

**AWS B5.1:2025**  
**An American National Standard**

# **Specification for the Qualification of Welding Inspectors**



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**An American National Standard**

**Approved by the**  
**American National Standards Institute**  
**July 30, 2024**

# **Specification for the Qualification of Welding Inspectors**

**3rd Edition**

**Revises AWS B5.1:2013-AMD1**

Prepared by the  
American Welding Society (AWS) Qualification and Certification Committee

Under the Direction of the  
AWS Technical Activities Committee

Approved by the  
AWS Board of Directors

## **Abstract**

This standard defines the qualification requirements to qualify welding inspectors. The qualification requirements for visual welding inspectors include experience and satisfactory completion of an examination, which includes demonstrated capabilities, and proof of visual acuity. The examination tests the inspector's knowledge of welding processes, welding procedures, nondestructive examinations, destructive tests, terms, definitions, symbols, reports, welding metallurgy, related mathematics, safety, quality assurance, and responsibilities.



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## Foreword

This foreword is not part of this standard 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.

This is the third edition of this specification. The first edition superseded, in part, AWS QC1, *Standard for Certification of AWS Welding Inspectors*. AWS QC1 sets the requirements for the AWS Certified Welding Inspector program. AWS B5.1 establishes a basic definition of a welding inspector and is referenced by QC1. Companies or individuals wishing to establish in-house or internal qualification programs for inspection personnel may use AWS B5.1 as the basis for their program. Companies or individuals wishing to obtain AWS certification must follow the requirements in AWS QC1. Individuals who comply with AWS B5.1 but not with AWS QC1 should not be labeled as AWS Certified Welding Inspectors; only individuals who comply with AWS QC1, as determined by AWS, may obtain that title.

Previous editions of the document are as follows:

ANSI/AWS B5.1:2003	<i>Specification for the Qualification of Welding Inspectors</i>
ANSI/AWS B5.1:2013	<i>Specification for the Qualification of Welding Inspectors</i>
AWS B5.1:2013-AMD1	<i>Specification for the Qualification of Welding Inspectors</i>

The following is a summary of the most significant changes contained in B5.1:2025:

### Summary of Changes

Clause/Table/Figure/Annex	Modification
Clause 1	Removed word “Material” from 1.3.2(1) from term “Safety Data Sheets”
Clause 2	(New) Added Normative References
Clause 3	Terms and Definitions, was presented as Clause 2 in the previous edition; added three definitions: employer, quality assurance, and quality control
Clause 4	Levels of Qualification, was presented as Clause 3 in the previous edition
Clause 5	Functions, was presented as Clause 4 in the previous edition; Table 5.1 was revised; Differentiation between SWI and WI added; Additions made to Knowledge and Skills, Quality Control, and Quality Assurance
Clause 6	Education and Experience, was presented as Clause 5 in the previous edition
Clause 7	Examination Requirements, was presented as Clause 6 in the previous edition; Statement on SWI Test Requirements added
Clause 8	Examination Structure, was presented as Clause 7 in the previous edition; Tables added for recommended examination subjects and recommended subject weight: Table 8.1 WI/AWI Examination Structure; Table 8.2 SWI Examination Structure
Clause 9	Maintenance of Qualification, was presented as Clause 8 in the previous edition
Annex A Informative References	Additional reference information was added to Informative References

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



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# Specification for the Qualification of Welding Inspectors

## 1. General Requirements

**1.1 Scope.** This standard establishes the requirements for qualification and defines the body of knowledge applicable to welding inspection personnel.

**1.1.1 Levels.** There are three levels of qualification: Associate Welding Inspector (AWI), Welding Inspector (WI), and Senior Welding Inspector (SWI).

**1.1.2 Responsibility.** Qualification of AWI/WI/SWI personnel to the requirements of this standard does not eliminate the need of an employer to determine the ability of the individual to perform the duties involved in a particular welding inspection assignment.

