AWS B5.17:2014
An American National Standard

Specification for the Qualification of Welding Fabricators

American Welding Society®

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An American National Standard

Approved by the
American National Standards Institute
September 12, 2014

Specification for the Qualification of Welding Fabricators

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Prepared by the
American Welding Society (AWS) B5G Subcommittee on Qualification of Welding Fabricators

Under the Direction of the
AWS Technical Activities Committee

Approved by the
AWS Board of Directors

Abstract

This standard establishes the minimum requirements necessary to qualify as a Welding Fabricator. The qualification is determined based on an examination of the implementation of the fabricator's Quality Manual to verify compliance to the requirements defined in this specification. This document also defines the Welding Fabricator's functions and lists the minimum reference materials that the Welding Fabricator should possess.

American Welding Society®

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All standards (codes, specifications, recommended practices, methods, classifications, and guides) of the American Welding Society (AWS) are voluntary consensus standards that have been developed in accordance with the rules of the American National Standards Institute (ANSI). When AWS American National Standards are either incorporated in, or made part of, documents that are included in federal or state laws and regulations, or the regulations of other governmental bodies, their provisions carry the full legal authority of the statute. In such cases, any changes in those AWS standards must be approved by the governmental body having statutory jurisdiction before they can become a part of those laws and regulations. In all cases, these standards carry the full legal authority of the contract or other document that invokes the AWS standards. Where this contractual relationship exists, changes in or deviations from requirements of an AWS standard must be by agreement between the contracting parties.

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This standard may be superseded by new editions. This standard may also be corrected through publication of amendments or errata, or supplemented by publication of addenda. Information on the latest editions of AWS standards including amendments, errata, and addenda is posted on the AWS web page (www.aws.org). Users should ensure that they have the latest edition, amendments, errata, and addenda.

Publication of this standard does not authorize infringement of any patent or trade name. Users of this standard accept any and all liabilities for infringement of any patent or trade name items. AWS disclaims liability for the infringement of any patent or product trade name resulting from the use of this standard.

AWS does not monitor, police, or enforce compliance with this standard, nor does it have the power to do so.

Official interpretations of any of the technical requirements of this standard may only be obtained by sending a request, in writing, to the appropriate technical committee. Such requests should be addressed to the American Welding Society, Attention: Managing Director, Technical Services Division, 8669 NW 36 St, # 130, Miami, FL 33166 (see Annex A). With regard to technical inquiries made concerning AWS standards, oral opinions on AWS standards may be rendered. These opinions are offered solely as a convenience to users of this standard, and they do not constitute professional advice. Such opinions represent only the personal opinions of the particular individuals giving them. These individuals do not speak on behalf of AWS, nor do these oral opinions constitute official or unofficial opinions or interpretations of AWS. In addition, oral opinions are informal and should not be used as a substitute for an official interpretation.

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, 8669 NW 36 St, # 130, Miami, FL 33166.

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Foreword

This foreword is not a part of AWS B5.17:2014, *Specification for the Qualification of Welding Fabricators,* 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 welding fabricators. This specification establishes the qualification requirements from which a central certification agency or an employer may develop a certification program for welding fabricators.

This is the fourth edition of this specification. Editorial changes were made to the Scope (Clause 1). A significant change in this edition is the provision that allows the use of other codes or specifications not published by AWS as specified in AWS QC17, *Standard for Accreditation of Welding Fabricators for AWS Certified Welding Fabricator Program* (Clause 6). A new requirement for verification at least annually of welding machine electrical characteristics was added (Clause 6).

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 welding personnel and welding facility qualification requirements. 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, 8669 NW 36 St, # 130, Miami, FL 33166.

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Table of Contents

Page No.

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Specification for the Qualification of Welding Fabricators

1. Scope

1.1 This specification establishes the minimum requirements for the Welding Quality Program for welding fabricators. This specification is intended to be used by welding fabricators regardless of the welding processes or materials used. This specification does not cover weldment design or nonwelding related fabrication processes, such as bolting and coatings. This specification is intended to offer assistance to the customers of welding fabricators who purchase weldments in various industry sectors in assessing the firm's capability to satisfy project quality needs.

