AWS QC1: 2016-AMD1

# Specification for AWS Certification of Welding Inspectors



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### Specification for AWS Certification of Welding Inspectors

**6th Edition** 

Supersedes AWS QC1: 2016

Prepared by the American Welding Society (AWS) Subcommittee on Certification of Welding Inspectors

Under the Direction of the AWS Qualification & Certification Committee

Approved by the AWS Board of Directors

#### **Abstract**

This specification defines the requirements and program for the American Welding Society to certify welding inspectors. The certification of visual welding inspectors requires documentation of experience, satisfactory completion of an examination, and proof of visual acuity. The examination tests the inspector's knowledge of welding processes, welding procedures, destructive tests, terms, definitions, symbols, reports, safety, and responsibilities.



AWS QC1: 2016-AMD1

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#### **Dedication**

Jerry H. Hope 1940-2012

The AWS Certification Committee and the CCC Subcommittee on Certification of Welding Inspectors dedicate this edition of QC1, *Specification for AWS Certification of Welding Inspectors*, to the memory of Jerry H. Hope.

Since 2007, Jerry served on the AWS Certification Committee and participated in the Committee for many years prior to becoming a member. He also chaired the CCSTI Subcommittee on Test Supervisor Instruction and in 2008, joined the CCC Subcommittee to help improve the QC1, *Specification for AWS Certification of Welding Inspectors*. He also served as an AWS Test Supervisor for over 20 years and was a Life Member of the AWS. Jerry's loyalty, devotion, and contributions to the improvement of the certification programs are to be commended and he will be missed by those who knew and had the privilege to work with him.

#### **Foreword**

This Foreword is not a part of AWS QC1:2016, *Specification for AWS Certification of Welding Inspectors*, but is included for informational purposes only.

The purpose of welding inspection is to determine if a weldment meets the acceptance criteria of a specific code, standard, or other document. The welding inspector must be thoroughly familiar with welding processes, welding procedures, welder qualifications, materials, the limitation of weld testing, be able to read drawings, prepare and keep records, prepare and make reports, and make responsible judgments. For welding inspectors to be effective, the activities performed should be consistent with the requirements, and technical and ethical principles.

AWS QC1, Specification for Certification of AWS Welding Inspectors, was first published in 1975. Subsequent editions were published in 1988, 1996, 2006, and 2007. This document, QC1:2016, Specification for Certification of AWS Welding Inspectors, replaces the 2007 edition. The first examinations for the certification of Welding Inspector were conducted in the spring and fall of 1976. More than 97,000 individuals have met the requirements of AWS QC1, worldwide, since the start of the program.

This edition contains revisions approved by the AWS <u>Qualification & Certification Committee</u>. <u>Vertical lines in the margin</u> and underlined text indicate a substantive revision from the 2007 edition.

Some changes made in the QC1:2016 do not include vertical lines or underlines, including:

- Substituting "Specification" for "Standard" (in the title and throughout the text).
- Updated address of AWS.
- Annex A (Informative Annex) Guidelines for Preparation of Inquiries for AWS Certification Committees

  The following is a summary of the substantive revisions by clause or section:
- **1.6** Additional safety and health language and sources were added.
- **2.** Clarified that endorsements may be added to certifications.
- **3.** Added definition for active supervision; clarified endorsement to include knowledge, skill, or ability; defined examination; modified nondestructive examination (NDE) definition; added definitions for reexamination and retest; modified definitions for specification and standard.
- **4.4** Clarified that the CAWI can perform inspections only under the active supervision of a SCWI or CWI.
- 5.2 Modified the range in the number of years applicants for SCWI shall be certified as a CWI.
- **5.3** Clarified application requirements.
- **6.1.4** New subclause describes alternative certification for the SCWI.
- **6.2.2** CWI Part B—Practical examination, minimum number of questions reduced to 40.
- **6.2.5** Clarified retesting parameters.
- **6.2.5.1** New subclause describes full 3-Part Reexamination requirements.
- **6.2.5.2** New subclause describes 1-Part or 2-Part Retest requirements.

- **6.2.5.3** New subclause adds language that a retest for Part C—Code Book must use the same code used for the original examination.
- **6.2.6** New subclause describes exemption from retaking certain exam parts passed by a Certified Welding Educator (CWE) for the CWI exam.
- **6.2.7** New subclause adds language regarding split examinations.
- **6.2.7.1** New subclause adds language regarding split examinations for Part A including retests, retest limitations, and recognition.
- **6.2.7.2** New subclause adds language regarding split examinations for Parts B & C including retests and retest limitations.
- 7. New language cautioning that CAWIs are limited on how they can practice inspection activities.
- **7.1** CAWI Part B—Practical examination, minimum number of questions reduced to 40.
- **8.1.1** New language defining an AWS Visual Acuity Form to be completed; the visual acuity time period changed from seven (7) months to one (1) year prior to the examination or certification expiration date; visual acuity records valid for up to one (1) year from exam date.
- **8.1.2** Eye examination results due date extended to 60 days after examination date.
- **8.2** New subclause describing passport-style color photograph requirements and acceptance.
- **10.1** New language clarifying that certification becomes effective on the first day of the month following the date of examination; the wallet card will include a photo.
- 10.2 Adds photo to information to be shared by AWS staff as a result of requests for verification of status and certification number.
- 11.2.3 Adds language that the SCWI, CWI, and CAWI will not utilize the certification stamp or number connected to a lapsed or terminated SCWI, CWI, or CAWI status.
- 11.2.5 Clarifies active supervision as one of the parameters which an inspector can sign off work.
- 11.4.4 Language modified regarding conflict of interest conditions allowed for an inspector whose work is performed while being a public official.
- **15.1** CAWI certification period clarified to be up to a three-year period.
- **15.1.1** Eliminated redundancy with 15.2.1; clarified that CAWI testing for CWI status fall under CWI examination requirements.
- **15.2.2** Changed renewal applications accepted no earlier than 11 months prior to the certification expiration date from previous 6 months prior.
- **15.3.2** New subclause describes that a renewal may be accepted after the 60-day grace period but within one year of expiration, noting that administrative late fees may be applied.
- 15.4 Clarified continuous inactivity refers to work inactivity.
- **16.1** Changed 9-year recertification application accepted no early than 11 months prior to the certification expiration date from previous 6 months prior; added language regarding a 60-day administrative extension.
- **16.3.1** New language stating that the endorsement does not need to be current at the time of application for CWI recertification.
- 16.4.2 New language allowing for broader course content relevance to subject or job functions in AWS B5.1.
- **16.5.1** Expanded language regarding earning Professional Development Hours (PDHs).
- 16.5.2 Increased the maximum PDH hours to 40 from previous 20; added proof of attendance as verification.
- 16.5.3 Clarified non-AWS conferences allowed for PDHs; clarified proof of participation required.

