



**Technical Activities Committee
Rules of Operation
(TACRO)**

12th Edition

Approved by the Technical Activities Committee
May 13th, 2025

Approved by the Board of Directors
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Foreword

The rules set forth in this document govern the organization and operation of the Technical Activities Committee (TAC), the technical committees reporting to TAC, and their subcommittees related to the development, approval, revision, reaffirmation, and withdrawal of American National Standards for the American Welding Society.

The foreword, commentary, and user notes of an AWS *American National Standard (ANS)* are not considered part of the ANS and are not required to be voted on. These sections will be identified in the ANS as required by the ANSI Essential Requirements.

The 12th edition of the rules is a major rewrite, with a focus on improving the processes surrounding volunteer work. The following is a non-exhaustive summary of the major changes between this edition (12th Edition), including any amendments, and the previous edition (11th Edition).

Removed all instances of <i>ballot</i> . These have been replaced by either <u>a</u> <i>vote</i> or a <i>review</i> .
Clarified the review process and voting process.
AWS <i>TSD</i> 1.1 and AWS <i>SM</i> documents have been sunset and replaced by an internal document, AWS <i>Style & Methods (S&M)</i> .
Clarified standard, document, nonstandard language. This led to changing <i>nonstandards</i> to <i>Non-ANSI documents</i> and <i>standards</i> to <i>American National Standard (ANS)</i> for clarity.
Moved boilerplate requiring technical expert approval into the rules, under Clause 9.
Clarified Advisor participation and discharge requirements.
Clarified ISO or IEC adoption procedures and aligned with ISO/IEC Guide 21-1.
Clause 9 contains all of the guidance for areas typically in conflict across AWS documents to ensure Committee alignment. These include but are not limited to: Information on units of measurement, numerical conversions, safety boilerplate, normative references, terms and definitions, referencing sources, numbering of figures and tables, commentary, annexes, and index.

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RULES OF OPERATION OF THE TECHNICAL ACTIVITIES COMMITTEE

The rules set forth herein govern the organization and operation of the Technical Activities Committee (TAC), the technical committees reporting to TAC, and their subcommittees. These Rules of Operation have been approved by the Board of Directors. In the absence of specific language, the ANSI Essential Requirements apply.

1. Authorization

The Technical Activities Committee is authorized as a standing committee under Article VII, Section 1, of the *Bylaws of the American Welding Society* (AWS). TAC reports to Standards Council.

2. General Requirements, Normative References, and Terms and Definitions

2.1 General Requirements

2.1.1 Membership. The TAC shall consist of those individuals who meet the requirements in Clause 3 of these rules and *AWS Membership and Duties Statement for the Technical Activities Committee*. Duties of members are prescribed in *AWS Membership and Duties Statement for the Technical Activities Committee*.

2.1.2 Activities

2.1.2.1 A technical committee's activities shall align with those presented in that technical committee's scope, as approved by TAC. A technical committee may alter its scope with the approval of TAC.

2.1.2.2 The activities of a subcommittee shall be approved by the relevant technical committee, except as otherwise provided in these rules.

2.1.2.3 The activities of a task group shall be approved by the relevant committee chair, except as otherwise provided in these rules.

2.2 Normative References. The following documents contain provisions which, through reference in this text, constitute mandatory provisions of this AWS document. 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.

American Welding Society (AWS):

AWS A1.1, Metric Practice Guide for the Welding Industry

AWS A3.0M/A3.0, Standard Welding Terms and Definitions, Including Terms for Additive Manufacturing, Adhesive Bonding, Brazing, Soldering, Thermal Cutting, Thermal Spraying, and Nondestructive Examination.

AWS Antitrust Policy

AWS Membership and Duties Statement for the Technical Activities Committee

AWS Patent Policy

American National Standards Institute (ANSI):

ANSI Essential Requirements

ANSI Procedures for the National Adoption of ISO and IEC Standards as American National Standards

2.3 Terms and Definitions. For the purposes of this document, the following definitions apply:

active standard. The latest published edition of an American National Standard (ANS), which is still active according to ANSI's Essential Requirements.

amendment. An amendment shall be used when a full revision to an ANS is not deemed necessary. For example, as the result of an intent interpretation, or the correction of an error in substantive content in a published standard that had been inadvertently approved by the required approval procedures.

ballot. Previously used name for a combined vote and review.

can. The auxiliary verb "can" is used to denote capability or possibility.

comment review period. The period of time that a document or portion of a document is available for the committee to review and comment.

committee. A generic term whose scope may include technical committees, subcommittees, and task groups.

consensus. The achievement of substantial agreement by the members of a group on issues put before or considered by the group. Consensus signifies the concurrence of at least a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered and that an effort be made toward their resolution.

consensus body. The group that approves the content of a standard and whose vote demonstrates evidence of consensus. For AWS, the consensus body is defined as the technical committee that has the assigned responsibility for the preparation and approval of an ANS.

editorial, *adj.* Involving matters that are not substantive. See **substantive**.

editorial change. A change to a document not affecting its meaning, intent, or use. See also **substantive** change. Examples include:

- (1) Change in sentence structure or vocabulary having no effect on the meaning of a provision;
- (2) Changing term(s) to standard AWS terminology per AWS A3.0M/A3.0 with no change in the meaning of a provision;
- (3) Moving text material to a table, or vice versa;
- (4) Adding a reference directing the document user to a related provision within the same document or already referenced document under *Normative References*;
- (5) Correcting a typographical error; and
- (6) Relocating a provision in which the meaning or applicability is unchanged.

errata. A list of corrections to errors introduced during the typesetting process, or editorial changes, after an ANS has been approved. Errors in an ANS' technical content that were included in the revision process, but were not discovered until after the approval process, cannot be corrected by issuing errata.

ex-officio. Membership status by virtue of one's office on another committee or previous service on the committee.

inactive standard. An ANS that has been superseded by a later edition but must still be accessible for archive or historical reference.

informative, *adj.* Denoting a nonmandatory element of a document.

informative annex. An annex appended to the document to provide information not mandatory for the application of the document.

informative reference. A source provided for informational purposes only and not necessary for the application of the document. Informative references may be found in both normative and informative elements of a document. Informative references are always referred to in nonmandatory language.

Example:

Further information about resistance brazing is presented in AWS C3.9M/C3.9, *Specification for Resistance Brazing.*

may. The auxiliary verb “may” denotes permission. When permission is based on a condition, the condition shall be stated.

new vote. A vote that starts or restarts the consensus voting process such that prior votes and comments do not count. All votes are *new votes* by default, unless explicitly stated otherwise (e.g., This vote is a recirculation).

normative, *adj.* Denoting a mandatory element of a document.

normative annex. An annex appended to the document to provide information necessary for the application of the document.

normative reference. A cited source required for the application of the document. Normative references are found only in normative elements of a document. Normative references are always referred to in mandatory language.

Example:

Equipment setup shall be performed according to ASTM F19, *Specification for the Testing of Tensile Button Specimens.*

proxy. A representative assigned by a voting member of a committee to vote in the member's stead.

recirculation vote. Recirculation votes are used when a proposal has satisfied the consensus and quorum criteria in 4.8.2, but there is a need to report unresolved objections (4.8.1.7) or substantive changes are made in response to comments or disapproval votes.

resolved public review objection. A comment submitted during public review where the commenter accepts the proposed resolution of their comment.

resolved technical committee objection. A negative vote submitted by a committee member, where the negative voter agrees in writing to change their vote, or the vote is superseded by an affirmative or abstain vote by the committee member.

review. A method by which a committee can provide feedback on a document during a defined period of time.

shall. The modal auxiliary “shall” denotes a requirement. This word shall be used when compliance with the document requires no deviation.

should. The modal auxiliary “should” denotes a recommendation or non-mandatory condition.

subcommittee. A committee reporting to a technical committee.

substantive, *adj.* Involving matters addressed in a document that directly and materially affect the use of that document.

substantive change. A change to a document affecting its meaning, intent, or use. Examples include:

- (1) Changing the term “shall” to “should” and vice versa;
- (2) Adding, deleting, or revising requirements, regardless of the extent of these changes;
- (3) Adding or deleting mandatory compliance with referenced document(s);
- (4) Changes made to correct the technical meaning in a document to reflect the committee's original intent;
- (5) A change from “less than” to “equal to or less than.”

task group. A group organized by a committee chair to perform a specific assignment for the committee.

technical committee. A committee reporting directly to the Technical Activities Committee. Synonymous with the term “main committee.” Technical committees may or may not have subcommittees and task groups reporting to them.

unresolved public review objection. A comment submitted during public review where the commenter’s comments have not been satisfied and/or withdrawn after having been addressed.

unresolved technical committee objection. A negative vote submitted by a committee member that has not been superseded by an affirmative or abstain vote or withdrawn by the committee member.

withdrawn standard. An ANS that has been officially removed from publication and will not be revised. It may still have to be accessible for archival or historic purposes, but shall not be cited in new AWS documents or publications.

3. Personnel

3.1 Committee

3.1.1 Size. A committee shall be large enough to represent directly and materially affected interests, yet small enough to provide an effective working group.

3.1.2 Application Process

3.1.2.1 Requirements. The members of a committee shall be selected on the basis of their experience in the field (technical, commercial, industrial, or other), their willingness to participate in the work of the committee, and their ability to devote sufficient time and other necessary resources to the prompt execution of the work.

3.1.2.2 Application. Prospective members shall submit a completed application form stating their qualifications, their desire to serve, and that they have the support and resources necessary to carry out their committee obligations. A written acknowledgement shall be sent to the applicant, and the chair shall be notified.

By default, the prospective member will be considered an applicant upon application completion. While applicant status does not guarantee future voting membership on the committee, barriers to entry or gatekeeping of applicant status are inconsistent with AWS's expectations or ANSI's essential requirements.

The applicant's contact information shall be entered into the AWS database for the committee(s) or subcommittee(s) membership to which the individual is applying. The applicant's status shall be listed as "Applicant" until approval of membership is completed (see 3.1.5.3). The applicant shall receive committee correspondence and be invited to participate in committee activities, such as committee meetings, participating in reviews, and contributing to discussions. Should the applicant fail to attend two consecutive meetings, the applicant may be contacted and informed that they shall be removed as an applicant.

Applicants agree to abide by the *AWS Rules of Operation of the Technical Activities Committee* and all other relevant AWS rules and policies.

3.1.3 Duties. The duties of each member of a committee are:

- (1) Give thorough consideration to each subject requiring committee action and vote when called upon to do so;
- (2) Provide technical input for publications;
- (3) Assist with the preparation of material for publication;
- (4) Provide advice on personnel for membership on the committee; and
- (5) Assist generally in carrying out the work of the committee by attending meetings, replying to correspondence, and communicating with other members, as required.
- (6) The front matter (abstract, foreword, table of contents, etc.) and back matter (index, etc.) are not the responsibility of the committee members.

