



CERTIFICATION SCHEME FOR PERSONNEL

DOCUMENT No. CSWIP- WP-19- 08

**Requirements for the Certification of Personnel
Responsible For Review of Welding Procedures and their
Associated Documentation**

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Issued under the authority of the Governing Board for Certification
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by Accreditation Certificate No 25

FOREWORD

The Certification Scheme for Welding and Inspection Personnel (CSWIP) is a comprehensive scheme that 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, Plant Inspectors, Underwater Inspection personnel, NDT personnel, Plastics Welders and Cathodic Protection.

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.

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 procedures by which personnel may be examined, and, if successful, certificated for the duties of review and approval of welding procedures

1.2 Responsibilities of personnel

Typical areas of work activity of personnel for whom CSWIP procedure approval would be suitable are given below:

1.2.1 Personnel who review sub contractor and in-house welding procedures qualification record (WPQR) and welding procedure specification (WPS).

1.3 Requirements prior to taking a certification test

Job responsibilities and experience criteria for examination eligibility as given below are strictly adhered to and enforced.

Candidates must have the following as a minimum:

a) Hold a current valid Senior Welding Inspector or International equivalent.

or

b) Certified Welding Inspector with five years relevant verified work experience or International equivalent.

or

An HNC in Welding Fabrication.

1.3.1 Training

All candidates must attend a CSWIP approved course of training prior to examination. Details of such courses are available on request.

1.3.2 Health/Eyesight

Candidates need to have satisfactory eyesight.

2 Examination Procedure

2.1 Written Examination

The written examination consists of both multiple choice and narrative questions and is designed to test the candidate's knowledge of the Applicable Recognised International Standard (AWS D1. 1, ASME IX or ISO 15614-1)

2.2 Examination

Theory Part A1: The examination consists of the review of a WPQR to the Applicable Recognised International Standard (AWS D1. 1, ASME IX or ISO 15614-1) and then the review of two WPS's in conjunction with the associated WPQR. Time allowed 4 hours.

Part A1 is open book

Theory Part A2: 30 multiple choice questions. Time allowed 45 Minutes

Part A2 is open book.

2.3 Application for Examination and Fees

Candidates will be required to submit an application form and a CV. All the information requested must be on these forms. No applications can be considered confirmed until receipt of correctly completed documents. Application forms ask for specific details of experience and training and must be signed to the effect that these details are correct.

In the event of a false statement being discovered on forms or on CVs any examination undertaken will be declared null and void. A certificate is automatically invalidated if there are any outstanding examination fees in respect of that certificate.

Examinations may be taken at any one of a number of Test Centres in the UK and overseas. Lists are available on request.

3 Certification

3.1 Results notices

All candidates will be sent a results notice. This notice will also be sent to the organisation paying the examination fee, if not paid by the candidate.

3.2 Successful candidates

Two copies of a certificate of proficiency will be issued to the sponsoring organisation. Duplicate certificates to replace those lost or destroyed will be issued only after extensive enquiries.

3.3 Unsuccessful candidates

Candidates who fail to obtain a certificate may attempt one retest on those parts of the examination in which success was not achieved. The retest must be completed within one year of the initial test; otherwise candidates will have to repeat the complete examination.

3.4 Period of validity

The certificate is valid for five years from the date of completion of the initial test. Certificates are only valid provided:

- a) they are within date.
- b) they are on standard cream CSWIP paper bearing the CSWIP logo in black on gold signed by an officer of CSWIP and embossed with the CSWIP stamp.
- c) they have been signed by the individual to whom the certificate is awarded.
- d) they are accompanied by a valid official CSWIP identity card.
- e) the holder is still employed by the sponsoring organisation.

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

3.5 Renewal

Certificates are renewed five years from the initial examination by the holder successfully completing a renewal examination prior to the expiry of the certificate.

The five year examination consists of a review of 2 WPS's against the supplied WPQR – time allowed 2 hours.

One retest, within six months of the year renewal examination, will be allowed.

Candidates who fail the retest will have to take the full course and full initial examination to regain the qualification.

3.6 Complaints and appeals

An aggrieved party in a dispute 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 inspector or the employer upon application in writing to the Governing Board.

4 RECORDS

TWI Certification Ltd maintains records of successful and unsuccessful candidates. These records are accessible to the Governing Board or its nominees at all reasonable times.

5 ADDRESSES

For further general information 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:

TWI Training and Examinations
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Phone: +44 (0) 1223 899000
Email: trainexam@twi.co.uk

Fax: +44 (0) 1223 891630
Website: www.twi.co.uk

6 References

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| BS EN ISO 15614-1: | 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 |
| ASME <i>BPVC-IX</i> | <i>BPVC Section IX-Welding and Brazing Qualifications</i> |
| ANSI/AWSD1.1 | Structural welding code (Steel). |

Appendix A – Examination Syllabus

Initial Examination

Theory Part A1: The practical examination consists of the review of a WPQR to the Applicable Recognised International Standard (AWS D1. 1, ASME IX, or ISO 15614-1) and then the review of two WPS's in conjunction with the WPQR. Time allowed 4 hours

Part A1 is open book

Theory Part A2: 30 multiple choice questions. Time allowed 45 Minutes

Part A2 is open book.

Pass mark for all parts is 70%

Five Year Examination

This consists of a review of 2 WPS's against the supplied WPQR – time allowed 2 hours.

Subjects

Candidates will be expected to have knowledge of:

- a) Application of the requirements of codes and standards and qualification essential variables for welding procedures. The essential features of a procedure. British, European, and American (other systems upon application) of procedure and appropriate documentation.
- b) Parent material grouping systems
- c) Consumables: The identification of consumables to British, European, ISO and American standards. Coating types and fluxes. Shielding gas compositions. Electrode and filler wire compositions.
- d) Weld preparation details

Verification that dimensions, fit-up and weld preparations are in accordance with good engineering practices.
- e) Preheating: (where required) is in accordance with applicable standards i.e. ISO 1011-1.
- f) Post weld heat treatment (if any) has been conducted in accordance with specification requirements.
- g) Destructive tests: The selection and purpose of all destructive tests specified in standards. Assessment of results and review of mechanical test data and verifying compliance with appropriate standards and specifications.
- h) NDT techniques and limitations
- i) Weld Terminology: Weld face, toe, root, throat, leg length, HAZ, fusion boundary.
- j) Welding processes: Basic understanding of manual and mechanised flux shielded and gas shielded arc processes.