The welding fabricator may be accredited by AWS as an AWS Certified Welding Fabricator, providing the fabricator meets the requirements of AWS QC17, *Standard for Accreditation of Welding Fabricators for AWS Certified Welding Fabricator Program*.

1.2 As used in this specification, the word 'shall' denotes a requirement; the word 'should' denotes a guideline or recommendation; and the word 'may' denotes a choice. The word 'welding' includes brazing, and the word 'welder' includes welding operators, brazers, and brazing operators.

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

1.4 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.

2. Referenced Documents

The standards listed below are referenced within. For undated references, the latest edition of the referenced standard shall apply. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply.

AWS Documents:[1]

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

AWS A2.4, *Standard Symbols for Welding, Brazing, and Nondestructive Examination*

AWS A3.0, *Standard Welding Terms and Definitions, Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying*

AWS B1.11, *Guide for the Visual Examination of Welds*

AWS B2.1, *Specification for Welding Procedure and Performance Qualification*

AWS *Safety and Health Fact Sheets*

AWS QC1, *Standard for AWS Certification of Welding Inspectors*

AWS QC17, *Standard for Accreditation of Welding Fabricators for AWS Certified Welding Fabricator Program*

ASNT Document:[2]

ASNT SNT-TC-1A, *Recommended Practice: Personnel Qualification and Certification in Nondestructive Testing*

3. Terms and Definitions

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

Certified Welding Inspector (CWI). A welding inspector certified by the AWS as meeting the requirements of AWS QC1, *Standard for AWS Certification of Welding Inspectors*.

contract documents. Plans, specifications, and other documents necessary for the fabrication of a product, assembly, or structure.

corrective action. Disposition of nonconforming product (e.g., accept as-is, repair/rework, scrap) and the action taken to determine and eliminate the root cause of a nonconformance in order to prevent or reduce recurrence of the nonconformity.

nonconformance. A deficiency in items, materials, or process that does not conform to the Quality Manual, approved procedures, and applicable codes or specifications.

quality assurance (QA). All the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfill requirements for quality.

quality control (QC). Operational techniques and activities that are used to fulfill requirements for quality. The act of examination, testing, or measurement that verifies compliance to processes to specific criteria (i.e., detection and measurement of weld discontinuities or the supervision of individuals so involved).

quality control personnel. Individuals responsible for verifying compliance with the fabricator's quality control program.

quality management system. A management approach to quality improvement based on the participation of management in improving processes and products provided to the fabricator's customer.

Quality Manual. Document stating the quality policy and describing the quality management system of an organization.

quality record. A report, list, or other documentation showing the results of a measurement, event, or a decision. It attests to either the achievement or failure to achieve the required quality.

supplier. Organization that provides a product or service to the customer (e.g., vendor, material supplier, NDE test facility).

welding inspection. The act of inspecting or examination of welds against established standards. Details for welding inspection can be found in AWS B1.11, *Guide for the Visual Examination of Welds*.

[1] AWS standards and ANSI Z49.1 are published by the American Welding Society, 8669 NW 36 St, # 130, Miami, FL 33166.

[2] ASNT documents are published by the American Society for Nondestructive Testing, Inc., 1711 Arlingate Lane, Columbus, OH 43228-0518.

4. Qualification

A welding fabrication facility complying with the requirements of this specification shall be considered qualified as a welding fabricator. Compliance to the requirements is determined by an audit of all of the elements in Clause 6, Quality Manual Requirements, and verification the welding fabricator has the documents in their library as specified in Clause 7. An audit may be conducted internally, by a third party, or both.

5. Quality Management System

The welding fabricator shall operate a quality management system in accordance with Clauses 6 and 7 of this specification.

6. Quality Manual Requirements

The welding fabricator is required to prepare and maintain a Quality Manual. This Quality Manual is a comprehensive description of the fabricator's process controls and methods as outlined by this specification.

The Quality Manual shall include, but is not limited to, all of the following sections:

6.1 Cover Page. The cover page of the Quality Manual shall contain the company name, physical address(es), and revision status.