Failure to carry out these duties may result in discharge from the committee (See 3.1.7.3 through 3.1.7.6).

3.1.4 Members shall be selected on the basis of their individual qualifications, rather than their affiliation with any particular company or organization, and in accordance with the requirements of 3.1.5.

3.1.5 Balance and Membership Approval Process. Technical committees that develop ANS shall be balanced according to the *ANSI Essential Requirements*.

Subcommittees need not be balanced, but they are encouraged to obtain members representing directly and materially affected interests. In the absence of a complaint contending that the members of a single category of interest have acted to exclude fair consideration of viewpoints other than their own, no test for dominance is required.

3.1.5.1 Balance.

(1) For safety-related ANS, the membership of each Technical Committee shall be such that no single interest category constitutes more than one-third of the membership of a consensus body.

(2) For non-safety related ANS, the membership of each technical committee shall be such that no single interest category constitutes a majority of the membership of a consensus body.

In the absence of a complaint contending that the members of a single category of interest have acted to exclude fair consideration of viewpoints other than their own, no test for dominance is required.

3.1.5.2 Categories of Interest. The categories of interest are described below. Each committee shall use the categories listed as mandatory and may use those listed as optional. With approval from TAC, the technical committee chair shall assign the categories that shall be used within their technical committee. The technical committee chair shall assign the categories of interest for members in cases where the proper category is not readily apparent.

Mandatory:

- (1) *Producers.* Those directly concerned with the production of any product or service specified in the ANS.
- (2) *Users.* Those directly concerned with the use of any product or service specified in the ANS.
- (3) *General Interest.* Those whose interests do not align with other interest categories.

Optional:

- (4) *Educators.* Those primarily involved in the technical education of individuals.
- (5) *Distributors.* Those primarily involved in the distribution of any product or service specified in the ANS.

3.1.5.3 Committee Membership. To ensure a breadth of viewpoints, each committee may limit the number of participants from any single company, industry, association, or other group, where the AWS commitment to producing industry consensus ANS could be questioned. With approval from TAC, a technical committee may choose to have its membership made up of specific groups, such as subcommittee chairs, former committee chairs, or executive committee members. If doing so results in a committee that risks violating balance, the members of that committee should encourage persons from other categories to apply and some participation requirements may be waived for those applicants. Any general committee decision, policy, or rule affecting the orderly transition of applicants to full membership shall be documented and accessible to all members.

Members of technical committees, subcommittees, and task groups do not necessarily have to be members of AWS. Only Officers of technical committees are required to be members of AWS.

Certain Standing Committees, which produce American National Standards (ANS), such as the *Safety & Health* and *Qualification & Certification* Committees, choose to have its membership made up of specific groups, such as subcommittee chairs, former committee chairs, executive committee members, and at-large members. The most updated information on the membership of the Standing Committees can be found in the *AWS Membership and Duties Statements of Standing Committees and Council of Directors*. This document is available on the AWS website.

(1) Applicants

Applicants may be required to participate in a minimum number of committee meetings, reviews, or task groups prior to committee appointment. The appointment of more than one member from any given company or organization is not specifically prohibited, but such appointments shall be kept to a minimum, and the ramifications of each shall be thoroughly considered before the appointment is made.

(2) Technical Committee Membership

New technical committee members shall be nominated by a majority vote of that technical committee or by its chair, and membership status granted by a majority vote of the voting members of TAC. Voting rights are granted to a new technical committee member upon TAC approval. New members of a technical committee, upon approval, shall be notified of their appointment by the secretary of the committee.

(3) Subcommittee Membership

New members of a subcommittee shall be appointed by the Chair of that subcommittee and approved by the relevant technical committee chair.

(4) Activity Level Evaluations

The secretary shall provide the Chair(s) with an activity log for members and applicants. This shall be done on a regular basis of one, three, or five years, depending on the activity of the Technical Committee. Any member who has not demonstrated active participation may be moved to applicant status by agreement of the Chair(s) and Staff. The committee chair shall determine if each applicant will be retained on the applicant list, removed from the applicant list, or nominated for full committee membership. If voted, these votes will be reviewed by the Chair(s) and Staff to determine if they risk violation of balance, openness, or fairness. If a voted action is overturned by the Chairs or Staff, the reasons must be communicated to the committee and another vote taken. If the results of the second vote are the same as the first, the matter will be referred to the Director of Standards Committee Operations for consultation and disposition. Removed applicants may reapply at any time.

3.1.5.4 Advisors. An Advisor is someone whose input would be valuable to the committee but does not serve as a full voting member of the committee. Advisors shall be appointed to or removed from the technical committee directly by the technical committee chair. Advisors shall be appointed to or removed from subcommittees directly by the subcommittee chair, with approval of the technical committee chair.

Advisors are required to participate in committee activities, including commenting on documents during the review period. Advisors shall not be counted toward quorum when determining committee balance, and do not have a vote. The appointment of advisors should be restricted to those infrequent cases where continuity of committee activity or the special qualifications of some particular individuals are needed, and membership for that individual is not possible because of the requirements for committee size, balance, or attendance, as set forth in 3.1.1, 3.1.5, or 3.1.7, respectively.

3.1.5.5 Voting Status. Once appointed, members may participate in the committee's activities, but they do not have a vote until they are approved, as set forth in 3.1.5.2 and 3.1.5.3. The voting status of members during a meeting is established by the committee roster at the time the meeting is called to order. Changes approved during the meeting to committee membership by the removal of a technical committee member shall not go into effect until the provisions of 3.1.7.3 are met. Changes approved during the meeting to committee membership by the change of status to applicant or the removal of a subcommittee member shall not go into effect until the provisions of 3.1.7.4 are met and shall not go into effect until the conclusion of the meeting.

3.1.6 Proxies and Alternates. Proxies and alternates may be appointed to TAC and committees, as described in 3.1.6.1 and 3.1.6.2, to permit TAC and the committees to function during the absence of any of its members. No individual may act as a proxy or alternate for more than one person. AWS staff may not act as a proxy or alternate because of potential conflicts of interest. The position of a proxy or alternate is not restricted to committee members, but may be anyone the member chooses, provided the criteria of 3.1.6.1 or 3.1.6.2 are met, as appropriate.

3.1.6.1 Proxy. A proxy is a person selected by a member of the committee to attend a meeting in place of that member to observe the transactions and express the member's views. The proxy shall be acceptable to the Chair of the committee. The Chair shall confirm the assignment of proxy. A proxy can be appointed at the meeting, but only if the member makes a request to the Secretary requesting the Chair appoint a proxy on their behalf. If this request was verbal, it must be confirmed by email or other written record prior to issuance of the minutes of the meeting. A proxy may vote at the meeting but may not cast a vote on another type of vote. An individual may only hold one proxy.

3.1.6.2 Alternates. An alternate is a person selected by a member of the committee to attend meetings and to act for the member during the member's extended absence. Such selections shall be communicated to the Chair of the committee in writing and shall be subject to acceptance by that Chair. Alternates selected to serve on TAC shall be approved by the TAC Chair; Standards Council shall be informed of the appointment. An alternate shall have all of the duties and privileges of the member during the period of service in that capacity. Such service shall automatically terminate on the:

- (1) Request of the member,
- (2) Return of the member from the absence, or
- (3) Termination of the member's membership.

3.1.7 Activity. For each meeting of TAC, committees, and subcommittees, the relevant secretary shall prepare a tally of the activity of each member and advisor with respect to meeting attendance and response to reviews or votes during the preceding 24 months. The tally shall also include the activity of alternates and proxies. Any voting member or advisor who meets any of the following conditions shall be advised that they have not met the expected level of participation and a change in membership status is under consideration:

- (1) Attended (not represented by proxy) less than 25% of the meetings during the previous two years;
- (2) Attended or have been represented by an alternate or proxy at less than 50% of the meetings during the previous two years;
- (3) Responded to fewer than 75% of votes over the past two years, as long as more than one vote has occurred in the prior two years.
- (4) Participated in fewer than 75% of comment review periods over the past two years.

Only the period of time where a member has voting or advisory status on the committee shall be taken into consideration when determining participation. The Chair shall take into consideration percentages that may be skewed due to factors such as few votes, comment review periods being issued, or few meetings being held.

3.1.7.1 Change in Status. When the activity tally (see 3.1.7) documents the inactivity of a member or advisor, the Chair or Secretary shall advise the member of their failure to meet participation expectations. The Chair may also:

- (1) Change that member's or advisor's status to applicant,
- (2) Initiate proceedings to discharge that member or advisor from the committee, or
- (3) Delay action until a future date or indefinitely.

3.1.7.2 Approval of the Executive Subcommittee of TAC (see 4.2.1) is required to release any technical committee member. (See 3.1.7.5 for exception, if technical committee chair).

3.1.7.3 Committee advisors who have not met the participation requirements of 3.1.7 may be released at the discretion of the Chair.

3.1.7.4 When committee members and advisors are released, they shall be notified by the Chair or the Secretary of the committee, as the Chair elects.

3.1.7.5 Only the president of the Society may release a member of TAC and may do so only with the approval of the Board of Directors.

3.1.7.6 A subcommittee member or advisor may be discharged by the Chair of the subcommittee with the approval of the technical committee chair.

3.1.8 TAC At-Large members. A total of six at-large members shall be appointed to TAC for a three-year term. Annually, the TAC Chair shall appoint two at-large members, plus any required

to fill at-large member vacancies, with majority concurrence of the TAC Chair and Vice Chairs. At-large members are eligible to serve a maximum of two consecutive terms.

3.1.8.1 A candidate's technical committee activity record and professional qualifications shall be considered in making the appointment.

3.1.8.2 Individuals with a desire to communicate their interest in being considered as an at-large member candidate shall contact the TAC Secretary and/or Chair to express their interest and share their qualifications (e.g., resume or CV).

3.1.9 Ex-Officios. Ex-officio positions are assigned to committees by the committee chair or are required by membership and duties statements or these TAC Rules of Operation. Ex-officios have the same rights as Advisors, do not count in quorum or balance requirements, are not required to attend meetings, respond to correspondence, or participate in committee activity. Their name will not appear in the published documents. Ex-officios do not have voting rights. Ex-officio roster positions should be updated annually to reflect the current individual in that position or role.

3.1.10 Corresponding Members. Corresponding members may be added to committee rosters in order to keep certain individuals informed of the committee's activities. The corresponding member is not required to attend meetings, respond to correspondence, or participate in committee activity. The corresponding member's name will not appear in the published documents. The corresponding member does not have voting rights.

A corresponding member may be added to or removed from a committee by the technical committee chair. A corresponding member may be added to or removed from a subcommittee by the subcommittee chair with agreement of the technical committee chair.