**1.1.3 Employer.** This standard 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 authority to assign an individual for the work or for the performance of the work.

**1.1.4 Terminology Definitions.** As used in this standard, the word *shall* denotes a requirement, the word *should* denotes a guideline, and the word *may* means it is permissible. As used in this specification the word *welders* includes welding operators, brazers, and brazing operators.

**1.2 Units of Measurement.** This standard does not require units of measure. Therefore, no equivalents or conversions are contained except when they are cited in examples.

**1.3 Safety.** Safety and health issues and concerns are beyond the scope of this standard; some safety and health information is provided, but such issues are not fully 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 website

Material or Equipment Manufacturers:

- (1) Safety Data Sheets supplied by materials manufacturers
- (2) Operating Manuals supplied by equipment manufacturers

Applicable Regulatory Agencies

Work performed in accordance with this standard may involve the use of materials that have been deemed hazardous and may involve operations or equipment that may cause injury or death. This standard does not purport to address all safety and health risks that may be encountered. The user of this standard should establish an appropriate safety program to address such risks as well as to meet applicable regulatory requirements. ANSI Z49.1 should be considered when developing the safety program.

## 2. Normative References

The documents listed below are referenced within this publication and are mandatory to the extent specified herein. For undated references, the latest edition of the referenced standard shall apply. For dated references, subsequent amendments or revisions of the publications may not apply since the relevant requirements may have changed.

American Welding Society (AWS) documents:

AWS A3.0M/A3.0, *Standard Welding Terms and Definitions*

ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*

## 3. Terms and Definitions

AWS A3.0M/A3.0, *Standard Welding Terms and Definitions*, provides the basis for terms and definitions used herein. However, the following terms and definitions are included below to accommodate usage specific to this document:

**active supervision.** Direct on-site or readily available supervision by the WI/SWI in the form of necessary instructions to assure that the AWI can perform specific evaluations as specified by the employer.

**candidate.** The person attempting to qualify to this standard.

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

**employer.** An individual or an organization in the government, private, nonprofit, or business sector hiring and paying people for their work.

**qualification.** Training, skill, knowledge, and experience required for personnel to perform a specific job or function, typically demonstrated by passing a specified examination or examinations.

**quality assurance.** (QA). Those planned and systemic activities implemented within a quality system to provide confidence that a product or service will fulfill requirements for quality.

**quality control.** (QC). Activities ensuring that a manufactured product or performed service adheres to a defined set of quality criteria.

## 4. Levels of Qualification

This standard recognizes three levels of qualifications for welding inspection personnel. These levels are:

**4.1 Associate Welding Inspector (AWI).** A person meeting the qualification requirements of 6.1 and Clause 7.

**4.2 Welding Inspector (WI).** A person meeting the qualification requirements of 6.2 and Clause 7.

**4.3 Senior Welding Inspector (SWI).** A person meeting the qualification requirements of 6.3 and Clause 7.

## 5. Duties and Capabilities

### 5.1 Duties

**5.1.1 AWI.** The AWI shall be capable of performing inspections in accordance with applicable standards. Such inspections shall be performed under the active supervision of a SWI or WI. As such, responsibility for determining if welded assemblies conform to applicable workmanship and acceptance criteria shall be maintained by the supervising SWI or WI.

**5.1.2 WI.** The WI shall be capable of performing inspections in accordance with applicable standards. The WI shall be capable of verifying welding compliance of suppliers and organizations providing materials or services. The WI shall ensure the work performed and associated records are maintained and conform to the requirements of the applicable standards or other contract documents. The WI shall also be capable of supervising and training AWIs.

**5.1.3 SWI.** The SWI shall be capable of performing inspections, managing and supervising WIs and AWIs, qualifying welding procedures and personnel, documenting these qualifications, preparing inspection plans and reports, and reviewing and managing quality system requirements. The SWI shall be considered qualified to perform both quality control and quality assurance activities as well as manage the qualification and performance of WIs and AWIs. Where a WI is referenced by code, contract, or specification, a SWI is a duly qualified welding inspector and meets any requirement that specifies a WI.

