

AWS B5.14:2009
An American National Standard



Specification for the Qualification of Welding Sales Representatives



American Welding Society



**AWS B5.14:2009
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**Approved by the
American National Standards Institute
February 2, 2009**

Specification for the Qualification of Welding Sales Representatives

2nd Edition

Supersedes AWS B5.14:2002

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

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This standard establishes the minimum requirements to qualify as a Welding Sales Representative (WSR). This qualification is based on the individual's education and experience, and his or her ability to pass an examination.



American Welding Society

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This standard is subject to revision at any time by the AWS Personnel and Facilities Qualification Committee. It must be reviewed every five years, and if not revised, it must be either reaffirmed or withdrawn. Comments (recommendations, additions, or deletions) and any pertinent data that may be of use in improving this standard are required and should be addressed to AWS Headquarters. Such comments will receive careful consideration by the AWS Personnel and Facilities Qualification Committee and the author of the comments will be informed of the Committee's response to the comments. Guests are invited to attend all meetings of the AWS Personnel and Facilities Qualification Committee to express their comments verbally. Procedures for appeal of an adverse decision concerning all such comments are provided in the Rules of Operation of the Technical Activities Committee. A copy of these Rules can be obtained from the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

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Personnel

AWS Personnel and Facilities Qualification Committee

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B. W. Phillips	<i>Oil States Industries, Incorporated</i>
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Advisor to the AWS B5N Subcommittee on Welding Sales Representatives

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Foreword

This foreword is not part of AWS B5.14:2009: *Specification for the Qualification of Welding Sales Representatives*, but is included for informational purposes only.

This specification was developed by the AWS Personnel and Facilities Qualification Committee in response to an industry demand for a qualification document for individuals who sell welding products or services. This specification establishes the qualification requirements from which a central certification agency or an employer may develop a certification program for these professionals.

This is the second edition of this specification. This edition canvassed a larger group in order to improve upon the requirements in the first edition, and to make this document more responsive to industry needs.

The Qualification and Certification Committee of the American Welding Society was formed in 1973. In 1996, it was divided into two committees. The Personnel and Facilities Qualification Committee is now responsible for creating American National Standards for the qualification of welding personnel and welding facilities. The AWS Certification Committee is now responsible for creating certification programs based on these and other recognized standards.

Comments and suggestions for the improvement of this standard are welcome. They should be sent to the Secretary, AWS Personnel and Facilities Qualification Committee, American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

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Specification for the Qualification of Welding Sales Representatives

1. Scope

1.1 General. This standard defines the minimum education, experience, and knowledge necessary for individuals to function effectively sales representatives in the welding industry. It provides a method, through documentation of education and experience and a written examination, to qualify an individual as a Welding Sales Representative (WSR). It also provides general job functions a WSR should be able to perform.

1.2 Safety and Health. Some safety and health issues may be beyond the scope of this standard and therefore not be fully addressed by this standard. Users of this standard should consult ANSI Z49.1, *Safety in Welding, Cutting, and Allied Processes*, applicable federal, state, and local regulations and other relevant documents concerning safety and health issues not addressed herein.

1.3 Terminology Guideline. As used in this standard, the word *shall* denotes a requirement, the word *should* denotes a guideline, and the word *may* denotes a choice. As used in this standard, the word *welding* includes brazing.

2. Referenced Documents

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

AWS A3.0, *Standard Welding Terms and Definitions*¹

AWS A5.01M/A5.01, *Procurement Guidelines for Consumables—Welding and Allied Processes—Flux and Gas Shielded Electrical Welding Processes*¹

AWS A5.32/A5.32M, *Specification for Welding Shielding Gases*¹

¹ Published by the American Welding Society, 550 N.W. LeJeune Road, Miami, FL 33126.

AWS F3.2M/F3.2, *Ventilation Guide for Weld Fume*¹

Brazing Handbook, 5th Edition, American Welding Society¹

Modern Welding Technology, 5th Edition, Howard Cary, Prentice Hall²

Soldering Handbook, 3rd Edition, American Welding Society¹

Welding Handbook Volume 1: Welding Science and Technology, 9th Edition American Welding Society¹

Welding Handbook Volume 2: Welding Processes, 9th Edition, American Welding Society¹

3. Terms and Definitions

Terms used in this standard are defined below. All other terms are defined by AWS A3.0, *Standard Welding Terms and Definitions*.

Candidate. An individual who is seeking to obtain status as a WSR.

Employer. The corporate, private, or public entity which employs the WSR for wages, salary, fees, or other considerations.

qualification. The process of demonstrating whether an individual is capable of fulfilling specified requirements.

Welding Sales Representative (WSR). An individual who has demonstrated that they meet the requirements of this standard.

² Published by Prentice Hall, One Lake Street, Upper Saddle River, NJ 07458.

4. Qualification Requirements

A Candidate shall meet the requirements of Clauses 6 and 7 to be qualified as a WSR. There is only one level of qualification for WSR.