6.2 Management Support and Responsibility (Statement of Authority and Responsibility)

6.2.1 For the purpose of the Quality Manual, the welding fabricator must identify the AWS structural welding code(s) or AWS specification(s) that determine the rules for controlling the welding process including weld acceptance at their facility. Examples include but are not limited to the following (X means any number):

(1) D1.X, structural welding codes

(2) D3.X, marine

(3) D8.X, automotive

(4) D9.X, sheet metal

(5) D14.X, machinery and equipment

(6) D15.X, railroad

(7) D17.X, aerospace

The use of other codes or specifications not published by AWS may be considered as specified in AWS QC17.

6.2.2 There shall be a statement included in the Quality Manual assuring that responsible quality control personnel have the full support of management and they report to the executive management within the organization.

6.2.3 There shall be a statement in the Quality Manual stating that personnel assigned to quality have the authority to identify quality problems, verify implementation of solutions, and limit or control further processing and delivery of nonconforming items until proper disposition has occurred. This statement shall designate who is responsible to resolve disputes between quality control personnel and other functions.

6.2.4 The Quality Manual shall be signed and dated by the executive management within the organization to show their review and approval.

6.3 Organization

6.3.1 The Quality Manual shall include an organization chart showing the relationship among management functions (e.g., purchasing, quality control, receiving, production, weld inspection, and shipping).

6.3.2 The Quality Manual shall specify how the delegation of authority is assigned when persons listed in the Quality Manual are unavailable.

6.4 Document Control

6.4.1 Quality Manual. The Quality Manual shall specify the following:

(1) personnel responsible for the preparation and revision of the Quality Manual

(2) the approval process for revisions to the Quality Manual by executive management

(3) a method to identify the revisions

(4) that each department or work area that affects quality shall have ready access to the Quality Manual—when printed copies of the Quality Manual are distributed, a system shall be used to maintain traceability of the controlled copies.

6.4.2 Contract Documents. The Quality Manual shall specify how contract documents are received, who is responsible for review, and how changes are handled as they occur throughout the fabricating process.

6.4.3 Drawings. The Quality Manual shall specify a system for drawings (including computer generated) to be issued, distributed, and revised. Drawings shall be issued to personnel and facilities performing the work.

6.4.4 Quality Records, Forms, and Reports. The Quality Manual documentation shall include, but is not limited to, the following:

(1) welder performance qualification records (WPQRs)

(2) welding procedure specifications (WPSs)

(3) procedure qualification records (PQRs)

(4) material test reports (MTRs) (when required by the contract, governing code or specification)

(5) nondestructive examination (NDE)reports (when required by the contract, governing code, or specification)

(6) nondestructive examination personnel qualification records

(7) weld identification reports (weld mapping) when required

(8) record of final inspection (i.e., traveler, inspection record, check-off list)

(9) heat treatment records (when required by the contract, governing code, or specification)

(10) receiving material inspection reports

(11) nonconformance reports (NCRs)

(12) calibration records of equipment

(13) internal quality audit report

(14) welder continuity log

6.4.5 Record Retention. The Quality Manual shall describe the welding fabricator's system for the retention of quality related documents and revisions as stated in 6.4.2, 6.4.3, and 6.4.4. The retention system shall include, but not limited to, the following:

(1) the duration of retention

(2) who is responsible for maintaining the documents

(3) where the documents will be filed or stored

(4) a procedure for destroying or retaining obsolete documents

6.5 Material Control. The Quality Manual shall detail the system of material control. As a minimum, the material control system shall include the following:

(1) a purchasing document that describes the item and ensures that the correct materials are ordered

(2) a system that ensures that the correct material has been received, released for production, and how nonconforming or unverified material or items are prevented from use

(3) how materials or parts are identified, and how identity and traceability are maintained throughout the manufacturing process, when required by contract

(4) when material certifications or material test reports are required, they shall be reviewed to verify that the material meets the requirements established by specifications

(5) means to ensure that filler materials purchased conform to AWS A5.XX (X means any number) or other filler metals tested and approved for the specific application—if AWS filler metals are not used, then procedure qualification testing is required.

6.6 Welding. The Quality Manual shall describe the elements of control necessary for the welding process.

6.6.1 Welding Procedure Specifications and Procedures Qualifications Records. The Quality Manual shall include a documented system of welding procedure specifications including the following minimum requirements:

(1) Welding procedures shall be qualified and approved, in accordance with the applicable AWS Welding Code(s), Specification(s), or other applicable codes or standards. The Quality Manual shall specify which code(s) or specification(s) the welding procedure and procedure qualification will be certified to.