3.2 Officers.

3.2.1 Officer Details.

(1) TAC Officers: TAC shall have a Chair and should have at least a first and a second vice chair elected from among its members to a two-year term. Officers of TAC shall not be eligible to serve more than one full term in the same office, unless an exception is made for them by Standards Council on the recommendation of TAC.

(2) Technical Committee Officers: Each technical committee shall have a Chair and should have at least a first and a second vice chair elected from among its members to a three-year term. Officers of technical committees shall not be eligible to serve more than two full consecutive terms in the same office, and a total of four full terms in the same office; an exception may be made by TAC on the recommendation of the relevant technical committee.

(3) Subcommittee Officers: Each subcommittee shall have a Chair appointed by the relevant technical committee chair. Each subcommittee chair may choose to appoint a Vice Chair, with the approval of the technical committee chair.

All officers of TAC, technical committees, and subcommittees shall be members of AWS. Vice chairs shall indicate their willingness to accept the position of Chair should that position become vacant during their term.

3.2.2 Removal of Technical Committee Chair. In accordance with 3.1.7, 3.2.1, and 3.3.2(3)(b), TAC shall replace any Chair of a technical committee who becomes inactive or who otherwise fails to carry out the duties of the office. Justification for removal shall be brought before TAC in

writing by the individual(s) concerned with the performance of the Chair. Such justification (e.g., time, place, event, etc.) shall be properly documented to permit TAC to make a rational conclusion about the Chair's non-performance of duties.

3.2.3 TAC and Technical Committee Officer Elections. TAC and the technical committees shall hold elections for their officers. The election of technical committee officers shall be such that the officers of approximately one-third of the technical committees are elected each year.

3.2.3.1 Before February 1 of the year in which the Chair's term of office expires (December 31st), the Chair of TAC and the Chair of each affected technical committee shall arrange for an election of officers to serve for the ensuing term by appointing a nominating committee. The nominating committee shall solicit potential candidates from the committee membership. The nominating committee shall recommend a list of candidates to be considered for nomination, appointment, or election, after having first ascertained that the candidates:

- (1) Agree to serve,
- (2) Are members of AWS, and
- (3) Have the resources necessary to perform as officers.

3.2.3.2 A member of the nominating committee shall not be nominated for any office while still serving as a member of the nominating committee.

3.2.3.3 In selecting the nominees for officers, the following factors are to be considered:

- (1) Leadership ability,
- (2) Willingness and ability to serve, and
- (3) Prior committee experience and activity level.

The Chair and vice chairs of committees who are serving their first term in office shall be considered for renomination to a consecutive term. When a Chair of a committee is in the second term, the vice chairs shall be considered for advancement, although neither nomination for a second term nor advancement shall be automatic.

3.2.3.4 Nominations for TAC officers shall be presented to the Chair of TAC by April 1 and to the membership of TAC for voting no later than May 1. Election shall be by majority of the votes cast. Elections shall be conducted through a vote and votes shall be kept confidential. The names of all newly elected TAC officers shall be submitted to the AWS president for appointment after the completion of the election.

3.2.3.5 The nominations for technical committee officers shall be presented to the Chair of the committee by no later than April 1 and to the committee membership for voting by no later than May 1. Election shall be by majority of the votes cast. Elections shall be conducted through a vote and votes shall be kept confidential. By July 1, the results of the election shall be passed to the Secretary of TAC for approval by TAC at its next meeting. Upon approval by TAC, the Secretary of TAC shall forward the names of the new chairs of the technical committees to the AWS president for appointment to TAC.

3.2.3.6 If any technical committee fails to meet these requirements, TAC shall appoint the new officers for that technical committee at its meeting.

3.3 Duties of Officers.

3.3.1 Duties of the Chair. The duties of the Chair, as the executive officer of a technical committee, are the following:

- (1) Conduct the activities of the technical committee within its scope, closely following the schedule and actions of the subcommittees and task groups, to ensure timely progress of the technical committee's business.
- (2) Determine the extent to which the activities of the technical committee shall be carried out at meetings (as opposed to correspondence), schedule and call meetings, and plan the agendas.
- (3) Officiate at the meetings and communicate all rules, policies, and related matters to the technical committee members.
- (4) Keep the Vice Chairs and the Secretary informed, by means of copies of correspondence, of the activities of the technical committee.
- (5) Ensure that the technical committee documents are technically correct, well-written, and prepared according to these rules.
- (6) Withdraw from the approval process and remand to its subcommittee any document produced by a subcommittee of the Chair's technical committee that is found to contain a significant error or discrepancy that cannot be readily resolved, regardless of its stage in the approval cycle.
- (7) Appoint the chairs of subcommittees reporting to the technical committee and approve the appointment of new subcommittee members (see 3.1.5.3).
- (8) Approve the discharge of members, advisors, and corresponding members (including officers) of the technical committee and subcommittees in accordance with 3.1.5.3, 3.1.7.1 through 3.1.7.3, and 3.1.10.
- (9) Keep abreast of the activities of other committees and establish liaison with them and with other organizations to:
 - (a) ensure coordination and avoid duplication of effort, and
 - (b) avoid technical contradictions in AWS publications within the scope of the committee's work.
- (10) Serve as an ex-officio or advisor member of all subcommittees under the Chair's technical committee. In so doing, the Chair shall not be counted in establishing a quorum of the subcommittee, nor shall the Chair vote, unless the Chair is a voting member of the subcommittee.
- (11) Serve as a member of TAC, in which case the Chair has a responsibility for the overall technical affairs of AWS. The Chair shall participate in the activities of TAC, which

include attending TAC meetings, participating in reviews, responding to votes, and staying informed on matters relating to the work of the Chair's technical committee. In working with both TAC and the Chair's technical committee, the Chair shall elicit and demand a high level of professionalism in all published documents. TAC members who are chairs of multiple technical committees shall hold only one vote as a TAC member. The Chair may send a proxy to the TAC meeting in their absence if deemed necessary.

(12) Submit to TAC a report of the activities of the Chair's committee as requested by the Chair of TAC (see 5.1).

(13) Final approval for Abstract and Foreword, with concurrence of the responsible AWS Committee Secretary.

(14) Can assign a technical committee Vice Chair to approve Editorial or New Business items on their behalf.

3.3.2 Duties of the Vice Chair. The duties of the Vice Chairs are as follows:

(1) Carry out the duties assigned to them by the Chair; and

(2) Keep the Chair and the Secretary fully informed of their activities by copies of their correspondence.

(3) If assigned, can approve Editorial or New Business items on behalf of the Chair.

(4) The first Vice Chair shall:

(a) Carry out the duties of the Chair, should the Chair become temporarily incapacitated and relinquish those duties when the Chair returns.

(b) Be prepared to assume the position of Chair, should the Chair become unable to complete the term of office.

3.4 Secretary. The Secretary of a Committee is both a non-voting member and officer. When the Secretary is selected from AWS staff, the Director, Standards Committee Operations, shall make the selection. When an AWS Staff Secretary is unable to attend a committee meeting, an acting Secretary can be selected by the Chair from the membership of a committee. An acting Secretary shall be responsible for items (1) and (2) in 3.4.1. If the acting Secretary is a voting member of the committee, the Secretary retains the right to vote on all business while acting as Secretary.

3.4.1 Duties of the Secretary. The duties of the Secretary, whether AWS Staff Secretary or Volunteer Secretary, shall be to:

(1) keep the minutes of meetings,

(2) act as parliamentarian if requested by the Chair of the committee, and

(3) maintain the official files of the committee.

3.4.2 AWS Staff Secretaries. AWS Staff Secretaries shall not vote and shall not be included in counting a quorum or determining the balance of the technical committee. An AWS Staff Secretary is both a non-voting member and officer of the committee but is unique in that they are expected

to be impartial and therefore not allowed to vote. AWS Staff Secretaries assigned to committees may or may not have the technical background and knowledge to assist with every task.

If selected from the AWS Staff, the Secretary shall have the following additional duties:

- (1) AWS staff are charged with assisting committee members in researching, preparing, and reviewing drafts, within the limitations of the resources available to them;
- (2) Maintain records of all committee reviews and votes;
- (3) AWS staff are responsible for ensuring that the front matter (abstract, foreword, table of contents, etc.) and back matter (index, etc.) conform to this specification or the AWS *Style and Methods* (S&M);
- (4) AWS staff is responsible for informing the committee members when portions of draft documents do not comply with this specification or the AWS *Style and Methods* (S&M);
- (5) Technical committees may request that AWS staff perform an editorial revision of draft documents to bring them in line with this specification or the AWS *Style and Methods* (S&M);
- (6) Process all informal inquiries and requests for official interpretations, directing them to the proper source for development of a response, and sending the formal response to the inquirer;
- (7) Serve as liaison with other AWS committees, AWS business units, and other organizations to assure coordination of efforts;
- (8) Make arrangements for meeting locations and whatever other facilities are required;
- (9) Advise the committee regarding adherence to rules and policies applicable to the committee;
- (10) Handle committee correspondence;
- (11) Ensure documents are following the AWS *Technical Activities Committee Rules of Operation* (TACRO) and AWS *Style and Methods* (S&M) by serving as a final approval of whether a document shall move forward to a subsequent review or vote; and
- (12) If, during (11), the document does not follow the AWS *Technical Activities Committee Rules of Operation* (TACRO) and AWS *Style and Methods* (S&M), the Secretary shall not move the document forward to the next step, and they shall provide guidance to committees on fixing the issues.

3.4.3 Secretary of TAC. Applicable duties noted in 3.4.2 and 3.4.3 shall apply to the Secretary of TAC. Also, it shall be the Secretary's duties to maintain current the following documents and make these documents available to all TAC and committee members:

(1) AWS Technical Activities Committee Rules of Operation (TACRO); and

(2) AWS Style and Methods for American Welding Society Documents (S&M)

The Secretary of TAC shall be responsible for all the approvals in 8.3 and the submission to TAC of any revisions required as a result of changes to *ANSI Essential Requirements: Due Process Requirements for American National Standards*.

4. Operation

Technical committees shall actively pursue their objectives. In so doing, they shall hold periodic meetings, and they may establish subcommittees (including executive subcommittees) and develop their own rules of operation. Rules adopted by technical committees shall not conflict with AWS Technical Activities Committee Rules of Operation (TACRO) and are subject to approval by TAC.

4.1 Meetings.

4.1.1 TAC shall hold a minimum of two meetings each year. The time and place shall be deemed suitable by the majority of the members of TAC.

4.1.2 The Chair or Secretary of a committee shall schedule and call the committee meetings. The frequency of the meetings shall be determined by the workload of the committee and the method by which the committee operates. The Chair shall be required to call a meeting upon the written request of five members or two-thirds of the committee's membership, whichever is smaller.