**5.2 Capabilities.** As specified by qualification level, the welding inspector shall, at a minimum, be capable of performing those tasks listed in Table 5.1. This does not preclude inspectors from performing tasks above their qualification level if their organization determines an inspector possesses the necessary skills and experience to perform those higher-level tasks (see 1.1.2).

**Table 5.1**  
**Welding Inspection Capabilities Based on Qualification Level (See 5.2)**

Knowledge and Skills	AWI	WI	SWI
(1) Prepare reports.	X	X	X
(2) Communicate effectively orally and in writing.	X	X	X
(3) Understand the fundamentals of SMAW, SAW, OFW, RW, LBW, EBW, GTAW, FCAW, GMAW, PAW, SW, ESW, EGW, and Thermal Spraying, Soldering, Mechanical Cutting, Thermal Cutting/Gouging, Brazing/Braze Welding.	X	X	X
(4) Understand the fundamentals of VT-direct, MT, UT, PT, and RT.		X	X
(5) Understand the fundamentals of VT-indirect, ET, and LT.			X
(6) Understand the fundamentals of welding metallurgy.		X	X
(7) Understand welding symbols and drawings.	X	X	X
(8) Interpret drawings and specifications.		X	X
Standards	AWI	WI	SWI
(1) Verify base material compliance.	X	X	X
(2) Verify filler metal compliance.	X	X	X
(3) Verify filler metal storage/handling compliance.	X	X	X
(4) Verify inspection records compliance.	X	X	X
(5) Verify proper documentation compliance.	X	X	X
(6) Verify base material and filler metal compatibility.		X	X
(7) Certify documented results compliance.		X	X
(8) Verify procedure qualification records compliance.		X	X
(9) Verify welding procedure compliance.		X	X
(10) Verify NDE procedures compliance.		X	X

(Continued)

**Table 5.1 (Continued)**  
**Welding Inspection Capabilities Based on Qualification Level (See 5.2)**

<b>Procedure Qualification</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Verify welding equipment appropriateness.	X	X	X
(2) Verify edge preparation compliance.	X	X	X
(3) Verify joint geometry compliance.	X	X	X
(4) Witness procedure qualification		X	X
(5) Verify welding procedure qualification compliance.		X	X
(6) Review welding procedures for compliance with code and contract requirements.		X	X
(7) Write welding procedures.			X
<b>Performance Qualification</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Witness welder performance qualification.		X	X
(2) Verify welder qualification compliance.		X	X
(3) Verify welder qualification records compliance.		X	X
(4) Request welder performance requalification.		X	X
<b>Production</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Verify welder qualification appropriateness.		X	X
(2) Verify production welding compliance.		X	X
(3) Verify personnel qualifications.		X	X
<b>Inspection</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Perform visual examinations.	X	X	X
(2) Verify examination procedure compliance.		X	X
(3) Review examination results compliance.		X	X
(4) Develop visual inspection procedures (before, during, and after welding).		X	X
(5) Provide NDE inspection planning and scheduling (before, during, and after a project).		X	X
(6) Review welding inspection reports.		X	X
(7) Verify implementation of nondestructive and destructive evaluation methods.		X	X
(8) Prepare visual inspection requirements.			X
(9) Prepare NDE requirements.			X
(10) Report investigation results of quality inspection disputes.			X
(11) Prepare destructive testing requirements.			X
<b>Safety</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Be knowledgeable of applicable safety requirements.	X	X	X

(Continued)