- **16.5.9** New subclause allowing PDHs for items not directly listed in AWS B5.1 contingent upon AWS Certification Department approval.
- 16.7 New language allowing CWI 9-year recertification applicants to switch the recertification means if within the deadline.
- 16.7.1 New subclause specifies the instances in which all three Parts A, B, and C are required for CWI 9-year recertification.
- **16.7.2** New subclause describes circumstances in which an individual's certification expires and is then considered as a new applicant.

List of AWS Documents on Certification replaces QC4 and QC7 with QC47; adds QC9, QC14, and QC20.

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS Qualification & Certification Committee, American Welding Society, 8669 NW 36th St., #130, Miami, FL 33166.

#### **Amendment**

The following Amendment has been identified and is incorporated in this reprint.

**AWS Standard:** QC1:2016-AMD1

**Amendment Number:** 1

**Subject:** Subclause 8.1.2 (Visual Acuity)

8.1.2 Applicants shall submit the eye examination results to the AWS Certification Department along with their application.

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## Specification for AWS Certification of Welding Inspectors

#### 1. Scope

- **1.1** This specification establishes the requirements for American Welding Society (AWS) certification of welding inspection personnel. It describes how personnel are certified, and the principles of conduct and practice by which certification may be maintained. Any oral or written claim of certification under the guidelines established herein shall be made only by those individual SCWIs, CWIs, and CAWIs who are, at the time of the claim, current and in compliance with all sections of this specification. This specification meets or exceeds the requirements of <u>AWS B5.1:2013</u>, *Specification for the Qualification of Welding Inspectors*. This specification supersedes AWS QC1:2007.
- **1.2** The three levels of certification are Senior Certified Welding Inspector (SCWI), Certified Welding Inspector (CWI), and Certified Associate Welding Inspector (CAWI).
- **1.3** In the certification process, AWS conducts an examination to determine a person's general knowledge of welding inspection and related technical areas. No determination is made of an individual's capabilities in applying that knowledge within a specific work environment or under actual working conditions.
- **1.4** It shall be the responsibility of the employer to determine that the SCWI/CWI/CAWI is capable of performing the duties involved in his or her particular welding inspection assignment.
- **1.5** This specification is intended to supplement the requirements of an employer, code, or other documents and shall not be construed as a preemption of the employer's responsibility for the work or for the performance of the work.
- **1.6 Statement on Safety.** Safety and health issues and concerns are beyond the scope of this specification and therefore are not addressed herein. Safety and health information is available from the following sources:

American Welding Society:

- (1) ANSI Z49.1, Safety in Welding, Cutting, and Allied Processes
- (2) AWS Safety and Health Fact Sheets
- (3) Other safety and health information on the AWS web site

Material or Equipment Manufacturers:

- (1) Safety Data Sheets supplied by materials manufacturers
- (2) Operating Manuals supplied by equipment manufacturers
- **1.7 Verb Usage.** As used in this specification, the word *shall* denotes a requirement; the word *should* denotes a guideline; and the word *may* denotes an obligation to make a choice.

#### 2. Levels of Certification and Endorsements

There are three levels of AWS certification of welding inspection personnel. <u>Endorsements may be added to certifications.</u> These levels are defined as follows:

**2.1 Senior Certified Welding Inspector (SCWI).** A person certified by AWS as meeting the qualification requirements of 5.3, 6.1, and 6.2 of AWS B5.1, *Specification for the Qualification of Welding Inspectors*, and 5.2 of this specification.

- **2.2 Certified Welding Inspector (CWI).** A person certified by AWS as meeting the qualification requirements of 5.2, 6.1, and 6.2 of AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
- **2.3 Certified Associate Welding Inspector (CAWI).** A person certified by AWS as meeting the qualification requirements of 5.1, 6.1, and 6.2 of AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
- **2.4 Endorsements.** Endorsements may be added to the SCWI and CWI certifications as outlined in specific endorsement publications.

#### 3. Definitions

The welding terms used in this specification are defined in AWS A3.0, *Standard Welding Terms and Definitions*. Other terms used in this specification are defined as follows:

**active supervision.** Direct on-site or readily available supervision by the CWI/SCWI in the form of necessary instructions to ensure that the CAWI can perform specific evaluations as specified by the employer.

applicant. A person who applies to the AWS for certification.

AWS Certification Department. The department that administers the certification activities of the AWS.

**certificate.** The document issued to the applicant on successful completion of the requirements for certification.

**certification.** The act of determining, verifying, and attesting in writing to the qualification of personnel in conformance to specified requirements.

certified. Having met the AWS certification requirements.

**code.** A standard consisting of a set of conditions and requirements relating to a particular subject and indicating appropriate procedures by which it can be determined that the requirements have been met. A standard suitable for adoption in whole or in part by a governmental authority as a part of a law or regulation or as specified by other mandatory documents.

**Committee.** The Qualification & Certification Committee of the AWS.

**endorsement.** Indication of an additional <u>knowledge</u>, skill, <u>or ability</u> documented in writing and added to <u>an individual's</u> certification credential(s).

examination. All testing required to attain an AWS certification.