4.1.3 All committee meetings involving preparation of the technical provisions of AWS publications shall be open meetings, hybrid or virtual, and attendance by any interested party shall be welcomed. Such guests shall not have the right to vote, nor shall they, except by specific permission of the Chair of the committee, be entitled to receive copies of the minutes of the meetings. It shall be permissible for executive subcommittees to hold closed meetings when technical matters relating to the development of documents are not discussed.

4.1.4 On questions of parliamentary procedure not covered by these rules, the most recent edition of *Robert's Rules of Order* shall prevail.

4.1.5 A meeting quorum shall consist of a simple majority (>50%) of the members (either present or represented) of the committee and shall be adequate to conduct the business of the committee except for approval of ANS. When a meeting does not have a quorum, the members present may proceed with the agenda, but all items requiring committee approval shall be submitted to the committee for approval by vote or approved at the next committee meeting. For votes taken at meetings, consensus criteria and quorum requirements concerning the approval of ANS are addressed in 4.8.2.2.

4.1.6 Minutes. Minutes shall be prepared as soon as possible after a meeting but no later than 30 days after the meeting date by the secretary of the committee. Minutes of all committee meetings shall be properly prepared as per Standards Development Division format and instructions (see forms and templates on AWS internal server). Each page of the minutes shall be clearly identified in the header and footer with the following:

4.1.6.1 Header Content. The header shall contain the following disclaimer text on each page:

These minutes shall not be distributed outside the AWS committee structure or each committee member's organization (employer) without the committee chair's approval.

4.1.6.2 Footer Content. The footer shall contain the following on each page:

- (1) File name containing the committee name and meeting date(s),

(2) Page number (centered), and

4.1.7 Recording of Committee Meetings and Teleconferences. Any recording of meetings and teleconferences is prohibited, except when the following are met:

- (1) The meeting or teleconference secretary making the recording is an AWS staff member.
- (2) The director of the AWS department under which the committee operates has given prior approval for the recording.
- (3) The recording is made as a backup to written notes of the discussion for use during preparation of the minutes.
- (4) The recording is erased or deleted immediately after approval of the minutes.

Violators of this recording policy will be asked to stop recording. Failure to stop recording or repeated attempts to record may result in expulsion from the meeting.

4.2 Executive Subcommittees.

4.2.1 TACX Subcommittee. The TACX Executive subcommittee shall be comprised and function as outlined in the current *AWS Membership and Duties Statement for the Technical Activities Committee*.

4.2.2 Executive Subcommittees of Technical Committees. An executive subcommittee, organized when deemed necessary by the Chair of a technical committee, shall be composed of the Chair, the vice chairs, and as many other members of the technical committee as the Chair considers necessary. The size and the membership of this subcommittee shall be closely controlled by the Chair since it acts as the main steering group for the activities of the technical committee. The Chair of the technical committee shall be the Chair of the executive subcommittee.

4.3 Subcommittees.

4.3.1 Subcommittees of TAC.

4.3.1.1 TACR Subcommittee. TACR shall be organized by the chair of TAC for rules review and revision oversight. TACR is a permanent subcommittee of the Technical Activities Committee that shall be comprised of the Second Vice Chair of TAC, one at-large member of TAC, one technical committee chair, the Secretary of TAC, one additional staff member of the Standards Development department, and one additional member from TAC. The TAC members shall be appointed annually by the Chair of TAC. The TAC Secretary and additional staff member shall be designated by the Director, Standards Committee Operations. The purpose of this subcommittee is to provide recommendations to the Technical Activities Committee for proposed changes to AWS TACRO, *Rules of Operation of the Technical Activities Committee*. TAC and all technical committees, subcommittees, and task groups shall be notified of changes to the AWS Style and Methods (S&M). The Second Vice Chair of TAC shall be the Chair of TACR.

4.3.1.2 TACA Subcommittee. TACA, shall be organized by the Chair of TAC for awards review and oversight. TACA is a permanent subcommittee of the Technical Activities Committee that shall be comprised of the First Vice Chair of TAC, and two of the at-large members of TAC as appointed annually by the Chair of TAC. This subcommittee aims to recognize the technical

volunteers of the Society by actively nominating said volunteers for awards of the Society and other societies. The First Vice Chair of TAC shall be the Chair of TACA.

4.3.2 Subcommittees of Technical Committees

4.3.2.1 Subcommittees may be organized, as necessary, to carry out the work of a technical committee. The questions in 7.2 may be helpful in determining a technical committee's need for subcommittees. The Chair of the technical committee shall appoint the Chairs of the subcommittees and shall assist these chairs in selecting the members of their subcommittees. All subcommittee membership appointments shall be subject to approval by the Chair of the technical committee.

4.3.2.2 Each subcommittee shall operate within its scope, as assigned by the technical committee. Each subcommittee takes its direction, in general, from the technical committee. This is done through the Chair of the technical committee and the Chair of the subcommittee.

4.4 Task Groups. Task groups may be organized by the Chair of a committee to perform a specific task. Members of the task group do not necessarily have to be committee members. The task group shall be discharged by the Chair of the originating committee upon completion of its assignment.

4.5 Correspondence. The committee should continue to operate by means of correspondence between meetings. Copies of correspondence shall be forwarded to the Chair, vice chairs, and committee secretary.

4.6 Publications

4.6.1 Technical committees may prepare ANS (codes, specifications, recommended practices, methods, classifications, and guides), including their annexes and commentary, and non-ANSI documents (such as manuals, handbooks, textbooks, safety and health fact sheets, and reports) for publication. Technical committees shall cooperate in the preparation and review of publications of other AWS committees. ANS shall be categorized as active, inactive, or withdrawn.

4.6.2 Permission to Prepare a New Document. Before preparation of a new document may begin, a technical committee shall obtain the authorization of TAC and Standards Council.

4.6.2.1 Process Initiation. This process is initiated by completing and submitting an official *Request for Permission to Prepare* (PTP) to the Secretary of TAC, who shall submit it for approval via a two-week review to TAC or include it as an exhibit for vote at the next TAC meeting. The exhibit shall be an action item for approval if the PTP has not been approved prior to the meeting. The technical committee or its Chair shall complete the entire form and include an outline of the proposed document in the submission package. Prior to submission to TAC, the PTP shall be approved by the subcommittee, if responsible for preparation of the document, and the technical committee, which will be responsible for preparation or oversight of the document. Once approved by TAC, the PTP shall be submitted to Standards Council for approval through the same method listed above. After a PTP has been approved by Standards Council, the Committee Secretary shall submit an American National Standards Institute *Project Initial Notification System* (PINS) form. In the case where a PTP covers multiple documents, the submittal of a PINS may occur over an extended period of time after approval from Standards Council. However, a PINS shall always be submitted after TAC and Standards Council approval and as soon as AWS finalizes the title, scope, and stakeholders for the proposed ANS. Any comments resulting from the filing of a PINS will be addressed in accordance with clauses 2.5.1 of the *ANSI Essential Requirements*.

4.6.2.2 PINS Submission.

- (1) Revisions of AWS ANS. The Committee Secretary shall obtain written approval by the subcommittee and technical committee chairs or a meeting vote to revise (see 4.9.1) or reaffirm the ANS. Upon approval, the Committee Secretary shall submit an American National Standards Institute *Project Initiation Notification System* (PINS) form for listing in ANSI's *Standards Action*.
- (2) Reaffirmation or Withdrawal of an AWS ANS. A PINS form may be submitted, but is not required, at the initiation of a project to reaffirm or withdraw an ANS.
- (3) Non-ANSI documents. No PINS are submitted for non-ANSI projects.

4.6.2.3 Time Limitations. The permission to prepare (PTP) shall expire after notification is issued to the committee chair if no activity has occurred within three (3) years of the PTP submission date. If the PTP expires, the document shall be removed from the ANSI document tracking. To resume work (if that is desired), a new PTP shall be submitted using the process in 4.6.2.

Furthermore, if a period of continuous inactivity of three (3) years is allowed to persist any time during the preparation and approval process, the relevant committee chair will be notified and asked to (1) update the PTP schedule or (2) withdraw the PTP for the document. The three-year time period commences from the closing date of the last vote or review.

4.6.2.4 Discontinuance of a Document Project (Withdrawal of PTP). If a technical committee feels that a document project needs to be discontinued, the committee shall submit to TAC the request to withdraw the PTP and cease all work on it. A brief justification for discontinuing the document's development shall be submitted with the request. Once approval for discontinuance of an ANS project is received, the Committee Secretary shall notify ANSI to remove the project from their records.

4.6.3 Commercial Terms and Conditions and Patent Policy. AWS shall comply with the current ANSI Commercial Terms and Conditions Policy and ANSI Patent Policy in its ANS development activities (see *ANSI Essential Requirements: Due Process Requirements for American National Standards*).

4.6.4 Document Compliance. Members of the ANS-writing committees and AWS staff shall verify that all new ANS and the revisions to existing ANS that are in need of a substantial revision comply with AWS S&M and AWS TACRO.

4.7 Approval of Documents.

4.7.1 All documents submitted for publication shall have the approval of AWS before they can become official documents of the Society. Approval by technical committees of ANS without unresolved objections constitutes approval by AWS, while approval by Standards Council of ANS with unresolved objections constitutes approval by AWS. An ANS becomes an official publication only when it has been copyrighted and published by AWS.

4.7.2 All ANSI documents shall be approved by the procedure in 4.8. All non-ANSI documents shall be approved by the procedure in 4.12.

4.7.3 AWS Staff shall determine whether a document is an ANSI document or a non-ANSI document.

4.7.4 The publication process and publication timeline for ANS shall follow the most recent edition of the *ANSI Essential Requirements*.

4.7.5 The final vote by the technical committee to publish any ANS shall be accomplished by a formal vote. The results of the vote, indicating each individual vote, shall be recorded. For technical committees that are required to be balanced (see 3.1.5 and 3.1.5.1), the voter's category of interest shall also be recorded.

4.8 Procedures for Approval of American National Standards (ANS)

4.8.1 Review Sequence. An ANS shall go through one or more review periods. This review period serves to prepare the document for publication and obtain feedback and comments from subcommittee, committee, and TAC members. This is separate from the vote to publish and relevant quorum requirements outlined in 4.8.2.

4.8.1.1 The review sequence begins with the subcommittee (as applicable) and progresses through TAC, one step at a time, as outlined below:

- (1) Subcommittee (as applicable),
- (2) Technical committee,
- (3) Technical Activities Committee (after (1) and (2) are completed, and the technical committee has a passed vote to publish, as listed in 4.8.2.1),

A modification of the sequence in 4.8.1.1 is permitted in situations approved by TAC officers.

4.8.1.2 Simultaneous review is permitted by the subcommittee and technical committee. Simultaneous reviews across all levels are permitted in situations approved by TAC officers.