**Table 5.1 (Continued)**  
**Welding Inspection Capabilities Based on Qualification Level (See 5.2)**

<b>Quality Control</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Perform welding program inspections.		X	X
(2) Conduct welding inspections.		X	X
<b>Quality Assurance</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Perform audits and surveillance.		X	X
(2) Implement weld inspection quality assurance plans.		X	X
(3) Prepare weld inspection quality assurance plans.			X
(4) Prepare base material control requirements.			X
(5) Prepare weld consumable control requirements.			X
(6) Prepare audit and surveillance plans.			X
(7) Prepare documentation control requirements.			X
<b>Project Management</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Review contract requirements.		X	X
(2) Review vendor proposal compliance.		X	X
(3) Prepare weld inspection bid specifications.			X
(4) Prepare purchase specifications.			X
(5) Determine vendor capacity and capability.			X
(6) Select vendor.			X
<b>Training</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Develop and provide a training program for the AWI.		X	X
(2) Develop visual inspection training.		X	X
(3) Verify implementation of visual inspection training.		X	X
(4) Develop and provide a training program for the WI.			X
(5) Provide technical leadership for welding inspectors.			X
(6) Verify implementation of quality assurance training.			X
(7) Provide guidance and direction to inspectors for maintaining and upgrading their individual qualifications.			X
<b>Evaluation</b>	<b>AWI</b>	<b>WI</b>	<b>SWI</b>
(1) Evaluate AWIs performance.		X	X
(2) Evaluate WIs performance.			X
(3) Perform inspection results trend analysis.			X



## 6. Education and Experience Requirements

**6.1 Associate Welding Inspector.** An AWI shall be a high school graduate, or hold a state or military-approved high school equivalency diploma (e.g., GED) and shall have a minimum of two (2) years of qualified experience in an occupational function with a direct relationship to weldments fabricated to national or international standards and shall have been directly involved in one or more of the areas listed under 6.5.

**6.1.1** The following combinations of education and years of experience are considered to be acceptable alternatives to 6.1, with supporting documentation (e.g., copies of transcripts or letters of reference specifying earned credit hours of training) and may be substituted as follows:

(1) Eighth-grade level of schooling with a minimum of four (4) years of qualified work experience in welding functions as defined in 6.5;

(2) Less than an eighth-grade level of schooling with a minimum of six (6) years of qualified work experience in welding functions, as defined in 6.5;

(3) Eighth-grade level of schooling with a minimum of one (1) year of vocational education and training in a welding curriculum and a minimum of three (3) years of qualified work experience in welding functions, as defined in 6.5; or

(4) Two (2) years of post-secondary education in welding or engineering technology, engineering, or physical sciences, and a minimum of six (6) months of qualified experience in welding functions, as defined under 6.5.

**6.2 Welding Inspector.** A WI shall be a high school graduate or hold a state or military-approved high school equivalency diploma (e.g., GED) and shall have a minimum of five (5) years of qualified experience in an occupational function with a direct relationship to weldments fabricated to national or international standards and shall have been directly involved in one or more of the areas listed under 6.5.

**6.2.1** The following combinations of education and experience are acceptable alternatives to 6.2, with supporting documentation (e.g., copies of transcripts or letters of reference specifying earned credit hours of training) and may be substituted as follows:

(1) Eighth-grade level of schooling with a minimum of nine (9) years of qualified work experience in welding functions as defined in 6.5.

(2) Less than an eighth-grade level of schooling with a minimum of twelve (12) years of qualified work experience in welding functions, as defined in 6.5.

**6.2.2** Up to a maximum of four (4) years of post-secondary education may be substituted for an equal number of years of the required five (5) years of experience, provided studies are relevant to any of the functions as defined under 6.5. Credit is given as follows:

(1) Bachelor or higher degree in engineering: Four (4) years maximum if the degree is in welding engineering or welding engineering technology.

(2) Associate or higher degree: Three (3) years maximum if the degree is in welding or non-welding technology, engineering, or physical sciences.

(3) Engineering/technical school courses: Two (2) years maximum, and only for successfully completed courses\* in a curriculum suitable for application to (1) or (2) above.

(4) Trade/vocational courses: One (1) year maximum, and only for successfully completed courses in a curriculum\* related to welding suitable for application to (1) or (2) above.

