



CERTIFICATION SCHEME FOR PERSONNEL

DOCUMENT NO. CSWIP-PED -1-99

Requirements for the Qualification of Welding Procedures and Welders and Brazing Procedures and Brazers

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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 25

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, Drillstem Inspectors, Heat Treatment Operatives, Brazing Examiners, Underwater Inspection personnel, NDT personnel and Plant Inspectors.

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 17024 for certification of personnel.

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 17024.

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 procedures and welders and brazing procedures and brazers for manufacturers seeking to comply with the Pressure Equipment Regulations ⁽¹⁾ or with any other relevant standard or client specification which requires independent accredited third party approval.

1.2 Responsibilities

In terms of compliance with the Pressure Equipment Regulations ⁽¹⁾, TWI Certification Ltd is a Recognised Third Party Organisation for the qualification of welding procedures and welders and brazing procedures and brazers, as provided by Article 13 of Directive 97/23/EC. It is not authorised or notified to assess or establish conformity with the whole of the Directive.

TWI Certification Ltd acts as the Examining Body and the Certifying Body. It carries overall responsibility for ensuring that the requirements for qualification testing are satisfied and that appropriate qualification certificates are issued following successful qualification tests.

The particular requirements for qualification testing are given in the appropriate standard. 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 standard and it should be noted that the rules covering testing and validity of qualification certificates vary from standard to standard.

It is also 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 or Examining Body 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.

Testing activities may be subcontracted by TWI Certification Ltd to one of its approved Examining Bodies, see section 8. These Bodies act as the interface between TWI Certification Ltd and the manufacturer. TWI Certification Ltd rigorously controls the procedures and functions of Examining Bodies in the conduct of their work on behalf of TWI Certification Ltd.

Individuals engaged by Examining Bodies to carry out assessment work in connection with the requirements of this document must be approved by TWI Certification Ltd, in accordance with procedures operated by the Examining Body and approved by TWI Certification Ltd.

Testing of individual candidates or welding/brazing procedures is arranged between the manufacturer and TWI Certification Ltd or the Examining Body and the manufacturer. The Examining Body will check that any pre-test requirements as applicable are fulfilled by the manufacturer or candidate(s). The Examining Body is responsible for setting examinations and tests, witnessing welding and/or testing as required by the selected standard and for informing TWI Certification Ltd of the test results.

If mechanical testing or NDT is needed in relation to a welder/brazer qualification or a welding/brazer procedure qualification test, the Examining Body or manufacturer must employ a test house with the appropriate scope of approval that is accredited to ISO 17025 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).

2 Standards

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

2.1 Welder/brazer qualification testing

BS EN ISO 9606-1	Qualification testing of Welders – Fusing Welding – Part 1: Steels
EN 287-1:	Qualification testing of Welders - Fusion Welding – Part 1: Steels
BS EN ISO 9606-2	Qualification Testing of Welders – Fusion Welding – Part 2: Aluminium and Aluminium Alloys
AWS D1.1:	Structural Welding Code – Steel
AWS D3.6M:	Specification for Underwater Welding
ASME:	Boiler and Pressure Vessel Code. Section IX. Welding and brazing qualifications
BS EN 13133:	Brazing - Brazer approval
BS EN 14276:	Pressure equipment for refrigerating systems and heat pumps
BS EN ISO 13585:	Brazing – Qualification test of brazers and brazing operators

2.2 Welding/brazing procedure qualifications

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
AWS D1.1:	Structural Welding Code - Steel
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 Welders and welding procedures and brazer and brazer procedures

The Examining Body 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. In the case of welder/brazer qualifications, 'cover' certificate and identity card are also issued.

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

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

The period of validity of a qualification certificate and the conditions for renewal are governed by the selected standard.

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.

Appeals against failure to certify or against non-renewal of the certificate may be made by the candidate or the manufacturer upon application in writing to the Governing Board but must be within six months of the date of examination.

6 Records

Examining Bodies and TWI Certification Ltd maintain records of examinations and tests. Full records are only held for a period of eight months from the date of the test, only outline details of the 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 Examining Body. These forms are issued by the Examining Body 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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For specific information on examinations and tests and arranging for them to be carried out, contact the approved Examining Body:

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REFERENCE

- 1 The Pressure Equipment Regulations 1999 (S.I. 1999 No 2001)