**nondestructive examination (NDE).** The process of determining acceptability of a material or a component in accordance with established criteria without impairing its future usefulness.

**Professional Devlopment Hour (PDH).** A unit of approved professional or education activity involving class participation or performing as an instructor. PDHs are used to determine continuing education eligibility for recertification under this program.

**qualification.** Demonstrated training, skill, knowledge, and experience required for personnel to perform the duties of a specific job.

qualified. Having complied with specific requirements.

**reexamination.** All testing required to attain or renew an AWS certification.

**retest.** A segment of an examination that may be administered when an applicant failed to achieve a passing grade on the equivalent segment during an examination for AWS Certification.

**specification.** A standard detailing the essential technical requirements for a material, product, system, or service. It includes the procedures, methods, qualifications, or equipment necessary to verify compliance. This specification is considered mandatory when cited by a mandatory document or when agreed upon by parties, such as for procurement purposes.

**standard.** A document providing rules or guidelines, produced by consensus, and approved by a recognized body. The term standard encompasses five AWS categories: code, specification, method, recommended practice, and guide.

#### 4. Functions of Certified Personnel

- **4.1** The SCWI shall be able to perform inspections, supervise one or more CWIs, CAWIs, or NDE personnel, prepare inspection procedures, review and interpret joining procedures, conduct audits of vendors and/or organizations providing materials or services to the project, and ensure that the work performed and the records maintained conform to the requirements of the applicable standards and other contract documents and perform all SWI duties listed in AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
- **4.2** The SCWI and CWI shall be able to perform inspections or to verify that the work inspected and records maintained, conform to the requirements of the applicable standards and perform all WI duties listed in AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
- **4.3** The SCWI and CWI shall be able to certify the qualification of welders to various codes <u>or standards</u>. The requirements of the AWS QC7 *Certified Welder* program and the National Registry of AWS Certified Welders are outside the scope of this specification.
- **4.4** The CAWI shall be able to perform inspections only under the active supervision, as defined in this specification, of a SCWI or CWI. The SCWI or CWI shall maintain the responsibility for determining final acceptance.

#### 5. Education and Experience Requirements

- **5.1** Applicants seeking AWS SCWI, CWI, or CAWI certification shall meet the applicable education and experience requirements as stated in 5.5 of AWS B5.1, *Specification for the Qualification of Welding Inspectors* for the desired level of certification.
- **5.2** In addition to the requirements of AWS B5.1, *Specification for the Qualification of Welding Inspectors*, applicants for SCWI shall have been certified as a CWI for a minimum of six (6) years out of the previous eight (8) years.
- **5.3** The application submitted by the applicant shall include a listing of all relevant work and employment. The work history shall include a listing of all relevant employers and their contact information when available, the nature of the work performed, the dates of employment, and an affidavit with the applicant's signature (physical signature or AWS-approved digital signature) attesting to accuracy of the information provided. The work history is subject to verification by the AWS Certification Department and false information is cause to reject the application and can disqualify the applicant from testing to become an AWS CAWI, CWI, or SCWI.
- **5.4** Experience claimed by applicants for all levels of certification <u>and</u> recertification, shall be documented by one or more of the following:
  - **5.4.1** Completion of the employment verification section of the application for certification.
- **5.4.2** A letter of employment on company letterhead from present and former employers indicating applicant's name, social security number (optional) job title(s), start date, company name, company address and telephone number, immediate supervisor's name, and the name and title of the person completing the letter.
- **5.4.3** A letter on organizational letterhead from the applicant's associated or affiliated organizational representative containing information relevant to the organization in which they were employed, accompanied by official copies of work assignment sheets, books, or records.
- **5.4.4** Two (2) letters of reference on company letterhead from separate clients attesting to the nature of work assignments during the period of performance required for certification for self-employed or contract applicants.
- **5.4.4.1** If letters of reference cannot be practically obtained, applicants shall submit an affidavit describing what type of work activity they performed, and indicating the time frame of that activity for a sufficient number of clients to establish the length of activity required in 15.4 of this specification. Additional supporting documentation, such as lesson plans, letters, billing invoices, or check stubs also may be submitted.
- **5.5** All applicants shall be responsible for using the most current applications as provided by the AWS Certification Department. Use of obsolete forms may delay the certification process.

#### 6. Examination Requirements for SCWI and CWI

#### 6.1 Senior Certified Welding Inspector

- **6.1.1** Applicants seeking SCWI certification shall successfully meet the SWI requirements as contained in 6.2 and 7.2 of AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
  - **6.1.2** Applicants shall pass the examination(s) as follows:

	Minimum Number of Questions	Minimum Percentage of Correct Answers
Examination		
SCWI Part A and Part B	200	72

- **6.1.3** Reexaminations shall be considered as any tests taken within one year (12 months) of the original test date. Applicants may take up to two (2) reexaminations within one year of the original test date.
- **6.1.4 Alternative Certification for the SCWI.** The CWI applicant shall take an approved core of mandatory endorsement exams and a specified additional number of elective endorsement exams. The mandatory endorsement exams shall be designated by the Committee.

#### 6.2 Certified Welding Inspector

- **6.2.1** Applicants seeking CWI certification shall successfully meet the WI requirements as contained in 6.2 and 7.1 of AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
  - **6.2.2** Applicants shall pass the examination(s) as follows:

Examination	Minimum Number of Questions	Minimum Percentage of Correct Answers
Part A—Fundamentals	150	72
Part B—Practical	<u>40</u>	72
Part C—Code Book	46	72
Code Book Endorsements	N/A	72
Other Endorsements	N/A	As defined in the endorsement specifications

- **6.2.3** Applicants who achieve a 72% overall composite score (simple average of three parts of the examination) and fail to meet the requirements of 6.2.2 may retake those parts failed subject to the requirements of 6.2.5.
- **6.2.4** An applicant shall select and indicate on his or her certification application the code to which they are to be tested. Applicants are responsible for verifying with the AWS Certification Department which codes are available and which editions of those codes are applicable to the examination.
- **6.2.5** The maximum number of retests taken in the three-year period starting with the original test date is three (3). Applicants may take the first retest(s) of the failed segment(s) without additional training. Only one retest without documented evidence of additional training is permitted. Any additional retests (2nd or 3rd retests) shall require documented evidence of additional training in accordance with the following:
- **6.2.5.1 Full 3-Part Reexamination:** Forty (40) hours of further training received in welding inspection in the exam subjects and categories in AWS B5.1.
- **6.2.5.2 1-Part or 2-Part Retest.** Sixteen (16) hours of further training received in welding inspection specific to the AWS B5.1 exam subjects and categories failed.