*\*NOTE: "Courses in a curriculum" means courses within a program toward a degree, diploma, or certificate, to be applied to item (1) above. "Successfully completed courses" means a completed quarter or semester with credit in that course. Documentation of the number of actual hours completed is necessary prior to notification of actual credit allowed.*

**6.3 Senior Welding Inspector.** A SWI shall be a high school graduate or hold a state or military-approved high school equivalency diploma (e.g., GED) and shall have a minimum of fifteen (15) years of qualified experience in an occupational function that has a direct relationship to welded assemblies fabricated to national or international standards and shall have been directly involved in three (3) or more of the areas listed in 6.5. A SWI candidate shall be currently qualified as a WI.

**6.3.1** Up to a maximum of four (4) years of post-secondary education may be substituted for an equal number of years of the required fifteen (15) years of experience, provided studies are relevant to any of the functions as defined under 6.5. Credit is given as follows:

(1) Bachelor or higher degree in engineering: Four (4) years maximum if the degree is in welding engineering or welding engineering technology.

(2) Associate or higher degree: Three (3) years maximum if the degree is in welding or non-welding technology, engineering, or physical sciences.

(3) Engineering/technical school courses: Two (2) years maximum, and only for successfully completed courses in a curriculum\* suitable for application to (1) or (2) above.

(4) Trade/vocational courses: One (1) year maximum, and only for successfully completed courses in a curriculum\* related to welding suitable for application to (1) or (2) above.

*\*NOTE: "Courses in a curriculum" means courses within a program toward a degree, diploma, or certificate, to be applied to item (1) above. "Successfully completed courses" means a completed quarter or semester with credit in that course. Documentation of the number of actual hours completed is necessary prior to notification of actual credit allowed.*

**6.4 Documentation.** Candidates shall submit verifiable documentation of education and employment.

**6.5 Qualifying Experience.** Candidates shall submit verifiable documentation of experience in an occupational function with a direct relationship to weldments fabricated to national or international standards and shall have been directly involved in at least one (1) of the following for AWI and WI or three (3) of the following for SWI:

(1) Experience in the development of procedures, inspection requirements, acceptance criteria, nondestructive evaluation procedures, and specifications for weldments;

(2) Experience in planning, control, and application of base metals and filler metals in the preparation and completion of production weldments;

(3) Experience as a welder, welding operator, or tack welder in fabrication, manufacturing, or construction;

(4) Experience in the detection and measurement of weld discontinuities by application of visual or other nondestructive examination processes to a written procedure;

(5) Experience in planning, control, and application of repair welding;

(6) Experience in the qualification of welders or welding procedures to various codes, standards, and specifications;

(7) Experience applying welding related codes, standards, or specifications;

(8) Experience in operational techniques and activities used to fulfill quality control requirements for weldments; or

(9) Experience in teaching the occupational skill of welding or subjects related to welding; its application, control, materials, and processes.

## 7. Examination Requirements

The AWI, WI, and SWI shall meet the following examination requirements:

**7.1 Visual Acuity Requirements.** The AWI, WI, and SWI shall have the ability to read Jaeger Number 2 letters or smaller at a minimum distance of 12 inches (or equivalent test) in at least one eye with or without correction. The AWI, WI, or SWI shall test for color perception and shall test for contrast differentiation and shades of gray.

*NOTE: Near vision acuity is considered essential to the proper performance of welding examination. Failure to meet the above level of acuity shall be a failure to meet this standard. Color perception and shades of gray contrast differentiation are desirable in some specific applications but are not considered essential for all examinations. It shall be the employer's responsibility to establish and enforce visual requirements for AWI, WI, and SWI employees.*

**7.2 Associate and Welding Inspector (AWI, WI) Examination Requirements.** Candidates shall pass exams consisting of the following parts:

**7.2.1 Fundamentals.** An examination on practical application of welding inspection knowledge including, but not limited to, welding procedure and performance qualifications, test methods, drawing and specification compliance, and weld examination, as listed in Table 8.1.