(2) When the governing AWS Welding Code(s) mandate(s) that welding procedures be qualified by test, the welding fabricator shall include PQRs that support the applicable WPSs. Some Codes permit the use of prequalified WPSs or Standard Welding Procedure Specifications (SWPSs) published by the AWS. In these cases, PQRs are not required.

(3) All WPS and PQR documentation shall be reviewed and accepted to ensure code compliance, based upon the fabricator's designee as specified in the fabricator's Quality Manual. It is recommended that the fabricator's designee be one of the following:

(a) AWS Certified Welding Engineer

(b) AWS Senior Certified Welding Inspector

(c) AWS Certified Welding Inspector

(d) Individual competent with the selected code of construction

(4) The Quality Manual shall specify how the WPSs and PQRs are controlled by revision and by whom.

(5) The applicable WPSs shall be available to welders or welding operators during testing and production welding.

(6) The person(s) responsible for selecting and assigning welding procedures shall be identified and designated in the Quality Manual and shall ensure that welding procedures are listed on applicable shop fabrication drawings.

6.6.2 Welder Performance Qualification. The Quality Manual shall contain provisions requiring all welders and welding operators to be qualified in accordance with the governing AWS welding code(s), or AWS B2.1, Specification(s), or other applicable standards. The Quality Manual shall identify the following:

(1) the code(s) the welder and welding operator will be qualified and certified to—a Certified Welding Inspector (CWI) or fabricator's designee shall review the welder and welding operator's qualification record for compliance to said code(s)

(2) how welders and welding operators are identified by a number, letter, or symbol

(3) who is responsible for verifying only qualified welders and welding operators are assigned to specific jobs

(4) who is responsible for verifying the continuity of welders and welding operators qualification in accordance with the code or specification

6.6.3 Filler Metal. The Quality Manual shall describe the control of filler materials using the criteria as follows:

(1) The applicable filler material shall appear on the WPS.

(2) Controls shall be in place that define how welders obtain filler material, and who is responsible to ensure that the proper filler material is used.

(3) Storage practices to prevent intermixing of filler metal types, sizes and heat numbers (if applicable) shall be established. Storage practices to prevent contamination of the various filler metal types used by the fabricator, including any elevated temperature holding requirements of the filler metal manufacturer and the applicable code or filler metal specification.

(4) Length of time that issued filler metals may be exposed to the atmosphere before returning to the rod oven or crib. Redrying (baking) requirements (or other disposition) for filler metals which have exceeded the maximum allowable exposure time.

(5) Filler metal issuance and return log sheets (if applicable).

(6) Scrapping or disposition of unusable or damaged filler metals.

6.7 Inspection

6.7.1 The Quality Manual shall describe the method for welding inspection that includes the following:

(1) type of inspection to be performed and documented (i.e., dimensional, weld inspection, and final inspection)

(2) frequency of inspections necessary to ensure required quality of welds

(3) acceptance criteria used for weld inspection

6.7.2 Weld Inspector Qualifications. The Quality Manual shall designate those who are qualified to visually inspect weldments to the requirements of the applicable specifications. Inspectors shall be knowledgeable with the code(s) which applies to the fabrication work being performed. If an AWS Certified Welding Inspector is not used, then the weld inspector shall be qualified and certified in accordance with the employer's written practice based on current ASNT (American Society for Nondestructive Testing) SNT-TC-1A (VT). The certification process shall include the educational, training, experience, and testing provisions described in SNT-TC-1A (VT).

6.7.3 NDE Inspector Qualifications. The Quality Manual shall require that Radiographic Interpreters be certified in accordance with AWS B5.15, *Specification for the Qualification of Radiographic Interpreters*. Alternatively, Radiographic Interpreters shall be qualified and certified in accordance with the employer's written practice based on ASNT SNT-TC-1A. The certification process shall include the educational, training, experience, and testing provisions described in SNT-TC-1A. The preceding requirements related to the qualification and certification of personnel in accordance with the employer's written practice shall also apply to personnel performing other NDE methods (e.g., MT, PT, and UT).