The training documentation shall include a detailed description of the course(s) or other training means, the number of contact hours for each course or session, and a certificate or letter of completion. A contact hour shall consist of not less than 50 minutes of instruction and each Continuing Education Credit (CEU) shall be considered as 10 PDHs. If the required documentation cannot be supplied with the retest application, results will not be released until the required documentation is received.

- **6.2.5.3** An applicant who fails to pass the Part C—Code Book portion of the CWI examination is required to retest using the same code used for the original examination during the three (3) year retest period.
- **6.2.6** Applicants who previously passed their Certified Welding Educator (CWE) exams (Parts A and B of the CWI exam) at or above CWI levels shall be exempt from retaking Parts A and B, but shall be required to pass only the code book portion (Part C) at CWI levels. No CAWI certification shall be given.
- **6.2.7 Split Examination.** AWS may allow or require applicants to take and pass Part A first before qualifying to take Parts B & C. For split examinations, the rules shall be as follows:
  - **6.2.7.1 Part A.** Applicants must achieve a 72% or higher passing mark to be qualified to take Parts B & C.
  - (1) **Retests.** Applicants who fail to achieve a 72% passing mark may take a first retest of Part A no sooner than 24 hours after the start of the previous exam. Subsequent retests require 16 hours of qualified documented training (see 6.2.5.2) in welding fundamentals.
  - (2) **Retest Limitations.** Applicants may not exceed 4 exam attempts in a 3-year period on Part A. If the applicant has not passed Part A within 3 years of initial test attempt, he or she must submit a new initial application to the AWS with updated work and education experience.
  - (3) **Recognition.** Applicants who pass will receive a confirmation letter that they have passed Part A and are now eligible to take Parts B & C. No certification status will be earned by passing Part A.
- **6.2.7.2 Parts B & C.** Once an applicant passes Part A, he or she may attempt Parts B & C. Parts B & C must be attempted on the same day. Applicants must achieve a 72% or higher passing mark on both Parts B & C to earn a CWI. Applicants who achieve a 60% or higher mark on both parts but below the marks necessary for CWI on one or both parts will earn a CAWI.
  - (1) Retests. Applicants who achieve a 72% overall composite score (simple average of Parts B & C of the examination) but fail to achieve a 72% on each part may retake those parts failed subject to the requirements of 6.2.7.2(2). A first retest of the parts required may be scheduled no sooner than 24 hours after the start of the previous exam. Subsequent retests require 16 hours of qualified documented training (see 6.2.5.2) in one or both of the parts failed.
  - (2) **Retest Limitations.** Applicants may not exceed 4 exam attempts in a 3-year period on Parts B & C. If the applicant has not passed Parts B & C within 3 years of initial test attempt on Part A, he or she must submit a new initial application to AWS with updated work and education experience, and must restart the examination process over again by passing Part A per 6.2.7.1.

#### 7. Achieving Certified Associate Welding Inspector (CAWI) Certification

**Note:** Persons eligible for CAWI are cautioned that by accepting a CAWI certification from the AWS, they are now limited on how they can practice inspection activities. If they are unable to comply with these restrictions, it may be best to surrender the CAWI certification and to continue to work uncertified.

**7.1** CAWI certification is obtained when an applicant achieves the following on the CWI examination:

Examination	Minimum Number of Questions	Minimum Percentage of Correct Answers
Part A—Fundamentals	150	60
Part B—Practical	<u>40</u>	60
Part C—Code Book	46	60

- **7.2** CAWIs shall adhere to the requirements of 15.1 of this specification.
- **7.3** Applicants who achieve the minimum scores in 7.1 of this specification shall be awarded a CAWI certification and will be subject to the requirements of 15.1 of this specification.
- **7.4** All CAWI certifications issued in accordance with this specification shall have new certification numbers assigned to them.
- **7.5** CAWIs who meet the requirements of Section 14 of this specification are eligible for upgrading to CWI status. Certification upgrade is not automatic. Applicants for upgrade must complete and submit all necessary documents to the AWS Certification Department for consideration.

#### 8. Visual Acuity and Photo Requirements

- **8.1 Visual Acuity.** Applicants for certification as SCWI, CWI, or CAWI shall satisfy the visual acuity requirements of 6.1 of AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
- **8.1.1** An AWS Visual Acuity Form shall be completed by an ophthalmologist, optometrist, medical doctor, registered nurse, certified physician's assistant, or by other ophthalmic medical personnel, and must include the state or province license number. Examinations shall be performed not more than one (1) year prior to the date of the welding inspector examination or the expiration date for renewals and recertifications. New visual acuity records do not need to be supplied for retests occurring within one (1) year from the original examination date.
- **8.1.2** Applicants shall submit the eye examination results to the AWS Certification Department along with their application.
- **8.2** <u>Photos.</u> Applicants shall submit one (1) passport-style color photograph that meets photo submission requirements. The acceptance of photos is at the discretion of the AWS Certification Department.

#### 9. Reciprocity

**9.1** The Committee periodically approves reciprocity arrangements between the program defined in this specification and welding inspector certification programs in other countries. The terms and conditions of each reciprocity arrangement are unique and conditional upon the uniform administration of the reciprocal program. Changes to programs subsequent to granting reciprocity shall be cause for reevaluation by the Committee of issuance of certifications beyond the date of change. Contact the AWS Certification Department for a listing of current approved reciprocal agreements and their respective requirements.