**7.2.1.1** This examination shall be a general knowledge-based exam on the applicable welding inspection capabilities listed in Table 5.1 for the qualification level and the recommended examination subjects listed in Table 8.1.

**7.2.2 Practical Applications.** An examination on fundamental principles including, but not limited to: joining and cutting processes, nondestructive examination, quality assurance, inspector’s duties, weld discontinuities, welding symbols, joint design, mechanical properties of metals, and basic on-the-job mathematics.

**7.2.2.1** This examination shall be a general knowledge-based exam on the applicable welding inspection capabilities listed in Table 5.1 for the qualification level and the recommended examination subjects listed in Table 8.1.

**7.2.3 Code Applications.** An examination on the requirements of a code, standard, or specification.

**7.2.3.1** This examination shall include at least one recognized standard or may use multiple standards to cover the applicable welding inspection capabilities listed in Table 5.1 for the qualification level and the recommended examination subjects listed in Table 8.1.

**7.3 Senior Welding Inspector (SWI) Examination Requirements.** Candidates shall pass an examination(s) on the subject matter as described in Table 8.2.

## 8. Examination Structure

Recommended examination subjects and recommended subject weights are given in Tables 8.1 and 8.2:

**Table 8.1**  
**WI/AWI Examination Structure (See 7.2 and Clause 8)**

Fundamentals Examination	Minimum Percentages of Total Questions
Definitions and Terminology	12
Joining and Cutting Processes	14
Symbols—Welding and NDE	10
Visual Examination	10
Welding Application and Control	9
NDE Fundamentals	8
Base Materials, Heat Treatments & Metallurgy (Ferrous Materials)	6
Welding Related Calculations	6
Duties and Responsibilities	4
Destructive Testing Fundamentals	3

(Continued)

**Table 8.1 (Continued)**  
**WI/AWI Examination Structure (See 7.2 and Clause 8)**

<b>Practical Applications Examination</b>	<b>Minimum Percentages of Total Questions</b>
Welding Inspection and Discontinuities	34
Procedure and Performance Qualifications	28
Destructive Testing and Properties	8
NDE Application	8
Utilization of Specifications and Drawings	8
<b>Code Applications Examination</b>	<b>Minimum Percentages of Total Questions</b>
Qualification	25
Fabrication	25
Inspection	25
Reports and Records	5
Material and Design	5

**Table 8.2**  
**SWI Examination Structure (See 7.3)**

	<b>Minimum Percentages of Total Questions</b>
<b>Procedure Qualification and Code Compliance Examination</b>	<b>28</b>
Base Materials, Heat Control & Metallurgy (Ferrous and Nonferrous Materials)	
Welding and Allied Processes	
Destructive Testing Fundamentals, Techniques, and Applicability	
<b>Performance Qualification and Certification Examination</b>	<b>12</b>
Welding and Allied Processes	
Qualification and Certification	
<b>Inspection and NDE Personnel Examination</b>	<b>21</b>
NDE fundamentals, techniques, and applicability (PT, ET, MT, RT, UT, LT, VT [direct & indirect])	
Qualification and Certification	

(Continued)

**Table 8.2 (Continued)**  
**SWI Examination Structure (See 7.3)**

	Minimum Percentages of Total Questions
<b>Quality Assurance/Welding Coordination Examination</b>	<b>10</b>
Quality Programs	
Document Control	
Procurement and Supplier Control	
Calibration	
Process Control	
Statistical Quality Control	
Trend Analysis	
Nonconformance Control	
Auditing and Surveillance	
Corrective Action	
Records	
Project and Personnel Management	10

**8.1 Senior Welding Inspector (SWI) Alternative Qualification.** Candidates for SWI shall be considered as meeting the examination requirements of 7.3 if they can demonstrate the successful completion of separate education courses or examinations that cover a minimum of 90% of the subjects in Table 8.2.

