



CERTIFICATION SCHEME FOR PERSONNEL

DOCUMENT NO. CSWIP-PER-1-99-WP **(formerly CSWIP-PED-1-99-WP)**

Requirements for the Qualification of Welding and Brazing Procedures

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Issued under the authority of the Governing Board for Certification

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CSWIP is administered by TWI Certification Ltd

The use of the UKAS Accreditation Mark indicates accreditation in respect of those activities covered by
Accreditation Certificate No 0025

Foreword

The Certification Scheme for Personnel (CSWIP) is a comprehensive scheme which provides for the examination and certification of individuals seeking to demonstrate their knowledge and/or competence in their field of operation. The scope of CSWIP includes Welding Inspectors, Welding Supervisors, Welding Instructors, Cathodic Protection Personnel, Bolting Technicians, Plant Inspectors, Plastics Welders, Drill-stem Inspectors, Heat Treatment Operatives, Brazing Examiners, Underwater Inspection personnel, NDT personnel and Plant Inspectors, Welders, Welding Operators and Brazers.

CSWIP is managed by the Certification Management Board, which acts as the Governing Board for Certification, in keeping with the requirements of the industries served by the scheme. The Certification Management Board, in turn, appoints specialist Management Committees to oversee specific parts of the scheme. All CSWIP Boards and Committees comprise member representatives of relevant industrial and other interests. TWI Certification Ltd is accredited by UKAS to BS EN ISO/IEC 17065⁽¹⁾ for certification of processes.

TWI Certification Ltd understands the importance of impartiality in carrying out its certification activities, managing conflict of interest and ensuring the objectivity of all its certification activities, in accordance with BS EN ISO/IEC 17065.

Access to certification

Access to certification is not improperly restricted. The sole criteria for certification are given in the document (and any subsequent amendments) and no other criteria will be applied. Certification is not conditional on the candidate applying for other services or membership from TWI Certification Ltd, its parent, or any other groups or associations.

1 General

1.1 Scope

This document prescribes the requirements for the qualification of welding and brazing procedures in order for manufacturers seeking to comply with the Pressure Equipment (Safety) Regulations 2016 (as amended) or with any other relevant standard or client specification, that require such approval e.g. EU Pressure Equipment Directive (2014/68/EU).

1.2 Mutual Recognition Agreement

TWI Certification Ltd has entered into a mutual recognition agreement with EU Recognised Third Party Organisations to provide those manufacturers who require to satisfy compliance with Pressure Equipment Directive 2014/68/EU access to the appropriate conformity testing and qualification. Manufacturers who wish to obtain EU compliant qualification testing should identify this requirement on their application form.

1.3 Responsibilities

TWI Certification Ltd is a Recognised Third Party Organisation (RTPO) for the qualification of welding and brazing procedures, within the meaning set out in Regulation 52, Pressure Equipment (Safety) Regulations 2016. TWI Certification Ltd is not authorised or notified to assess or establish conformity with the whole of the Regulation.

TWI Certification Ltd acts as the Examining and Certifying Body in respect of permanent joints produced by welding and brazing procedures. It is responsible for ensuring that the requirements for qualification testing are satisfied and that appropriate qualification certificates are issued following successful qualification tests.

The individual requirements for qualification testing are specified in the appropriate standards. It is the manufacturer's responsibility to select the standard. Examples are given in section 2. Qualification testing and the issue of certificates can only be carried out to recognised standards and it should be noted that the rules pertaining to testing and the validity of qualification certificates varies between the different standards.

It is the manufacturer's responsibility to ensure that the recognition and acceptance of qualification certificates is appropriate to their requirements. For example, some standards state that the Examiner must be acceptable to the contracting parties. Whilst TWI Certification Ltd makes every effort to ensure that its qualification certificates carry appropriate accreditation and that testing and certification activities are carried out in accordance with best practice, it cannot guarantee acceptance by any particular customer or client.

Individuals engaged as CSWIP Welding Examiners to carry out assessments in connection with the requirements of this scheme document must be approved by TWI Certification Ltd.

Testing of welding and brazing procedures is arranged between the manufacturer and TWI Certification Ltd. The Examiner will check that any pre-test requirements as may be applicable are fulfilled by the manufacturer or candidate(s) beforehand. CSWIP Welding Examiners are responsible for organising the witnessing of the practical test, and/or testing as required by the selected standard and for informing TWI Certification Ltd of the test results.