4.8.1.3 Comments. All comments received during a review shall be addressed as outlined in 4.8.7. This review record shall be available to all committee members.

4.8.1.4 The due date of the initial review at each level shall be at least four weeks after the review issue date.

4.8.1.5 All reviews shall take place in AWS's chosen online document development software.

4.8.2 Voting Sequence.

4.8.2.1 Voting Options. Once the ANS has been reviewed at least once by each applicable level and the ANS has been deemed ready by the relevant technical committee chair and Secretary, a vote to publish the ANS shall be taken. This vote serves as the final approval mechanism for an ANS and is how a technical committee affirms a document is ready for publication.

If the technical committee chair does not respond within 2 weeks to the Secretary's request to initiate a vote to publish, the Secretary may schedule the vote.

A vote to publish shall occur at the technical committee level before the first TAC level review is issued, as listed in 4.8.1.1. A vote to publish shall only be required and taken at the technical committee (consensus body) level.

When recorded votes are taken at technical committee meetings to publish any ANS, the technical committee members who are absent shall be allowed to vote. If an absent member chooses to vote, they shall submit their vote within 15 days of the issuance of the meeting minutes. The Committee Secretary shall send a reminder to those voting members who have not submitted their vote before the expiration of 15 days.

Voting members have the following voting options:

- (1) *Affirmative.* Affirmative votes determine whether the proposal passes or fails. This vote denotes that the voter accepts the ANS even though there may be some disagreement with a portion of it.
- (2) *Negative.* This vote denotes that the voter cannot accept the ANS because of major faults. The reasons for a negative vote shall be given and, if possible, should include specific wording or actions that would resolve the objection. Negative votes have a dual role. They count in determining whether a proposal passes or fails, and they express a major objection to parts or all of the proposal. A single Negative vote is not a veto, but the comments it contains shall be given due consideration in accordance with 4.8.5, including a written disposition with reasons provided to the voter. If a member votes negative during the voting process (e.g., CD1), and the same member votes affirmative on a subsequent vote (e.g., CD2), the affirmative vote stands; there is no unresolved objection since the final vote on the language is affirmative.
- (3) *Abstain.* Members may make abstain responses when they do not feel competent to judge the merit or technical accuracy of the particular material in the ANS or if a potential conflict of interest exists.

4.8.2.2 Consensus Criteria and Quorum Requirements. To pass the consensus and quorum requirements, an ANS shall be approved by the technical committee that prepared it. To be approved by the technical committee, all the following criteria (from ANSI's essential requirements) shall be satisfied:

- (1) *Quorum.* Votes shall be cast by a majority of the members with voting privileges.
- (2) *Percent Affirmative of Votes Cast.* The Affirmative votes shall be at least two-thirds of the votes cast, not counting Abstentions.
- (3) *Comments.* All comments received during voting shall be addressed as outlined in 4.8.5.

4.8.2.3 Each unresolved objection and attempt at resolution, as well as any substantive change made in a proposed ANS, shall be reported to the main technical committee or subcommittee, if applicable, to allow the technical committee members to respond, reaffirm, or change their vote. A recirculation vote shall be conducted in accordance with 4.8.2.4.

4.8.2.4 Recirculation Vote. Recirculation votes are used when a revision has received the required percentage of votes to pass, but there is a need to report unresolved objections or to make substantive changes based on comments received during the vote or from public review. In that

case, the proposal may be revised, but only the revised portion is voted on during recirculation. The following guidelines reference how to recirculate negative votes and substantive changes.

(1) Objections provided from public review and comments accompanying negative votes, along with their attempts at resolution, shall be reported to the committee for a minimum two-week period. This will allow the committee to read the comments and responses and respond, reaffirm, or change their votes.

(2) Any substantive changes made to the proposal are recirculated to the committee and submitted for public review for a minimum two-week period to provide the members with the opportunity to respond, reaffirm, or change their vote, and for public review comment.

(3) If a vote is changed to negative as a result of the recirculation activities described in (1) and (2), then a reason for the negative vote shall be provided.

(4) If a voter does not respond to the recirculation activities described in (1) and (2) within the stated period, the original vote shall stand.

(5) If, during the recirculation period (and public review period in the case of substantive changes to the proposal), additional comments are received, they should be handled as follows:

(a) Any comment(s) submitted with a negative vote by a consensus body member during a recirculation vote does not need to be recirculated.

(b) Any comment(s) submitted during public review that remain unresolved that pertain to the revisions made shall be addressed according to (1).

(c) Any comment(s) submitted during subsequent voting of a recirculated revised proposal that do not pertain to the revisions made will be considered new business by default.

(6) At the end of the recirculation period(s), consensus as defined in 4.8.2.2 must be maintained for the document to be approved. In addition, the committee must be notified whether the proposal has failed or has consensus and will be adopted and published in the ANS.

4.8.3 Public Review and Review by Other Committees.

4.8.3.1 Public Review. All substantive changes shall undergo a public review in accordance with the ANSI Essential Requirements. All comments received from public review shall be considered in accordance with 4.8.7 prior to publication of the ANS. A written disposition with reasons shall be provided to the commenter.

4.8.3.2 Review by Other Committees. When a proposal prepared by a technical committee contains information that is included in, or is related to information in, any publication of a committee not reporting to TAC, the proposal shall be submitted to that committee by the relevant technical committee secretary for review at the same time it is submitted to TAC for review. That committee shall be requested to review the proposal and provide comments by the due date for TAC review. The absence of a timely response shall not be allowed to impede the publication of the ANS, for the responsibility to complete the ANS rests with the technical committee that started it. All comments shall be considered in accordance with 4.8.5.

4.8.4 Standards Council. When all comments from the final TAC review, technical committee vote to publish, subcommittee review (if applicable), and public review period have been

considered, the Committee Secretary shall proceed with 4.8.5.1 or 4.8.5.2.

4.8.4.1 With No Unresolved Objections. If the document has no unresolved objections, the document does not need to be submitted to Standards Council for review or approval. In this case, approval by the technical committee and review by TAC is on behalf of Standards Council and of the Board of Directors, and this approval constitutes acceptance of the ANS as an official AWS document. However, the following items shall be openly available to Standards Council:

- (1) The entire voting record summary for the technical committee for the latest drafts; and
- (2) A letter advising that the draft has been approved for publication by the technical committee with no unresolved objections and that a copy will be sent to a member of Standards Council upon request.

4.8.4.2 With Unresolved Objections. If the document has unresolved objections, the document, along with all the information about the unresolved objections, shall be submitted to Standards Council for approval using the procedures and criteria in 4.8.2. In this case, the final approval by Standards Council shall signify approval by the Board of Directors, and this approval constitutes acceptance of the ANS as an official AWS document.

Standards Council members may comment on the technical content of the ANS, but this is not required. Since the main purpose of voting at this stage is to ensure compliance with the rules and procedures, any substantive comments shall be sent to the technical committee for consideration during the next revision of the ANS.

4.8.5 Consideration and Resolution of Comments and Objections. Comments and objections from reviews at all organizational levels, as well as all comments from the public review and any review by members of other committees, shall be considered in accordance with the rules that follow. Objections from technical committee members and the public review shall be considered in accordance with the rules that follow. Comments are used as part of the process to improve language.

4.8.5.1 All comments and proposed changes submitted during a review or vote shall be considered.

4.8.5.2 Comments and objections should be submitted with a suggested change.

4.8.5.3 A proposed change shall be considered substantive by default.

4.8.5.4 Proposed changes considered editorial require the agreement of the Chair of the technical committee and Chair of the originating subcommittee for approval, with concurrence of the responsible AWS Committee Secretary. If the Chair of the technical committee and Chair of the originating subcommittee do not concur, the proposed change will be considered Substantive. If no subcommittee exists, determination shall be made by the Chair and the Vice Chair of the technical committee, with concurrence of the responsible AWS Committee Secretary. Commenters may request that their proposed editorial change receive full Committee consideration by notifying the Chair of the technical committee, Chair of the originating subcommittee, or AWS committee secretary. The Chair of the technical committee may delegate this responsibility to other technical committee officers (e.g., the Vice Chair, or the 2nd Vice Chair).

4.8.5.5 Proposed changes determined to be new business, through the concurrence of the Chair of the technical committee and Chair of the originating subcommittee, or through approval of 2/3 of the technical committee and originating subcommittee (if Chair approvals is not possible), shall

be added to the new business log for consideration by the committee during the next revision of the ANS (see 4.9.1.1).

4.8.5.7 A Negative vote may be changed to an Affirmative or Abstain vote at any time by the voter. All such changes shall be documented.

4.8.5.8 A comment may be withdrawn from the committee consideration process by the reviewer or voter at any time. The withdrawal of a comment shall be documented.

4.8.5.9 Notification of the approved substantive changes shall be accomplished by subsequent review or vote.

4.8.5.10 All persons with unresolved objections from the consensus approval process or public review shall be provided rationale for rejection of their objection and notified in writing of the right to appeal by the Committee Secretary (see 4.8.8).

4.8.6 Appeals. An appeal is intended to offer the opportunity for recourse to individuals who feel their position was not given proper consideration relative to the content of a committee-prepared ANS, or the procedure followed in its preparation. Individuals who have been or may be affected by any AWS procedural action or inaction shall have the right to appeal such action or inaction. This process shall not be used as another forum for the expression of a minority opinion that has previously been considered, responded to, and thoroughly documented at the original level of contention. The reply to the appeal shall be drafted by individuals who are unbiased and are not directly or materially affected by any action resulting from the appeal.

4.8.6.1 An appeal may be filed by any person who has provided comments in accordance with 4.8.5. With agreement of the appellant and the AWS Director, Standards Committee Operations, an appeal may be resolved informally before following the procedures outlined in 4.8.8.2.

4.8.6.2 Formal Appeals Process. For appeals pertaining to any AWS procedural action or inaction related to the TAC Rules of Operation or AWS documents, the procedure listed below shall be followed:

- (1) The appeal shall be filed with the Director, Standards Committee Operations, within fifteen (15) working days of the date of the communication reporting the action that is to be appealed. An appeal of inaction may be submitted at any time. The appeal shall be in writing, and it shall state the subject being appealed, the reason for the appeal, and the specific change necessary to satisfy the appeal.
- (2) The Director, Standards Committee Operations, shall provide a copy of the appeal to the Chair of the Technical Activities Committee and shall forward the appeal to the Chair of Standards Council, who shall appoint a panel to consider the appeal. The panel shall consist of the Chair of Standards Council (or someone appointed by the Chair) and an even number (at least two) of other members from Standards Council. All members of the panel shall be individuals who are not members of the Committee responsible for the ANS and are not directly or materially affected by any action resulting from the appeal.
- (3) The appellant shall be given the opportunity (but is not required) to present their arguments to the appeals panel,
- (4) The appeal shall be handled by vote. The Director, Standards Committee Operations shall forward the letter of appeal, the information supporting the action or inaction of the

technical committee involved, and any other pertinent information to each member of the panel.