6.7.4 NDE Procedures. NDE shall be performed in accordance to the welding fabricator's written NDE procedures. The Quality Manual shall list the following:

(1) The NDE procedures shall be approved by a Level III in the NDE method(s) that the procedures are based on. The Level III shall be qualified and certified in accordance with the employer's written practice based on ASNT SNT-TC-1A. The certification process shall include the educational, training, experience, and testing provisions described in SNT-TC-1A.

(2) A system shall be in place showing how the NDE procedures are issued, revised, and distributed to all necessary personnel at the facility.

6.7.5 Subcontractor. NDE may be subcontracted, however, the welding fabricator shall review the subcontractor's personnel qualifications to ensure they meet the requirements of 6.7.3 and 6.7.4. The Quality Manual shall specify who is responsible for the subcontractor's qualification review and approval.

6.8 Nonconformance. The Quality Manual shall describe the nonconformance system and shall include the following:

6.8.1 Personnel with the authority for identifying nonconformance and verifying corrective action.

6.8.2 Nonconformance shall be documented. The nonconformance report shall list the following:

(1) Discrepancy—a brief description of the Nonconformance

(2) Corrective Action—what action will be taken to resolve the discrepancy

(3) Verification of Corrective Action—verifying that the nonconformance has been resolved

6.8.3 Nonconforming items shall be prominently identified as nonconforming, and procedures shall be implemented to prevent the use of the items until a final disposition is determined.

6.9 Measuring and Testing Equipment. The Quality Manual shall state what measuring and testing equipment will be used to control fabrication quality and who is responsible for its calibration. It will describe the method of performing and controlling calibration including:

6.9.1 Calibration. The method of calibration of equipment shall be specified in the Quality Manual and designed to ensure that measurements made are traceable (where the concept is applicable) to national standards. Where the concept of traceability to national standards is not applicable, the method shall provide satisfactory evidence of calibration or accuracy of test results. Calibration intervals shall be specified within the Quality Manual.

6.9.2 Welding machines shall be verified as specified by the manufacturer. The frequency of verification shall be at least annually. The following shall be checked:

(1) Condition of volt meters, amp meters and gas flow meters (if equipped)

(2) Condition of cables

(3) Condition of hoses (if equipped)

(4) Condition of wire feeders (if equipped)

6.9.3 Calibration Identification. The Quality Manual shall address the establishment and maintenance of a log, label, or tag indicating the date of last calibration and due date of next calibration shall be maintained for each piece of equipment. The identification system for equipment shall be included in the log, label, or tag. The label or tag may be attached to the equipment.

6.9.4 Calibration Records. The Quality Manual shall specify how records are maintained on each item of equipment used to control quality. The record shall include the following:

(1) type of equipment

(2) serial number

(3) calibration frequency

(4) calibration tolerance

(5) date calibrated

(6) next calibration due date

(7) standard used

6.10 Internal Quality Audits. At a minimum, there shall be an audit of the quality program on an annual basis. The Quality Manual shall specify the following:

(1) Who is to perform the audit (the person must have the freedom and authority to identify quality audit problems).

(2) What are the qualification requirements of auditors (the auditor must have knowledge in the quality system being audited).

(3) How the audit is to be documented.

(4) Executive management shall review the audit results and implement corrective actions.

6.11 Sample Forms. Documents described within the quality manual shall be displayed as samples (typical forms) within the quality manual.

7. Library

As a minimum, the latest edition of the following publications shall be readily available at the welding fabricator's facility:

(1) AWS A2.4, *Standard Symbols for Welding, Brazing, and Nondestructive Examination*

(2) AWS A3.0, *Standard Welding Terms and Definitions, Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying*

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

(4) The AWS code or specification governing the qualification of welding procedures and welders

(5) The AWS code or specification governing the fabrication and acceptance of the weldment(s)

(6) The standard governing the qualification and certification of NDE inspectors

(7) The standard governing the qualification and certification of weld inspectors

Annex A (Informative)

Guidelines for the Preparation of Technical Inquiries

This annex is not a part of AWS B5.17:2014, *Specification for the Qualification of Welding Fabricators,* 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
8669 NW 36 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 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 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.

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.