#### 10. Certification

- **10.1 Documentation.** The AWS shall issue to each SCWI, CWI, and CAWI applicant who complies with the applicable requirements of AWS B5.1, *Specification for the Qualification of Welding Inspectors*, a serialized (unique number) certificate and a wallet card stating that the applicant has met the AWS certification requirements. <u>Certification becomes effective on the first day of the month following the date of examination.</u> Certification shall be valid for three years unless revoked for reasons defined in 11.6 and the authority of Section 12. The certificate shall indicate the date of certification. The wallet card shall <u>include the SCWI's, CWI's, or CAWI's photo,</u> indicate the expiration date of certification, and any need for corrective lenses for near-vision acuity. It shall also state results of color vision tests.
- **10.1.1** SCWIs shall be issued a new certification number but may request that the original date of CWI certification be listed on the SCWI wallet card.
- **10.2 Verification.** The AWS shall release certification test results only to the applicant SCWI/CWI/CAWI, or to a person or agency designated by the applicant SCWI/CWI/CAWI upon written request, and with notarized and witnessed release. The exceptions to this requirement are members of the AWS staff and members and officers of the Committee, who may request and receive access to all information relating to program participants in the necessary pursuit of their duties on

behalf of the program. Extra copies of test results, in addition to those provided at the time of certification, may require payment of a nominal administrative fee. Requests for verification of status and certification number of SCWIs, CWIs, and CAWIs shall be provided to requestors without charge. Only the certification number, date certified, expiration date, <u>photo</u>, current status (current, revoked, etc.), and certification limitations (corrected vision, etc.) shall be provided by the AWS staff members without the express written approval of the applicant, SCWI, CWI, or CAWI.

#### 11. Code of Ethics, Rules of Conduct, and Practice

**Preamble.** In order to safeguard the health and well-being of the public and to maintain integrity and high standards of skills, practice, and conduct in the occupation of welding inspection; the AWS SCWIs, CWIs, and CAWIs shall be cognizant of the following principles and the scope to which they apply, with the understanding that any unauthorized practice is subject to the Committee's review and may result in suspension, reprimand, or revocation of certification.

- **11.1 Integrity.** The SCWI, CWI, and CAWI shall act with complete integrity in professional matters and be forthright and candid to their employer, the regulator or employer's customer, and with the Committee or its representatives, on matters pertaining to this specification.
- **11.2 Responsibility to the Public.** The SCWI, CWI, and CAWI shall act to preserve the health and well-being of the public by performing duties required of welding inspection in a conscientious and impartial manner to the full extent of the inspector(s) moral and civic responsibility and qualification. Accordingly, the SCWI, CWI, and CAWI shall:
  - 11.2.1 Undertake and perform assignments only when qualified by training, experience, and capability.
  - **11.2.2** Present credentials upon request to persons authorized to examine them.
- 11.2.3 Will not falsely represent current status nor seek to misrepresent the certification level (SCWI/CWI/CAWI) by modification of certification documents or false verbal or written testimony of current level or status, or utilize the certification stamp or number connected to a lapsed or terminated SCWI, CWI, or CAWI status.
- **11.2.4** Be completely objective, thorough, and factual in any written report, statement, or testimony of the work and include all relevant or pertinent testimony in such communiqués or testimonials.
- 11.2.5 Sign only for work that the inspector has inspected, or for work over which the inspector has personal knowledge through active supervision as defined in this specification.
  - 11.2.6 Neither associate with nor knowingly participate in a fraudulent or dishonest venture or activity.

#### 11.3 Public Statements

- **11.3.1** The SCWI, CWI, or CAWI shall issue no statements, criticisms, or arguments on weld inspection matters connected with public policy which were inspired or paid for by an interested party, or parties, without first identifying the party, the speaker, and disclosing any possible financial interest.
- 11.3.2 The SCWI, CWI, or CAWI shall publicly express no opinion on welding inspection subjects unless it is founded upon knowledge of the facts in issue, upon a background of technical competence pertinent to the subject, and upon honest conviction of the accuracy and propriety of the statement.

#### 11.4 Conflict of Interest

- **11.4.1** The SCWI, CWI, or CAWI shall avoid a conflict of interest with the employer or client and shall disclose any business association, or circumstance that might be so considered.
- **11.4.2** The SCWI, CWI, or CAWI shall not accept compensation, financial or otherwise, from more than one party for services on the same project, or for services pertaining to the same project, unless the circumstances are fully disclosed to all interested parties or their authorized agents.
- **11.4.3** The SCWI, CWI, or CAWI shall not solicit or accept gratuities, directly or indirectly, from any party, or parties, dealing with the client or employer in connection with the SCWI's, CWI's, and CAWI's work.
- **11.4.4** The SCWI, CWI, or CAWI shall, while serving in the capacity of an elected, retained, or employed public official, neither inspect, review, nor approve work in the capacity of SCWI, CWI, or CAWI on projects also subject to the inspector's administrative jurisdiction as a public official, unless this practice is expressly dictated by a job description or specification and all affected parties are notified.

#### 11.5 Solicitation of Employment

- **11.5.1** The SCWI, CWI, or CAWI shall neither pay, solicit, nor offer, directly or indirectly, any bribe or commission for professional employment with the exception of the usual commission required from licensed employment agencies.
- 11.5.2 The SCWI, CWI, or CAWI shall neither falsify, exaggerate, nor indulge in the misinterpretation of personal academic and professional qualifications, past assignments, accomplishments and responsibilities, or those of the inspector's associates. Misrepresentation of current SCWI/CWI/CAWI certification status at the time of, or subsequent to, submission of requested employment information, or in the solicitation of business contracts wherein current certification is either required or inherently beneficial (advertisements for training courses, consulting services, etc.) shall be a violation of this section.
- 11.5.3 The SCWI, CWI, or CAWI shall not claim that their credentials are suitable for anything outside of the field of welding inspection or for tasks outside of their endorsements.
- 11.5.4 The SCWI, CWI, or CAWI shall not disclose proprietary information, (i.e., commercially valuable information not generally known) concerning business affairs or technical processes of a present or former client or employer, without their written consent, except as necessary to perform the duties of a SCWI, CWI, or CAWI.