- (5) The action on the appeal shall be completed within two months of the date on which the appeal was filed. The issue shall be settled by the majority vote of the panel. The appellant shall be provided with the final resolution in writing, which constitutes the final action of the appeal.

4.8.7 Review of Proof Copies. The following procedure shall be used to review documents just before proceeding with publication.

4.8.7.1 The secretary to the technical committee shall inform the Chair(s) of the technical committee and the subcommittee (if any) that the first proof copy is ready for review. The Chair(s) shall then determine who shall receive a copy of the page proofs for review prior to publication. The Chair may designate the responsible subcommittee chair or others to conduct this review. Proof pages are not to be generally distributed to committee members. The purpose of the review is to:

- (1) Ensure that the changes that were reviewed have been incorporated into the document as they were accepted; and
- (2) Make corrections to punctuation, grammar, and spelling.

Substantive changes to the approved content of page proofs are not permitted during this review. If substantive errors are identified in the approved content during page proof reviews, the Chair(s) of the technical committee and/or subcommittee (as appropriate) shall determine whether the errors are to be addressed at the next revision or if the current document shall be revised in accordance with the procedures for amendments for the erroneous items or the procedures for a complete revision before publication.

4.8.7.2 The Chair of the technical committee, the Chair of the subcommittee, the Committee Secretary, and/or the Chair's designee(s) shall review any corrections to punctuation, grammar, and spelling suggested for acceptability as editorial changes. Such changes shall not change the substantive content of the document.

4.8.7.3 This review should be completed within 15 days of receiving the materials. However, if the corrections and approvals are not returned to the committee secretary within one month of receipt, the Secretary may proceed with printing.

4.8.8 Procedures for Processing Errata after Publication. Errata shall be treated as follows:

4.8.8.1 Grammar, misspellings, and punctuation are corrected at the next printing, but no errata sheet is added unless the error changes the meaning of the sentence.

4.8.8.2 Corrections to technical errors are entered on an errata sheet inserted in newly purchased documents. Such corrections are also published in the Welding Journal and on the AWS Web page.

4.8.8.3 Corrections to technical errors that are considered safety-related are entered on errata sheets for newly purchased documents, published in the Welding Journal and on the AWS Web page, and mailed to previous buyers of the ANS.

4.8.9 Procedures for Creating and Approving Amendments.

4.8.9.1 Since amendments are partial revisions of an ANS, all amendments shall be approved by the procedures in 4.8 required for an ANS, except that only the corrected portion (amendment) is open for review. Any comments received that do not pertain to the reviewed item shall be processed as new business for the next edition and added to the new business log.

4.8.9.2 After an amendment has been officially approved, it shall be posted on the AWS website and placed in the AWS Welding Journal. Furthermore, all amendments shall be incorporated into the existing text of the ANS, which shall be reprinted and marked as incorporating an amendment(s) and which shall be identified in the revised Foreword.

4.8.9.3 No more than two separate amendments may be issued per edition of an ANS. If a third is needed, a new revision shall begin, and a new edition will be published. Complete new revisions are preferred to separate amendments and should be used if the size of the amendment amounts to more than 15% of the text. Furthermore, the issuance of amended portions of an ANS does not constitute a new edition, nor does it alter the five-year review requirement for the edition.

4.8.9.4 The style of amendments shall conform to AWS S&M.

4.9 Procedures for Document Maintenance. Each ANS, other than those approved for stabilized maintenance, shall be reviewed at least once every five years and revised, reaffirmed, or withdrawn by the technical committee having jurisdiction. The status of documents approved for stabilized maintenance shall be reviewed at least once every ten years. In both cases, the review/revision cycle begins with the ANSI approval date of the latest edition of the document. The technical committee shall establish a scheduling procedure to ensure the appropriate action occurs within the established time limits.

4.9.1 Revision of an American National Standard (ANS). An ANS that is revised shall be approved according to the procedures specified in 4.6.2.2 and 4.8. ANSI shall be notified when the revision process is initiated. A revision schedule shall be created and maintained by the technical committee's secretary using any suitable format. The technical committee chair shall report on schedule progress regularly.

4.9.1.1 The revision or new business items shall be handled in accordance with the following requirements:

- (1) Issues deferred from the previous edition's reviews or votes shall be addressed at the originating committee's review.
- (2) New changes, issues, and additions shall be allowed only during the originating committee's review.
- (3) The committee chair(s) shall select a date at which time all new business items will be deferred to the following revision. This is required to prevent an open-ended review process. All new business items brought up after this cut-off date will be deferred to the next revision unless the committee determines that the proposed change is needed to make the current version technically correct or meet applicable laws, codes, or other documents.
- (4) The deferred new business items can be included in the revision task log for the next revision.

(5) There is no minimum limit to the time between revised documents. Proposed changes that make major improvements to the document should be carried out as quickly as possible.

(6) All drafts shall clearly identify revisions made in text, tables, and figures.

4.9.1.2 ANS may be revised by submitting for approval only those portions that have revisions.

4.9.2 Reaffirmation of an American National Standard (ANS). An ANS can be reaffirmed if the existing document is considered to still be correct and representative of the pertinent technology. Reaffirmations shall be accomplished without any substantive change to the main text of the ANS. All nonsubstantive changes in the main text of the ANS shall be explained or noted in a foreword. An ANS undergoing an update of references to documents necessary to implement the ANS shall be processed as a revision unless the updated reference is only a reaffirmation of the referenced document. Any substantive changes in such references require processing as a revision. The reaffirmation approval date, however, shall be included in the ANS along with the original approval date of the ANS. The procedure to be followed for reaffirmation approval shall be as in 4.8.1 through 4.8.8, except as noted in 4.9.2.1 through 4.9.2.3.

4.9.2.1 Voting Options for Subcommittees and Technical Committees. The voting options relative to technical content shall be restricted to:

- (1) Affirmative,
- (2) Negative, or
- (3) Abstain.

Affirmative votes indicate agreement that the ANS is acceptable in its present form. Although the voter may recommend changes, these recommended changes are not significant enough to warrant a revision of the ANS at this time.

Negative votes indicate disagreement that the ANS is acceptable in its present form. The voter has significant recommended changes, which warrant a revision of the ANS instead of reaffirmation.

4.9.2.2 Voting Options for TAC. The voting options relative to technical content shall be restricted to:

- (1) Affirmative,
- (2) Negative, or
- (3) Abstain.

4.9.2.3 Negative votes shall be accompanied by a statement of the specific reasons (comments) for that vote, but specific recommended changes in the ANS are not required. Negative votes shall be addressed according to 4.8.7 except that the committee(s) need only review the comments accompanying the negative vote and decide whether the ANS should be reaffirmed or revised.

4.9.3 Withdrawal of an American National Standard (ANS). Any ANS the technical committee determines is no longer needed shall be considered for withdrawal. The procedure for consent to withdraw shall be as in 4.8.1 through 4.8.8 except as noted below.

4.9.3.1 Relative to technical content, the voting options at the subcommittee through TAC levels shall be as in 4.8.2.1.

4.9.3.2 Negative votes shall be accompanied by a statement of the specific reasons (comments) for that vote, but recommended changes in the ANS are not required. Negative votes shall be addressed according to 4.8.5, except that the committee(s) need only review the comments accompanying the negative vote and decide whether the ANS should be withdrawn.

4.9.3.3 TAC may decide to withdraw active ANS when a need arises. A majority of TAC members shall vote, and a simple majority shall be required for withdrawal. Standards Council shall vote on the withdrawal; the same voting requirements as TAC are required.

4.9.3.4 ANSI Administrative withdrawal for an ANS that expires at its 10-year anniversary shall be excluded from the procedure listed in 4.7.3.

4.9.3.5 Notification to ANSI by the Committee Secretary shall be accomplished via the submittal of an informational announcement if the ANS is withdrawn by the Committee or has been administratively withdrawn.

4.9.4 Stabilized Maintenance. TAC may designate ANS that satisfy the following eligibility criteria to be maintained under the stabilized maintenance option:

- (1) the ANS addresses mature technology or practices, and as a result, is not likely to require revision; and
- (2) the ANS is other than safety or health related; and
- (3) the ANS has been reaffirmed at least once; and
- (4) at least ten years have passed since the approval or last revision of the ANS; and
- (5) the ANS is required for use with existing implementations or reference purposes.

4.9.4.1 ANSI Notification. At the 10-year review, it shall be determined whether the ANS will continue to be maintained under the stabilized maintenance option, will be withdrawn, or will be revised.

If the ANS will continue to be maintained under stabilized maintenance, or will be withdrawn, then this shall be communicated to ANSI via the submittal of an informational announcement, and a related announcement shall be made in ANSI Standards Action.

If the ANS will be revised, then this shall be communicated to ANSI via a PINS.

4.9.4.2 Request for Maintenance. If a recommendation is made at any time by a materially affected and interested party that an ANS maintained under the stabilized maintenance option requires revision or should be withdrawn, then that recommendation shall be considered in the same manner as a new proposal but within a maximum of 60 days from receipt. A recommendation should include rationale to begin a revision and shall not be dismissed due to the fact that it does not necessarily suggest a specific revision. The submitter of such a recommendation shall be responded to in writing within 60 days of the receipt of the recommendation and advised of the decision relative to the maintenance status of the ANS.

4.9.4.3. Document Notice. A document maintained under the stabilized maintenance option shall incorporate a clear statement as prescribed in AWS S&M, of the intent to consider requests for change and information on the submittal of such requests.

4.10 Disposition of an ANS from Discharged Technical Committees.

4.10.1 When a technical committee has been discharged, TAC shall determine whether the ANS assigned to that technical committee be withdrawn or assigned to another technical committee or committees.

4.10.2 When a subcommittee has been discharged, the technical committee that discharged it shall reassign the ANS assigned to that subcommittee elsewhere within the technical committee or request TAC to reassign the ANS to another technical committee or committees.

4.11 Interpretations of ANS. Interpretations of ANS shall only be made in response to written inquiries submitted via email or letter.

4.11.1 Official Interpretations.

4.11.1.1 Approval by Technical Committee. Inquiries shall first be sent to the relevant committee for response. Inquiries that are answered only with a reference to a paragraph or component in the ANS may be answered by the subcommittee with the approval of the technical committee chair without approval of the technical committee. Such responses will not be published in accordance with 4.11.1.6. Inquiries that require a response that is more than a reference to a paragraph or component in the ANS shall be processed as outlined below. This includes “yes” or “no” answers that include a reference to a component in the ANS. All replies to inquiries shall be sent by the Committee Secretary of the relevant technical committee.