Where mechanical testing is required in relation to a welding or brazing procedure qualification test, the manufacturer must employ a test house with the appropriate scope of approval that is accredited to BS EN ISO/IEC 17025⁽²⁾ by UKAS or an organisation that is a signatory to the Multilateral Agreement or Arrangement schemes administered by European Co-operation for Accreditation (EA), the International Accreditation Forum (IAF) or the International Laboratory Accreditation Co-operation (ILAC). NDT testing shall be conducted by suitably qualified BS EN ISO 9712⁽³⁾ personnel.

2 Standards

Qualification testing and certification is available in accordance with the current issue of the standards listed below:

2.1 Welder and Brazing procedure qualifications

AWS D1.1:	Structural Welding Code – Steel;
AWS D3.6M:	Specification for Underwater Welding;
BS EN 14276:	Pressure equipment for refrigerating systems and heat pumps;
EN 288-9:	Specification and Qualification of Welding Procedures for Metallic Materials. Welding procedure test for pipeline welding on land and offshore site butt welding of transmission pipelines;
BS EN ISO 15607:	Specification and Qualification of Welding Procedures for Metallic Materials. General rules;
BS EN ISO 15609-1:	Specification and Qualification of Welding Procedures for Metallic Materials. Welding procedure specification. Arc Welding;
BS EN ISO 15610:	Specification and Qualification of Welding Procedures for Metallic Materials. Qualification based on tested welding consumables;
BS EN ISO 15611:	Specification and Qualification of Welding Procedures for Metallic Materials. Qualification based on previous welding experience;

BS EN ISO 15613	Specification and Qualification of Welding Procedures for Metallic Materials. Qualification based on pre-production welding test;
BS EN ISO15614-1:	Specification and Qualification of Welding Procedures for Metallic Materials. Welding procedure test - Arc and gas welding of steels and arc welding of nickel and nickel alloys;
BS EN ISO 15614-2:	Specification and Qualification of Welding Procedures for Metallic Materials. Welding procedure test - Arc welding of aluminium and its alloys;
ASME :	Boiler and Pressure Vessel Code. Section IX. Welding and brazing qualifications;
BS EN 13134:	Brazing Procedure approval;
BS EN 14276:	Pressure equipment for refrigerating systems and heat pumps;

The above lists are not intended to be exhaustive and other appropriate standards may be used.

3 Qualification Testing

3.1 Welding and Brazing Procedures

The CSWIP Examiner is responsible for ensuring that the requirements of the standard selected by the manufacturer are fulfilled. The standards are prescriptive and require no additional criteria.

4 Qualification Certificates

Qualification certificates are issued in accordance with the standard being applied, see Section 2.

Certificates are issued to the sponsoring organisation, usually the manufacturer.

Duplicate certificates may be issued to the sponsoring organisation to replace any that have been lost or destroyed. This will only be done after extensive enquiries by TWI Certification Ltd.

Photocopies are unauthorised by CSWIP and should only be used for internal administrative purposes.

5 Complaints and Appeals

An aggrieved party, which considers itself to have reasonable grounds for questioning the competency of a CSWIP qualified person, may petition the Governing Board for non-renewal of the certificate. Such a petition must be accompanied by all relevant facts and if in the opinion of the Board, an adequate case has been presented, a full investigation of the circumstances under dispute will be initiated. If the petition is substantiated to the satisfaction of the Board, the certificate will not be renewed without further test.

6 Records

TWI Certification Ltd maintains a record of all examinations and tests. Complete records are held for a period of eight months from the date of the test, thereafter only outline details of the qualification test and the results are maintained on file.

7 Application for Testing and Fees

Manufacturers will be required to submit completed application forms to the Certification Body. These forms are issued by the Examiner and all the required information must be on these forms. In the event of a false statement being discovered in the information provided by the manufacturer, any testing undertaken will be declared null and void. Approval certificates are automatically invalidated if there are any outstanding fees.

8 Addresses

For further general information about the approval schemes covered in this document contact:

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REFERENCE

- 1 BS EN ISO/IEC 17065 Conformity assessment – Requirements for bodies certifying products, processes and services
- 2 BS EN ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories.
- 3 BS EN ISO 9712 Non-destructive testing – Qualification and Certification of Personnel
- 4 The Pressure Equipment (Safety) Regulations (PER)
- 5 PED-2014/68/EU Pressure Equipment Directive (PED)