5. Duties and Capabilities

5.1 Duties

5.1.1 The WSR, as a minimum, shall be capable of demonstrating the use of welding equipment and supplies, directing sales of welding supplies and equipment, practicing appropriate sales ethics, determining customer needs, and providing customer support.

5.1.2 The Employer shall define the WSR's specific duties. The Employer is responsible for verifying that the WSR is qualified to perform the duties and tasks as assigned.

5.2 Capabilities. The WSR shall have:

(1) Basic knowledge in the application of industrial gases for welding and cutting processes including the safe handling and storage of industrial gases

(2) Basic knowledge and safe practices of welding processes such as gas tungsten arc welding (GTAW), gas metal arc welding (GMAW), flux cored arc welding (FCAW), shielded metal arc welding (SMAW), and submerged arc welding (SAW)

(3) The technical knowledge to determine when a welding procedure is required for a given application

(4) The technical knowledge to assist in selecting the most appropriate welding or cutting process for a given application

(5) Basic knowledge of when the application or use of hardfacing or corrosion resistant overlay is to be used

(6) Basic knowledge and safe practices of cutting processes, including mechanical and various thermal (oxyacetylene, plasma, etc.) processes

(7) Basic knowledge of brazing and soldering processes and their filler materials

6. Education and Experience Requirements

The Candidate shall:

(1) Be a high school graduate or hold a state or military approved high school equivalency diploma (e.g., GED).

(2) Have no fewer than two years of experience in an occupational function in direct relation to the sales of welding equipment, cutting equipment, and supplies and other related services.

(3) Have a training certificate of completion for welding processes, cutting processes, and filler metal if he or she has less than five years of experience in an occupational function in direct relation to the sales of welding equipment, cutting equipment, and supplies and other related services.

(4) Provide verifiable evidence the requirements of (1), (2), and (3) above have been met.

7. Examination Structure and Body of Knowledge

The Candidate shall pass a written examination to demonstrate knowledge of the capabilities listed in 5.2 of this standard. Recommended examination subjects and recommended subject weights are given in Table 1. The passing grade will be dependent on the difficulty of the examination, and therefore should be established by the company or organization that created the examination.

Table 1
Recommended Examination
Subjects and Weights

Examination Subject	Subject Weight (%)*
gas metal arc welding (GMAW)	9%
gas tungsten arc welding (GTAW)	9%
flux-cored arc welding (FCAW)	9%
shielded metal arc welding (SMAW)	9%
submerged arc welding (SAW)	4%
safety in welding, cutting, and related processes	4%
safety in gas cylinder storage and handling	2%
brazing and soldering	4%
AWS filler metal classification guidelines	9%
shielding gas applications	9%
welding terms and definitions	9%
welding fume extracting and ventilation	4%
basic electrical requirements of welding power supplies	4%
cutting processes	4%
welding procedures and procedure qualification records	2%

*Percentages indicate the *minimum* suggested percentage in each examination subject therefore the total given is less than 100%.

8. Maintenance of Qualification

The WSR shall periodically demonstrate his or her continuing ability to perform the functions in Clause 5 of this standard. This may be demonstrated by continuing education, record of employment in related work, reexamination, or some combination thereof. The period of validity of qualification shall be no more than three (3) years.

9. Reference Material

The examination questions shall be referenced from the following publications:

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

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

AWS A5.01M/A5.01, *Procurement Guidelines for Consumables—Welding and Allied Processes—Flux and Gas Shielded Electrical Welding Processes*

AWS A5.32/A5.32M, *Specification for Welding Shielding Gases*

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Welding Handbook Volume 2: Welding Processes, 9th Edition, American Welding Society

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Annex A

Guidelines for the Preparation of Technical Inquiries

This annex is not part of AWS B5.14:2009, *Specification for the Qualification of Welding Sales Representatives*, but is included for informational purposes only.

A1. Introduction

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 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:

Managing Director
Technical Services Division
American Welding Society
550 N.W. LeJeune Road
Miami, FL 33126

All inquiries shall contain the name, address, and affiliation of the inquirer, and they shall provide enough information for the committee 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 standard 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 standard 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 to obtain an interpretation of a standard's requirement or to request the revision of a particular provision in the standard.

A2.3 Content of the Inquiry. The inquiry should be concise, yet complete, to enable the committee to understand the point of the inquiry. Sketches should be used whenever appropriate, and all paragraphs, figures, and tables (or annex) that bear on the inquiry shall be cited. If the point of the inquiry is to obtain a revision of the standard, the inquiry shall 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 provide the wording for a proposed revision, if this is what the inquirer seeks.

A3. Interpretation of Provisions of the Standard

Interpretations of provisions of the standard are made by the relevant AWS technical committee. The secretary of the committee refers all inquiries to the chair of the particular subcommittee that has jurisdiction over the portion of the standard 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 committee 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 will appear in the *Welding Journal* and will be posted on the AWS web site.

A5. 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 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. 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.

A6. AWS Technical Committees

The activities of AWS technical committees regarding interpretations are limited strictly to the interpretation of provisions of standards prepared by the committees or to consideration of revisions to existing provisions on the basis of new data or technology. 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.