Note: While the SCWI, CWI, or CAWI may have established excellent credentials, certification alone may not legally qualify the inspector to provide inspection services to the public. Contract documents, or building or jurisdiction laws may require inspection to be performed under the direction and responsibility of others, such as a Registered Professional Engineer.

**11.6 Unauthorized Practice.** Any violation of any part of the standard of conduct prescribed by this specification if related to a SCWI's, CWI's, or CAWI's occupation, including any violation of the Code of Ethics contained in this specification, shall constitute an unauthorized practice subject to the imposition of sanctions.

#### 12. Revocation

- **12.1 Committee.** The Committee shall have the power to suspend, refuse renewal, revoke, place on probation, or reprimand the SCWI's, CWI's, or CAWI's certification for misrepresentation of facts regarding personal qualifications, status, assignments, etc., relating to SCWI's, CWI's, or CAWI's certifications whether such misrepresentation was made at the time of application or on subsequent applications (renewal, etc.). The Committee may suspend, refuse renewal, revoke, place on probation, or reprimand a certificate holder, if found guilty of any unauthorized practice (as outlined in 11.6 Unauthorized Practice) in a proceeding conducted in conformance to AWS QC9 *Administrative Procedures for Alleged Violations of AWS Certification Programs* (available from the AWS Certification Department).
- **12.2 Courts.** The Committee may apply to any court of competent jurisdiction for further enforcement of its administrative decisions and rulings.

#### 13. Reinstatement

Reinstatement of a revoked certificate shall be allowed with no penalty or prejudice to the individual provided the reason for such revocation has been rectified to the Committee's satisfaction.

#### 14. Upgrading of <u>CAWI</u> Certification <u>to CWI</u>

- **14.1 Applicants** whose scores on each part of the examination meet the requirements of 6.2.2 of this specification but did not meet the experience requirements of 5.2.2 of AWS B5.1 may request an upgrade to the CWI level once the experience requirements are met.
- **14.1.1** The period of validity of CWI certification for individuals who have upgraded in accordance with 14.1 shall not exceed the original period of CAWI certification.
- **14.2** The CWI shall not upgrade to the SCWI certification level without complying with the requirements of 5.1, 5.2, and 6.1 of this specification.

#### 15. Renewals

- 15.1 CAWIs are not eligible for renewal. A CAWI may only hold the CAWI certification for up to a three-year period.
- **15.1.1.** For anyone receiving initial or subsequent CAWI certification under QC1:2006 or later editions of QC1, subclauses 6.2.2, 6.2.3, and 6.2.5 apply to achieving CWI status. Retests may be scheduled at any time during the three-year CAWI certification in accordance with 6.2.5.
- 15.2 The SCWI and CWI shall be responsible for:
- **15.2.1** Maintaining a current address with the AWS Certification Department. Please notify the AWS Certification Department at AWS directly of all address changes. Failure to maintain a current address with the AWS Certification Department may jeopardize certification status.
- 15.2.2 Maintaining certification by submitting an approved renewal application to the AWS Certification Department by the expiration date of the current certification and no earlier than 11 months prior to the expiration date of that certification. AWS may send a renewal notice, but if not received, it remains the responsibility of the SCWI or CWI to renew on time.
- **15.3** Certification becomes effective on the first day of the month following the date of examination. On that same month and day, expiration occurs three years later. A 60-day administrative extension period is allowed. During this time, certification will be considered as expired. If the paperwork is received on time and all renewal or recertification requirements have been met, certification will be reactivated. For example,

Certification granted: May 1, 2008 Certification expires: May 1, 2011

Administrative extension period: May 1, 2011 to June 30, 2011

After June 30, 2011, applicant must meet the requirements of 6.1.2 or 6.2.2, as applicable, to gain certification.

- **15.3.1** For personnel serving on active duty with the US armed services overseas, contact the AWS Certification Department for current policy on renewing or recertifying.
- **15.3.2** Renewals submitted after the administrative 60-day grace period (15.3) but within one year of expiration may be accepted for renewal; however, administrative late fees may be applied.
- **15.4** The SCWI and CWI requesting renewal of certification shall attest to having no period of continuous work inactivity greater than two years in activities as described in AWS B5.1, Specification for the Qualification of Welding Inspectors during the previous three years of certification.
- **15.4.1** The SCWI and CWI not meeting the requirements of 15.4 may renew by taking the CWI Part B Practical exam and meet the scoring requirements in 6.2.2 of this specification.
- **15.5** SCWI and CWI certification renewals are limited to two consecutive three-year periods. Before the end of the third three-year period, SCWIs and CWIs are required to recertify by complying with Section 16 of this specification.
- **15.6** CWIs who are renewing or are at their 9-year recertification but seek SCWI certification must complete two applications. One application shall be for 9-year CWI recertification (by either Part B exam or continuing education) and the other application shall be to take the SCWI exam. CWIs who recertify in accordance with 16.3.1 of this specification and desire to sit for the SCWI examinations will have to take both the CWI Part B Practical and the SCWI examinations. Applicants for SCWI certification who successfully meet the requirements for CWI renewal or recertification in advance but fail to meet the requirements of 6.1.2 of this specification shall not lose their CWI status.

