the location of access and egress points.

Risk assessments shall be reviewed by the apprentice at the start of the practical training to determine their suitability. The risk assessment must be reviewed and accepted by the employer and/or the instructor.

Teaching Staff

Courses must be closely related to industrial practice and it is essential for teaching staff to have continuing contact with industry. Teaching staff can be divided into:

- Teachers for the theoretical parts.
- Instructors for the practical parts.

Theoretical teaching staff will need to combine:

1. Teaching ability - evidence of training in lecturing, public speaking or verbal communication.
2. Knowledge of the subjects being taught.
3. Knowledge and experience of current industrial practice in the subjects being taught.

Teachers for theoretical education shall at least have an International/European Welding Specialist diploma or equivalent qualification, for example a QCF Level 3 qualification in welding.

Instructors for the practical parts shall have a valid ISO 9606 certificate, or skill qualifications based on equivalent technical conditions, appropriate to the scope of training provided.

It is also recommended that instructors shall have technical knowledge at least at level of International/European Welding Specialist or equivalent qualification, for example a QCF Level 3 qualification in welding.

Monitoring of teaching performance must be carried out and recorded by the Training Body.

Documentation

A complete set of updated course notes (hard copy or electronic) should be maintained in order to ensure consistency between courses and in the event of any change of staff. Teachers should be supported by good quality reference material covering the course curriculum issued to students containing key updated information.

Records

It is strongly recommended that TB/employers carry out continuous assessments of each apprentice's progress through the apprenticeship covering his/her knowledge, practical skills and behaviours. Records of these assessments must be kept, fed back to the employer in a timely manner and made available at the end-point assessment.

2. Training Curriculum

In order to ensure consistency in delivery, it is recommended that training should be in accordance with the European/International Guidelines (Reference 1). At the national level this document is published as the National Welder Training Standard and divided into three parts:

Code of Practice CP1 – Welding operatives
Code of Practice CP2 – Craftsman Welders
Code of Practice CP3 – Master Welders

These documents are freely available at: <http://cswip.com/schemes/national-welder-training-standard/>

Taken together, CP2 and CP3 are identical to the European/International Guidelines. CP2 is the recommended training for Level 2; and CP2 plus CP3 is the recommended training for Level 3.

Training Bodies may find it more convenient to follow CP2/CP3, rather than Reference 1, as it is subdivided into separate parts.

Training Bodies may also find it beneficial to achieve certification under the Certification Scheme for Welder Training Organisations. By doing so, they would automatically meet the requirements of this document. Details of this scheme may be found in Reference 2.

3. National Occupational Standards

Training Bodies and Assessment Organisations may find it helpful to refer to National Occupational Standards which have been developed for welding occupations.

Examples of standards published by Semta applicable to Level 2 are:

SEMFEW204: Joining materials by the manual metal arc welding process
SEMFEW205: Joining materials by the manual MIG/MAG and other continuous wire processes
SEMFEW206: Joining materials by the manual TIG and plasma arc welding processes

Examples of standards published by Semta applicable to Level 3 are:

SEMFEW3-09: Welding plate using multiple manual arc welding processes SEMFEW3-08: Welding pipe/tube using multiple manual arc welding processes SEMFEW3-07: Welding materials by the oxy/fuel gas welding process
SEMFEW3-31: Producing fillet welded joints using a manual welding process

Examples of standards published by ECITB applicable to Level 2 and 3 are:

ECIW01 Join materials in by TIG welding
ECIW02 Join materials by flux cored welding
ECIW04 Join materials by MMA welding
ECIW05 Join materials by MIG/MAG welding
ECIW06 Gouging for welding activities
ECIW07 Interpret welding procedures, specifications and standards.

Full documentation on all National Occupational Standards is available by searching at:

<http://nos.ukces.org.uk/Pages/Search.aspx>

4. On-programme monitoring

There are no specific requirements in this plan for on-programme continuous monitoring of apprentices. However, in order to ensure that the apprentice is ready for the end-point assessment of his/her, knowledge, skills and behaviours, it is strongly recommended that the Training Body and/or employer carry out and record relevant on-programme monitoring.

5. Trainers/Examiners

In addition to the requirements for trainers and examiners given in Reference 1 and in Appendix 1 of the Assessment Plan, the ECITB requirements for Trainers/Testers may also be helpful, see Reference 3.

6. Engineering Council (Level 3 Apprenticeship Only)

The Engineering Council's rules for the registration of Engineering Technicians are contained within the document UK SPEC which is attached for reference. Engineering Council registration can only be achieved through membership of a licenced Professional Engineering Institution. The Welding Institute is the professional body for Welding and Joining in the UK. On successful completion of the Level 3 Apprenticeship Standard, applicants seeking Technician grade membership of The Welding Institute (TechWeldI) will also be eligible for Engineering Technician (EngTech) registration with the Engineering Council. The requirements for Technician grade membership of The Welding Institute are also attached for reference. Other licenced Professional Engineering Institutions have similar rules.

7. References

1. EWF/IIW Guideline – European\International Welder. Minimum Requirements for the Education, Examination and Qualification. IAB-089 r5-15.
2. Document No. CSWTO-1-02, Requirements for the Certification of Welder Training Organisations, see <http://www.cswip.com/schemes/certification-scheme-for-welder-training-organisations/>
3. ECITB Trainer-Tester Criteria Matrix, available at <http://www.ecitb.org.uk>