## 9. Maintenance of Qualification

The WI/SWI shall demonstrate the ability to perform the duties in 5.1. Evidence of continued application of this qualification shall be presented every three (3) years, as a minimum.

# Annex A (Informative)

## Informative References

This annex is not part of this standard but is included for informational purposes only.

The examination questions may be taken from the following reference information. The reference documents are not limited to the following:

Document	Applicability
AWS A1.1, <i>Metric Practice Guide for the Welding Industry</i> , American Welding Society.	AWI, WI, SWI
AWS A2.4, <i>Standard Symbols for Welding, Brazing, and Nondestructive Examination</i> , American Welding Society.	AWI, WI, SWI
AWS A3.0M/A3.0, <i>Standard Welding Terms and Definitions</i> , American Welding Society.	AWI, WI, SWI
AWS B1.10M/B1.10, <i>Guide for the Nondestructive Examination of Welds</i> , American Welding Society.	AWI, WI, SWI
AWS B1.11M/B1.11, <i>Guide for the Visual Inspection of Welds</i> , American Welding Society.	AWI, WI, SWI
AWS B2.1/B2.1M, <i>Specification for Welding Procedure and Performance Qualification</i> , American Welding Society.	AWI, WI, SWI
AWS B4.0, <i>Standard Methods for Mechanical Testing of Welds</i> , American Welding Society.	AWI, WI, SWI
AWS B5.1, <i>Specification for the Qualification of Welding Inspectors</i> , American Welding Society.	AWI, WI, SWI
AWS QC1, <i>Specification for AWS Certification of Welding Inspectors</i> , American Welding Society.	AWI, WI, SWI
ANSI Z49.1, <i>Safety in Welding, Cutting, and Allied Processes</i> , American Welding Society.	AWI, WI, SWI
American Welding Society (AWS), 2000, <i>Certification Manual for Welding Inspectors</i> , Miami: American Welding Society.	AWI, WI, SWI
American Welding Society (AWS), 2015, <i>Welding Inspection Handbook</i> , Miami: American Welding Society.	AWI, WI, SWI
American Welding Society (AWS), 1987, <i>Welding Handbook, Volume 1: Welding and Cutting Science and Technology</i> , Miami: American Welding Society.	AWI, WI, SWI
American Welding Society (AWS), 2004, <i>Welding Handbook, Volume 2: Welding Processes, Part 1</i> , Miami: American Welding Society.	AWI, WI, SWI
American Welding Society (AWS), 2007, <i>Welding Handbook, Volume 3: Welding Processes, Part 2</i> , Miami: American Welding Society.	AWI, WI, SWI
American Welding Society (AWS), 2010, <i>Welding Handbook, Volume 4: Materials and Applications, Part 1</i> , Miami: American Welding Society.	AWI, WI, SWI
American Welding Society (AWS), 2021, <i>Welding Handbook, Volume 5: Materials and Applications, Part 2</i> , Miami: American Welding Society.	AWI, WI, SWI
AWS WIT-T, <i>Welding Inspection Technology</i> , Miami: American Welding Society.	AWI, WI, SWI
Crawford, J. and K. Rodgers, 2000, <i>The Practical Welding Engineer</i> , Miami: American Welding Society.	SWI
ASNT SNT-TC-1A, <i>Recommended Practice: Personnel Qualification and Certification in Nondestructive Testing</i> , The American Society for Nondestructive Testing.	WI, SWI
ISO 9001, <i>Quality Management Systems—Requirements</i> , International Organization for Standardization.	SWI

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# Annex B (Informative)

## Requesting an Official Interpretation on an AWS Standard

This annex is not part of this standard but is included for informational purposes only.