#### 16. 9-Year Recertification for SCWI and CWI

**16.1** An approved 9-year recertification application must be in the AWS Certification Department by the expiration date of the current certification and no earlier than <u>11</u> months prior to the expiration date of the current certification. <u>A 60-day administrative extension period is allowed. During this time, certification will be considered as expired. If the paperwork is received on time and all renewal or recertification requirements have been met, certification will be reactivated.</u>

- **16.2** Before the end of the ninth year from the date of initial certification, and each nine years thereafter, SCWIs seeking recertification shall satisfy either 16.2.1 or 16.2.2.
- **16.2.1** SCWI recertification by examination by satisfying the requirements of 6.1 of this specification, or by taking a Committee-approved endorsement, or
- **16.2.2** SCWI recertification by experience and continuing education. The SCWI shall attest to having no period of continuous inactivity greater than two years in activities as described in AWS B5.1, *Specification for the Qualification of Welding Inspectors*, during the previous three years of certification, and shall present evidence of activities meeting the requirements of 16.4 or 16.5 of this specification.
- **16.3** Before the end of the ninth year from the date of initial certification, and each nine years thereafter, CWIs seeking recertification shall satisfy either 16.3.1 or 16.3.2.
- **16.3.1** CWI recertification by taking the Part B Practical examination or by taking a Committee-approved endorsement, and meeting the requirements of 6.2.2 of this specification. The endorsement will not need to be current at the time of application for recertification.
- **16.3.2** CWI recertification by experience and continuing education. The CWI shall attest to having no period of continuous inactivity greater than two years in activities as described in AWS B5.1, *Specification for the Qualification of Welding Inspectors*, during the previous three years of certification, and shall present evidence of activities meeting the requirements of 16.4 or 16.5 of this specification.
- **16.4** The following rules apply to meeting the training or teaching requirements in 16.2.2 and 16.3.2 of this specification.
- **16.4.1** A minimum of eighty (80) PDHs must be earned (training received or instruction delivered) during the nine-year certification period and twenty (20) of those 80 PDHs must be earned in the final three-year period.
- **16.4.2** The course content must be <u>relevant to</u> one or more of the subjects <u>or job functions</u> defined in AWS B5.1, *Specification for the Qualification of Welding Inspectors*.
  - **16.4.3** A maximum of eighty (80) PDHs are allowed for any one course.
- **16.4.4** Credit for a particular course may only be granted once in a nine-year period. (Example: a single 40-hour course taught any number of times can only be used to fulfill 40 hours of the 80 hours required for recertification without examination.)
- **16.4.5** Trainers who want to substitute teaching hours for the required PDHs shall submit documentation of the hours of training performed. Such documentation shall include a complete syllabus of subjects taught, a copy of the certificates of attendance or completion issued, the number of students attending, the dates of the training provided, and documentation that the training was a formal offering and not personal coaching, tutoring, or individual instruction delivered to meet job requirements.
- **16.5 Professional Development Hours (PDHs) Credit Toward 9-Year Recertification.** PDHs will be credited based upon each contact hour of activity. A contact hour shall consist of not less than 50 minutes of instruction. For applicable courses where CEUs are awarded, each CEU shall be considered as 10 PDHs. The following list shall define the credit (in PDHs) awarded for each activity.
- **16.5.1** PDHs may be earned by participating in <u>any</u> classroom, correspondence, or distance learning in one or more <u>subject</u> areas <u>listed</u> in AWS B5.1, *Specification for the Qualification of Welding Inspectors*, <u>Table 1</u>. There is no maximum of PDHs that may be accepted for recertification under this provision but all PDHs claimed must be accompanied by a course description and certificate of completion indicating the number of contact hours.
- **16.5.2** PDHs may be earned by attending local section meetings of a professional society (AWS or other) where technical presentations that cover one or more of the areas indicated in AWS B5.1, *Specification for the Qualification of Welding Inspectors*, are given. A maximum of <u>40</u> PDHs may be accepted for recertification during the 9-year period and must be accompanied by a section meeting announcement and certificate of completion <u>or proof of attendance</u> indicating the number of contact hours for the activity signed by the Section Chair or other officer.
- **16.5.3** PDHs may be earned for preparation and presentation of a technical session at <u>a</u> local or national conference (AWS or other societies or organizations) addressing subjects contained in AWS B5.1, *Specification for the Qualification of Welding Inspectors*. A single award of 10 PDHs will be accepted for recertification upon presentation of copies of

materials used to support the presentation and <u>proof</u> of participation from the Host society. A maximum of 20 PDHs can be awarded under this provision during the 9-year period.

- **16.5.4** PDHs may be earned for participation on an AWS standing committee, subcommittee, or task group. A single award of 20 PDHs will be accepted for recertification upon presentation of a letter from the committee chair indicating the documents/standards worked on. For participation on volunteer committees of other organizations, supporting materials such as ballots, minutes, and a description of how the committee work is related to AWS B5.1, *Specification for the Qualification of Welding Inspectors* is required. A maximum of 20 PDHs can be awarded under this provision during the 9-year period.
- **16.5.5** PDHs may be earned for a paper, article, or book published in a nationally recognized publication that addresses a subject contained in AWS B5.1, *Specification for the Qualification of Welding Inspectors*. Each publication will result in an award of 10 PDHs with no maximum of PDHs awarded over the 9-year period. All claims for PDHs under this provision must be accompanied by a copy of the published work.
- **16.5.6** PDHs may be earned for a patent issued that has an association with the field of welding, inspection, or testing. Each patent will result in an award of 10 PDHs with a maximum of 20 PDHs over the 9-year period. Patents eligible for this credit must have been issued within the most recent 9-year period. All claims for PDHs under this provision must be accompanied by a photocopy of the issued patent.
- **16.5.7** PDHs may be earned for initial certification as an AWS <u>Certified</u> Radiographic Interpreter or ASNT ACCP Level II or Level III inspector in any nondestructive method listed in AWS B5.1, *Specification for the Qualification of Welding Inspectors* (except Visual Testing). Each initial NDE certification will result in an award of 20 PDHs with no maximum of PDHs over the 9-year period. All claims for PDHs under this provision must be accompanied by evidence of the date of original certification.
- **16.5.8** PDHs may be earned for initial certification to endorsements offered under the AWS QC1 program. The award of PDHs will be determined based upon the decision of the Committee. Contact the AWS Certification Department for a listing of endorsements and their respective PDH values.
- **16.5.9** PDHs may be earned for items that are not directly listed in the B5.1, *Specification for the Qualification of Welding Inspectors*, if approved by the AWS Certification Department.
- **16.6** SCWIs failing to meet the alternative requirements for recertification using experience and continuing education shall be required to recertify by examination in accordance with 6.1 of this specification. SCWIs who fail to meet the examination requirements of 6.1 shall no longer be certified at any level. Such persons shall be notified of their status in writing.
- **16.7** CWIs failing to meet the alternative requirements for recertification using experience and continuing education (including the AWS 9-year recertification seminar) shall be required to recertify by taking the Part B Practical examination or by taking an endorsement approved by the Committee for recertification, and meet the minimum scores in 6.2.2 to maintain certification at the CWI level. Applicants are permitted to switch the recertification means (e.g., from Part B to an endorsement or between endorsements) provided the deadline noted in 16.7.1 is not exceeded.
- **16.7.1** A CWI failing to pass either the Part B examination or an endorsement examination or by accruing the required PDHs by the expiration date of their current certification plus the additional 60-day administrative period is required to pass the three part examination, i.e., Part A Fundamentals, Part B Practical, and Part C Code examinations, in order to maintain their CWI certification.
- <u>16.7.2.</u> Individuals failing to meet the requirements of 6.2.2 or 7.1 shall no longer be certified at any level after their certification expires and will be considered as a new applicant. Such individuals will be notified of their status in writing.
- 16.8 SCWIs and CWIs who successfully recertify shall be subject to the requirements of Section 15 of this specification.

