

AWS B5.4:2025
An American National Standard

Specification for the Qualification of Welder Test Facilities



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Approved by the
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Specification for the Qualification of Welder Test Facilities

2nd Edition

Revises AWS B5.4:2005

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 specification defines the requirements for the qualification of welder test facilities.



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Foreword

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

This specification establishes the requirements for a facility to conduct performance qualification testing of welders. These requirements include personnel, organization, procedures, equipment, capability, and commitment to conducting such testing. This specification also describes the activities and responsibilities of the test facility to achieve this purpose.

NOTE: It is the test facility representative's responsibility to be sure their inspectors meet any state or local requirements for qualifications and reporting organization.

The first edition of this specification replaced in part AWS standard QC4–89, *Standard for the Accreditation of Test Facilities for the AWS Certified Welder Program*. This standard defined the requirements for the qualification of the facility but did not address requirements for the accreditation of the facility.

This is the second edition of this specification. The term “quality” replaced “quality control” throughout the document. Underlined text in the clauses, subclauses, tables, figures, or forms indicates a change from the 2005 edition. A vertical line in the margin of a table or figure also indicates a change from the 2005 edition. The following is a summary of the most significant changes contained in B5.4:2025:

Summary of Changes

Clause	Modification
Clause 1	Editorial changes have been made to the Scope.
Clause 3	The definition of “essential variable” has been updated.
Clause 5	A new subclause 5.3(4) was added to address offsite testing. In 5.6 and 5.6.3, “calibration” was replaced with “verification” and verification parameters were included.

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 Welder Test Facilities

1. General Requirements

1.1 Scope. This specification defines minimum requirements for welder qualification test facilities to consistently conduct welder qualification testing to meet the requirements of codes and other standards.

This specification may be used by all welder qualification test facilities. Test facilities may be part of an independent laboratory, manufacturing plant, educational institution, or other party. This document becomes mandatory when invoked by a referencing document such as a specification or contract document. This specification does not establish welder certification requirements.

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 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 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.

1.4 Procedure. This specification establishes procedures that allow welder qualification test facilities to consistently perform welder qualification testing.

1.5 Terminology Guidelines. As used in this specification, the word *shall* denotes a mandatory provision; the word *should* denotes a non-mandatory provision but is recommended as good practice; and the word *may* denotes an optional provision. Additionally, *welder* shall be construed to include welder, welding operator, tack welder, brazer, and brazing operator; *welding* shall be construed to include both welding and brazing.