To become an official interpretation of an ANS, the interpretation shall be approved by the subcommittee (if applicable) and the technical committee responsible for the ANS in question by either a vote or an equivalent formal procedure (see 4.7.5).

- (1) The voting options are the same as those in 4.8.2.1.
- (2) To be approved at the subcommittee and technical committee levels, all the following voting criteria shall be satisfied:
 - (a) A majority of the committee shall vote,
 - (b) Members whose vote is “Abstain” shall be counted in determining quorum requirements, and
 - (c) Acceptance or rejection of the interpretation shall be by a simple majority of the Affirmative and Negative votes.

However, if there are any Negative votes, members shall be allowed to review the objection(s) and to consider changing their votes after being informed of the objection(s). This consideration period shall be limited to 10 working days for final approval of the interpretation.

4.11.1.2 Approval by Interpretation Subcommittee/Task Group. An interpretation subcommittee/task group may be used between committee meetings when the technical committee chair determines the issue is important enough to do so. The Secretary shall provide the request to

the technical committee chair and subcommittee chair (if applicable). At the discretion of the technical committee chair, an interpretation subcommittee/task group may be established, composed of at least three members, including:

- At least one officer of the technical committee
- At least one officer of the appropriate subcommittee (if applicable)
- One or two other members of the committee, subcommittee, or task group, as determined by the technical committee chair and subcommittee chair
- AWS Staff Secretary

The interpretation subcommittee/task group shall review the request and prepare the response.

Inquiries requiring a response more than a reference to a paragraph or component in the ANS shall be processed according to 4.11.1.1; this includes “yes” or “no” answers that reference a component in the ANS. All replies to inquiries shall be sent by the Committee Secretary of the relevant technical committee.

4.11.1.2.1 All members of this interpretation subcommittee/task group shall approve interpretations handled per 4.11.1.2; otherwise, the interpretation request shall be addressed per 4.11.1.1.

4.11.1.3 If the interpretation is rejected, comments accompanying Negative votes shall be reported to the document subcommittee for assistance in preparing a new interpretation. The new interpretation shall be processed according to 4.11.1.1.

4.11.1.4 Except as permitted in 4.11.1, respondents to inquiries are not authorized to speak or write on behalf of AWS, and they may not use official stationery or the logo of AWS unless they have obtained specific, written permission to do so from the AWS Board of Directors, in accordance with A3.3 of the *AWS Board Policy Manual*.

4.11.1.5 Any member having a potential conflict of interest with the inquirer or the inquirer’s employer shall not participate in drafting the reply.

4.11.1.6 All official interpretations shall appear in the *Welding Journal* and shall be posted on the AWS website.

4.11.2 Official Intent Interpretations. An intent interpretation is an interpretation issued to clarify the *intent* of the current edition of an ANS rather than to explain or reinforce what it actually states. An intent interpretation is to be used only when the code states one thing, but the technical committee intended it to state another.

An intent interpretation should be used *only* when absolutely necessary.

The Secretary shall provide the request to the technical committee chair and subcommittee chair (if applicable).

Since the code is not worded as intended, an amendment or revision to the code shall be issued in parallel with the intended interpretation. Both shall be approved by the technical committee and

the appropriate subcommittee. These cannot be approved by an interpretation subcommittee/task group.

Once the intent interpretation and amendment or revision are approved by the technical committee, the amendment or revision shall be submitted to TAC for review. The review shall have a closing date of 10 working days from the date of issuance. A disclaimer shall be included in the intent interpretation reply, stating that the ANS is being revised appropriately to address the issue.

All replies to requests for intent interpretations shall be sent by the Committee Secretary of the relevant technical committee.

4.11.2.1 The voting options are the same as those in 4.8.2.1.

4.11.2.2 If the intent interpretation is rejected, comments accompanying Negative votes shall be reported to the subcommittee for assistance in preparing a new interpretation. The new interpretation shall be processed according to 4.11.1.1.

4.11.2.3 Except as permitted in 4.11.2, respondents to inquiries are not authorized to speak or write on behalf of AWS, and they may not use official stationery or the logo of AWS unless they have obtained specific, written permission to do so from the AWS Board of Directors.

4.11.2.4 Any member having a potential conflict of interest with the inquirer or the inquirer's employer shall not participate in drafting the reply.

4.11.2.5 All official intent interpretations shall appear in the *Welding Journal* and shall be posted on the AWS website.

4.11.3 Informal/Unofficial Responses to Questions. When a question is submitted to the AWS Secretary, or a committee or subcommittee officer, which does not require an official interpretation (for reasons such as it is so basic or simple), a written informal/unofficial response can be provided. The Secretary, Committee Chair, and Subcommittee Chair (if applicable) shall review the question and agree to a response, verifying with others if they so decide. Once all agree, the Secretary issues this informal response to the inquirer in writing (such as via email), stating that it is not an official AWS interpretation but represents the opinions of the individuals who prepared it. These informal/unofficial responses to questions will not be published anywhere.

4.12 Procedure for Approval of Non-ANSI Documents.

4.12.1 Non-ANSI documents may be approved for publication by a task group comprised of members of TAC and Standards Council at the discretion of TAC and Standards Council. To form the task group, the Chair of TAC shall appoint two or more members from TAC, and the Chair of Standards Council shall appoint two or more members from Standards Council. Other TAC and Standards Council members may join the task group if they elect to do so. The Chair of the technical committee that developed the document or a member of that committee, as the technical committee chair chooses, shall be the Chair of the task group.

4.12.2 The document shall be approved according to the following procedure:

4.12.2.1 It shall be reviewed by the task group formed as per 4.12.1 and approved according to the voting options specified in 4.8.2.1.

4.12.2.2 To pass, the requirements of 4.8.2.2 shall be met.

4.12.2.3 The resolution of comments shall be conducted within the task group according to the provisions of 4.8.5.

4.12.2.4 Appeals shall be handled according to 4.8, except that the members appointed to the appeals task group shall not be members of the task group.

4.12.3 Revised documents shall be approved according to 4.12.

4.12.4 A document may be withdrawn according to the following procedure:

4.12.4.1 It shall be approved according to the voting options specified in 4.8.2.1.

4.12.4.2 To pass, the requirements of 4.8.2.2 shall be met.

4.12.4.3 Negative votes shall be handled within the task group according to 4.8.2.3.

4.12.4.4 Appeals shall be handled according to 4.12.2.4.

4.12.5 TAC and Standards Council shall be allowed to accept or reject the task group's approval of the document through a vote following approval by the task group.

4.12.6 Approval by the task group constitutes approval by the Board of Directors if no action to the contrary is taken under 4.12.5.

4.13 Joint Committees with Other Organizations. Technical committees responsible for preparing a document should be entirely under the auspices of AWS. However, exceptions may be made when the following apply:

- (1) The subject matter includes topics other than welding and requires experts in those fields,
- (2) AWS is invited to join in the preparation of a document by an outside organization, or
- (3) An outside organization is determined to prepare a document involving welding and will do so alone unless a joint committee is established.

4.14 ISO or IEC Adoptions. When adopting ISO standards, the committee shall follow the style and formatting guidelines in *ANSI Procedures for the National Adoption of ISO and IEC Standards as American National Standards* and ISO/IEC Guide 21-1, *Regional or national adoption of International Standards and other International Deliverables — Part 1: Adoption of International Standards*. The draft shall also comply with the following specifications.

4.14.1 Method of Adoption. All ISO standards adopted as AWS ANS shall be adopted by the republication and redrafting method as explained in ISO/IEC Guide 21-1.

4.14.2 Safety and Health Information. For adoption of ISO standards, the committee shall do one of the following:

- (1) Prepare a National Normative Annex with a scope including safety and health information.

- (2) Replace existing safety and health clause in ISO standard with safety and health information relevant to U.S. applications, or add safety and health information relevant to U.S. applications if no clause exists in the ISO standard.

4.14.3 Location of National Normative Annexes. Any annexes that AWS adds shall be placed after the complete ISO standard (including annexes), shall be arranged with the normative national annexes first and the informative national annexes following, using the next letter after the last ISO annex (e.g., if the last ISO annex is C, the first national annex is D), and shall be preceded by the heading "National Annexes."

4.14.4 Methods of Indicating Deviation from Adopted ISO Standards

- (1) Where deviations are few, they should be placed in the Foreword. They shall be listed in a two-column format that identifies the component and its modification. Each modification shall begin with either "Added," "Replaced," or "Deleted."

Example:

Clause/Subclause

Modifications

4 Test Conditions and Permissible Tolerances

Added "requirements for the testing of accuracy for the total vertical clearance of connecting parts" in the test items

5 Industrial Atmosphere Test

Replaced "25°C ± 2°C" with 40°C ± 1°C" and "as close as possible to 75% and within a range of 70% to 80%" with "80% ± 5%"

- (2) Where deviations are many, they should be placed in an appropriate annex after the *Requesting an Official Interpretation on an AWS Standard Annex*. Deviations shall be listed in a two-column format that clearly describes the component and its modifications. Each modification shall begin with either "Added," "Replaced," or "Deleted." See Annex R for an example of this method.

Per Guide 21-1, technical deviations should include an explanation for the reasoning of the deviation.

4.14.5 AWS technical committee members, acting through the relevant U.S. Technical Advisory Group (TAG) to ISO TC44, an ISO TC 44 subcommittee, or other working unit producing ISO standards, should be active in developing ISO standards compatible with U.S. industry.

4.14.6 Once a technical committee member identifies an ISO standard as potentially suitable for U.S. industry, the technical committee member shall bring this to the attention of the relevant AWS technical committee, along with a recommendation as to whether the ISO standard is suitable for US industry in one of the following forms:

- (1) As published, or
- (2) Modified, which may include modification or addition of text, annexes, tables, and figures. It may include the addition of appropriate mandatory (normative) and/or nonmandatory (informative) national annex(es). A normative national annex might be used to include filler metal dimensions in U.S. Customary Units, for example, or to include material compositions that are significant in the U.S. market but not included in the ISO standard.

An informative national annex might be used to include, for example, application information not present in the ISO standard.

4.14.7 If the technical committee determines that the ISO standard is suitable for U.S. industry, the technical committee shall advance the ISO standard, with appropriate normative and/or informative national annex(es) through the normal route to becoming an AWS and ANSI standard. If the ISO standard is to replace an existing AWS ANS, the resulting AWS standard should, if at all possible, carry the same AWS ANS number as the AWS ANS which it replaced. In no case can the ANSI expedited process be used when ISO standards are being adopted either as a whole or in part.

4.14.8 If the technical committee determines that the ISO standard is not suitable for U.S. industry, the technical committee should provide feedback, through the U.S. TAG, to ISO concerning what would be required to make the ISO standard acceptable to US industry.