### B1. Introduction

The following procedures are here to assist standard users in submitting successful requests for official interpretations to AWS standards. Requests from the general public submitted to AWS staff or committee members that do not follow these rules may be returned to the sender unanswered. AWS reserves the right to decline answering specific requests; if AWS declines a request, AWS will provide the reason to the individual why the request was declined.

### B2. Limitations

The activities of AWS technical committees regarding interpretations are limited strictly to the interpretation of provisions of standards prepared by the committees. Neither AWS staff nor the committees are in a position to offer interpretive or consulting services on (1) specific engineering problems, (2) requirements of standards applied to fabrications outside the scope of the document, or (3) points not specifically covered by the standard. In such cases, the inquirer should seek assistance from a competent engineer experienced in the particular field of interest.

### B3. General Procedure for all Requests

**B3.1 Submission.** All requests shall be sent to the Managing Director, Certification. For efficient handling, it is preferred that all requests should be submitted electronically through [certification@aws.org](mailto:certification@aws.org). Alternatively, requests may be mailed to:

Managing Director  
Certification  
American Welding Society  
8669 NW 36 St, # 130  
Miami, FL 33166

**B3.2 Contact Information.** All inquiries shall contain the name, address, email, phone number, and employer of the inquirer.

**B3.3 Scope.** Each inquiry shall address one single provision of the standard unless the issue in question involves two or more interrelated provisions. The provision(s) shall be identified in the scope of the request along with the edition of the standard (e.g., D1.1:2006) that contains the provision(s) the inquirer is addressing.

**B3.4 Question(s).** All requests shall be stated in the form of a question that can be answered 'yes' or 'no'. The request shall be concise, yet complete enough to enable the committee to understand the point of the issue in question. When the point is not clearly defined, the request will be returned for clarification. Sketches should be used whenever appropriate, and all paragraphs, figures, and tables (or annexes) that bear on the issue in question shall be cited.

**B3.5 Proposed Answer(s).** The inquirer shall provide proposed answer(s) to their own question(s).



**B3.6 Background.** Additional information on the topic may be provided but is not necessary. The question(s) and proposed answer(s) above shall stand on their own without the need for additional background information.

## **B4. AWS Policy on Interpretations**

The American Welding Society (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 official interpretations are approved by the technical committee that is responsible for the standard. Communication concerning an official interpretation is directed through the AWS staff member who works with that technical committee. The policy requires that all requests for an official interpretation be submitted in writing. Such requests will be handled as expeditiously as possible, but due to the procedures that must be followed, some requests for an official interpretation may take considerable time to complete.

## **B5. AWS Response to Requests**

Upon approval by the committee, the interpretation is an official interpretation of the Society, and AWS shall transmit the response to the inquirer, publish it in the *Welding Journal*, and post it on the AWS website.

## **B6. Telephone Inquiries**

Telephone inquiries to AWS Headquarters concerning AWS standards should be limited to questions of a general nature or to matters directly related to the use of the standard. The *AWS Board Policy Manual* 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. Headquarters staff cannot provide consulting services. However, the staff can refer a caller to any of those consultants whose names are on file at AWS Headquarters.

## Annex C (Informative)

### List of AWS Documents on Qualification and Certification

This annex is not part of this standard but is included for informational purposes only.

Qualification Designation	Title
B5.1	<i>Specification for the Qualification of Welding Inspectors</i>
B5.2	<i>Specification for the Training, Qualification, and Company Certification of Welding Inspector Specialists and Welding Inspector Assistants</i>
B5.4	<i>Specification for the Qualification of Welder Test Facilities</i>
B5.5	<i>Specification for the Qualification of Welding Educators</i>
B5.9	<i>Specification for the Qualification of Welding Supervisors</i>
B5.14	<i>Specification for the Qualification of Welding Sales Representatives</i>
B5.15	<i>Specification for the Qualification of Radiographic Interpreters</i>
B5.16	<i>Specification for the Qualification of Welding Engineers</i>
B5.17	<i>Specification for the Qualification of Welding Fabricators</i>

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

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