# Annex A (Informative Annex) Guidelines for Preparation of Inquiries for AWS Certification Committees

This annex is not part of AWS QC1:2016, *Specification for AWS Certification of Welding Inspectors*, but is included for informational purposes only.

#### A1. Introduction

The AWS Board of Directors has adopted a policy whereby all official interpretations of AWS standards are handled in a formal manner. Under this policy, all interpretations are made by the committee that is responsible for the standard. Official communication concerning an interpretation is directed through the AWS staff member who works with that committee. The policy requires that all requests for an interpretation be submitted in writing. Such requests will be handled as expeditiously as possible, but due to the complexity of the work and the procedures that must be followed, some interpretations may require considerable time.

#### A2. Procedure

All inquiries shall be directed to:

Director, Certification Programs Certification Department American Welding Society 8669 NW 36th St., #130 Miami, FL 33166

All inquiries shall contain the name, address, and affiliation of the inquirer, and they shall provide enough information for the committee/subcommittee to understand the point of concern in the inquiry. When the point is not clearly defined, the inquiry will be returned for clarification. For efficient handling, all inquiries should be typewritten and in the format specified below.

- **A2.1 Scope.** Each inquiry shall address one single provision of the specification, unless the point of the inquiry involves two or more interrelated provisions. The provision(s) shall be identified in the scope of the inquiry, along with the edition of the specification that contains the provision(s) the inquirer is addressing.
- **A2.2 Purpose of the Inquiry.** The purpose of the inquiry shall be stated in this portion of the inquiry. The purpose can be either to obtain an interpretation of a specification's requirement, or to request the revision of a particular provision in the specification.
- **A2.3** Content of the Inquiry. The inquiry should be concise, yet complete, to enable the committee to quickly and fully understand the point of the inquiry. Sketches should be used when appropriate and all paragraphs, figures, and tables (or the Annex), which bear on the inquiry shall be cited. If the point of the inquiry is to obtain a revision of the specification, the inquiry must provide technical justification for that revision.
- **A2.4 Proposed Reply.** The inquirer should, as a proposed reply, state an interpretation of the provision that is the point of the inquiry, or the wording for a proposed revision, if that is what inquirer seeks.

#### A3. Interpretation of Provisions

Interpretations of specification provisions are made by the <u>Qualification & Certification Committee</u>. The secretary of the committee refers all inquiries to the chair of the particular subcommittee that has jurisdiction over the particular specification addressed by the inquiry. The subcommittee reviews the inquiry and the proposed reply to determine what the response to the inquiry should be. Following the subcommittee's development of the response, the inquiry and the response are presented to the entire <u>Qualification & Certification Committee</u> for review and approval. Upon approval by the committee, the interpretation is an official interpretation of the Society, and the secretary transmits the response to the inquirer and to the *Welding Journal* for publication.

#### A4. Publication of Interpretations

All official interpretations shall appear in the Welding Journal and will be posted on the AWS web site.

#### **A5.** Telephone Inquiries

Telephone inquiries to AWS Headquarters concerning the QC1:2016, *Specification for AWS Certification of Welding Inspectors*, should be limited to matters directly related to the use of the specification. The AWS Board of Directors' policy requires that all AWS staff members respond to a telephone request for an official interpretation of any AWS standard with the information that such an interpretation can be obtained only through a written request.

#### A6. The Qualification & Certification Committee

The activities of the Qualification & Certification Committee regarding interpretations are limited strictly to the interpretation of specification provisions or to consideration of revisions to existing provisions. Neither AWS staff nor the committees are in a position to offer interpretive or consulting services on: (1) specific engineering problems or (2) requirements that apply to topics outside the scope of the specification or points not specifically covered by the specification. In such cases, the inquirer should seek assistance from a competent engineer or consultant experienced in the particular field of interest.

#### **List of AWS Documents on Certification**

Designation	Title
QC1	Specification for AWS Certification of Welding Inspectors
QC5	AWS Standard for Certification of Welding Educators
QC9	Administrative Procedures for Alleged Violations of AWS Certification Programs
QC13	Specification for the Certification of Welding Supervisors
QC14	Specification for the Certification of Welding Sales Representatives
QC15	Specification for AWS Certification of Radiographic Interpreters
QC17	Specification for AWS Accreditation of Certified Welding Fabricators
QC19	Specification for AWS Certification of Robotic Arc Welding Personnel
QC20	Specification for AWS Certification of Resistance Welding Technicians
QC47	Specification for AWS Certification of Welders and Accreditation of Test Facilities

