

**AWS B5.1:2013**  
**An American National Standard**



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



**American Welding Society®**



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**An American National Standard**

**Approved by the**  
**American National Standards Institute**  
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# **Specification for the Qualification of Welding Inspectors**

**2nd Edition**

**Supersedes AWS B5.1:2003**

Prepared by the  
American Welding Society (AWS) B5 Subcommittee on Welding Inspectors

Under the Direction of the  
AWS Personnel and Facility Qualification 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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# Table of Contents

	Page No.
<i>Personnel</i> .....	v
<i>Foreword</i> .....	vii
<i>List of Tables</i> .....	x
<b>1. Scope</b> .....	1
1.1 Requirements .....	1
1.2 Levels .....	1
1.3 Responsibility .....	1
1.4 Employer .....	1
1.5 Terminology Guideline .....	1
1.6 Units .....	1
1.7 Safety .....	1
1.8 Referenced Documents .....	2
<b>2. Terms and Definitions</b> .....	2
<b>3. Levels of Qualification</b> .....	2
3.1 Associate Welding Inspector (AWI) .....	2
3.2 Welding Inspector (WI) .....	2
3.3 Senior Welding Inspector (SWI) .....	2
<b>4. Functions</b> .....	2
4.1 Duties .....	2
4.2 Capabilities .....	2
<b>5. Education and Experience Requirements</b> .....	5
5.1 Associate Welding Inspector .....	5
5.2 Welding Inspector .....	5
5.3 Senior Welding Inspector .....	6
5.4 Documentation .....	6
5.5 Qualifying Experience .....	6
<b>6. Examination Requirements</b> .....	7
6.1 Visual Requirements .....	7
6.2 Written Test Requirements .....	7
<b>7. Examination Structure</b> .....	7
7.1 WI/AWI Examination .....	7
7.2 SWI Examination .....	8
7.3 SWI Alternate Qualification .....	8
<b>8. Maintenance of Qualification</b> .....	8
Annex A (Informative)—Reference Documents .....	9
Annex B (Informative)—Guidelines for the Preparation of Technical Inquiries .....	11

## List of Tables

<b>Table</b>	<b>Page No.</b>
1 Welding Inspection Capabilities Based on Qualification Level .....	3

# Specification for the Qualification of Welding Inspectors

## 1. Scope

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

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

**1.3 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.

**1.4 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 responsibility for the work or for the performance of the work.

**1.5 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.

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

### 1.7 Safety

**1.7.1** 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.

**1.7.2** 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) Material Safety Data Sheets supplied by materials manufacturers
- (2) Operating Manuals supplied by equipment manufacturers

Applicable Regulatory Agencies

**1.7.3** 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.