4.14.9 Any subsequent revisions, amendments, or technical corrigenda issued by ISO shall be submitted to the appropriate subcommittee, main committee, and TAC for approval before changes are incorporated into the AWS adoption.

4.15 Use of AWS ANS in the Development of ISO Standards.

4.15.1 No AWS ANS shall be offered or agreed to be used in developing an ISO standard without the approval of TAC.

4.15.2 No member of TAC or its committees shall offer to ISO the use of an AWS ANS unless it has been approved by TAC.

5. Reports and Records

5.1 Reports.

5.1.1 Schedule. A rotating schedule for technical committee reports is managed by the Standards Development staff. Reports from assigned technical committees shall be provided by the Chair of the technical committee and Secretary for inclusion in the agenda of TAC's semiannual meetings as a consent agenda item. The Chair of the technical committee can send a request to the TAC Secretary to present the report at the TAC meeting. The content of each report shall follow the instructions in 5.1.2.

5.1.2 Content. The content of the report should include the following items:

- (1) The committee's scope and goals;
- (2) The number of meetings held during the year (including meetings of the subcommittees);
- (3) Activities completed (include subject, date of approval, and any pertinent comments available on each document);
- (4) Activities under consideration (include subject, status, expected date of completion, and any comments);
- (5) New activities to be undertaken (comments and suggestions may be requested from TAC);
- (6) Obstacles the committee faces that are impeding progress with their work; and
- (7) Membership balance (if applicable). (See 3.1.5.)

5.2 Records. Records shall be prepared and maintained to provide evidence of compliance with the rules and procedures in this document. Records concerning new, revised, or reaffirmed ANS shall be retained for one complete ANS cycle. Once a new edition is published or a reaffirmation has been completed, the records for the previous edition may be discarded unless an AWS Board Policy or other AWS policy requires longer retention. Records concerning withdrawn ANS shall be retained for at least five (5) years from the withdrawal date. Records shall be retained until the ANS is reaffirmed, revised, or subsequently reviewed in connection with the stabilized maintenance of the ANS.

The records to be retained shall be related to the approval of an ANS for publication, and shall include, but not be limited to, the following:

- (1) Minutes of technical and subcommittee meetings,
- (2) Final verification records for all reviews and votes,
- (3) Reviews,
- (4) Comments on draft ANS, including public review comments,
- (5) Committee resolutions to comments on draft ANS, and
- (6) Production files (hard copy and electronic) for the latest published edition.

All editions of published ANS shall be permanently retained.

6. Discharge of Committees

6.1 Technical Committees. A technical committee may be discharged for cause by TAC, with the approval of Standards Council. When submitted for approval, the action shall include the reason for the discharge. Any ANS assigned to the discharged technical committee shall be reassigned or withdrawn according to 4.10.1.

6.2 Subcommittees. A subcommittee may be discharged for cause by the technical committee that established it. Any ANS assigned to the discharged subcommittee shall be reassigned or withdrawn according to 4.10.2.

6.3 Task Groups. The discharge of a task group shall occur on completion of its assignment (see 4.4).

7. New Technical Committees

7.1 Organization Origination. The need for a new technical committee may be brought to the attention of AWS by any of its members or by responsible and interested nonmember individuals or organizations.

7.2 Investigation. Upon receiving a request for a new technical committee, AWS Headquarters shall refer the matter to TAC. The Chair of TAC shall appoint an investigation committee. Standards Council shall be informed of such actions. The investigation committee shall promptly respond to the following questions and shall report back to TAC:

- (1) Is there a real need for a new technical committee?
- (2) Can the cooperation of all (or a substantial number of) interested parties be obtained, and should the technical committee have balanced membership, per 3.1.5.
- (3) Should the technical committee be organized solely as a technical committee of the Society, or should it be a joint committee with one or more other interested organizations? (See 4.13.)

7.3 Formation. TAC shall review the investigation committee's report and take one of the appropriate courses of action listed below.

7.3.1 TAC may accept the report and recommend forming a new technical committee. In this case, TAC shall request approval from Standards Council to form a new technical committee. The approval request shall include the name of the technical committee, the scope of the technical committee, proposed interim officers, and a request for the assignment of a committee secretary from AWS staff.

7.3.2 TAC may tentatively accept the report but request additional information. In this case, TAC shall specifically identify the additional information required. Standards Council shall be informed of such actions.

7.3.3 TAC may not accept the report and may not recommend the formation of a new technical committee. In this case, TAC shall indicate the reasons for not approving the formation of a new technical committee. Standards Council shall be informed of such actions.

7.4 Organization and Operation. A new technical committee shall be subject to all the rules governing the organization and operation of technical committees, as set forth herein.

7.5 Publications. Initiation of work on new publications by new technical committees shall be in accordance with 4.6.

8. Amendments and Appeals to TAC Rules of Operation

8.1 Initiation of Amendments to TAC Rules of Operation. Any AWS member may initiate a proposed amendment to these rules. Proposed amendments shall be submitted in writing to the Secretary of TAC for review.

8.2 Transmittal of Proposed Amendments to TAC Rules of Operation.

8.2.1 Upon receipt of a proposed amendment to these rules, the Secretary of TAC shall determine if the proposed amendment conflicts with the AWS constitution and bylaws.

8.2.2 The Secretary of TAC shall submit the proposed amendments of TAC Rules of Operation to the members of TACR (Rules Subcommittee) for review. The amendment shall then be presented to TAC for review. If the Secretary of TAC had identified any conflicts between the proposed amendment and the AWS constitution and bylaws, and TACR agrees, the Secretary of TAC shall return the proposed amendment to the proposer with the conflict identified.

8.3 Adoption of Amendments to TAC Rules of Operation.

8.3.1 Amendments to these rules shall be adopted after they have been approved by TACR, TAC, and Standards Council at a regular meeting or by a vote. An affirmative vote of at least two-thirds of the members of both TAC and Standards Council shall be required to approve amendments.

8.3.2 Any changes to these rules that pertain to ANS shall also be subject to the American National Standards Institute approval. The revised rules shall be submitted to the appropriate personnel at ANSI for review and approval after approval by Standards Council.

8.4 Approval of Amendments to TAC Rules of Operation. Duly adopted amendments to these rules by TAC and Standards Council become effective upon the approval by Standards Council who acts on behalf of the AWS Board of Directors. The approval(s) shall be presented by the secretary of Standards Council to the AWS Board of Directors as information items at their meeting.

9. Boilerplate for AWS ANS.

All AWS ANS shall follow the structure approved by AWS, as shown in the AWS Style & Methods (S&M). Specific boilerplate that shall be approved as part of these rules is listed below:

9.1 Codes, Specifications, and Methods. These ANS are written in a predominantly authoritative tone. They establish requirements that are necessary, definitive, and enforceable. The content should be consistent throughout each ANS and never contradict itself. The ANS should ensure repeatable results.

Example of Appropriate ‘Code’ Language:

Mislocated holes shall be repaired by the following procedure:

9.2 Statement of Mandatory Use for Practices and Guides. Recommended practices and guides shall include a paragraph in the “Scope” incorporating the following standard text, verbatim:

“Although this (*recommended practice or guide*) is not written with mandatory requirements, mandatory language, such as the use of ‘shall’, will be found in those portions of the document where failure to follow the instructions or procedures could produce inferior, misleading, or unsafe results.”

9.3 Units of Measurement.

9.3.1 Statement on Units of Measure (Clause 1.2). All ANS shall include a paragraph in the “General Requirements” titled “Units of Measurement”. The “Units of Measurement” paragraph shall incorporate the boilerplate text for one of the options shown in Table 9.3.1 verbatim. Option 1 or 2 should be used instead of Options 3 or 4. ANS that use SI Units should use the practices of AWS A1.1, *Metric Practice Guide for the Welding Industry*.

The A5 Filler Metal Specifications are an exception to this requirement.

**Table 9.3.1
Options for the Use of Units of Measure and Document Designations**

Option	Requirements and Explanation	Boilerplate Text
Option 1	<u>ANS</u> that are written solely in the International System of Units (SI) shall be designated using the letter “M” (e.g., AWS G1.10M:2001). Examples of typical dimensions in a document with this designation are “25 mm” and “100 MPa.”	This standard makes sole use of the International System of Units (SI).
Option 2	<u>ANS</u> that are dual dimensioned shall be dual designated (e.g., AWS D1.1/D1.1M:2010 or AWS D16.1M/D16.1:2004). Examples of typical dimensions in a document with this designation are “1 in [25 mm]” or “25 mm [1 in].”	This standard makes use of both [<i>Insert the system of units to be used first, e.g., U.S. Customary Units</i>] and [<i>Insert the corresponding system of units, e.g., the International System of Units (SI)</i>]. The latter are shown within brackets ([]) or in appropriate columns in tables and figures. The measurements may not be exact equivalents; therefore, each system must be used independently.
	For product <u>ANS</u> , add as the last sentence.	The measurements are not exact equivalents; therefore, each system must be used independently when referring to material properties.
	For <u>ANS</u> that utilize units of measure for labeling (such as the A5 Filler Metal Specifications), add this statement to the above statement in the “Scope”.	Standard dimensions based on either system may be used for sizing of electrodes or packaging or both under A5.XX and A5.XXM specifications.
Option 3	<u>ANS</u> that are written solely in U.S. Customary Units but which require approximate SI equivalents for informational purposes shall be designated using the document number followed by a colon (:) and the year of publication (e.g., AWS B4.0:2007). An example of a typical dimension in a document with this designation is 3/4 in (19 mm).	This standard makes sole use of U.S. Customary Units. Approximate mathematical equivalents in the International System of Units (SI) are provided for comparison in parentheses or in appropriate columns in tables and figures.
Option 4	<u>ANS</u> that are written solely in the International System of Units (SI) but which require approximate U. S. Customary equivalents for informational purposes shall be designated using the document number followed by a colon (:) and the year of publication (e.g., AWS D3.6M:2010). An example of a typical dimension in a document with this designation is 19 mm (3/4 in).	This standard makes sole use of International System of Units (SI). Approximate mathematical equivalents in U.S. Customary Units are provided for comparison in parentheses or appropriate columns in tables and figures.
Option 5	For <u>ANS</u> not requiring units of measure, the document designation shall be the same as in Option 3 using the document number followed by a colon (:) and the year of publication (e.g., AWS B5.15:2010).	This standard does not require units of measure. Therefore, no equivalents or conversions are contained except when cited in examples.

9.3.2 Units and Symbols. Use of inch-pound units and symbols shall comply with Annex Table 9.3.2. Use of SI units shall comply with AWS A1.1, *Metric Practice Guide for the Welding Industry*.

**Table 9.3.2
Inch-Pound Units and Abbreviations with Examples**

Inch-Pound Abbreviation	Meaning	Example
Cps	cycles per second, Hz, s ⁻¹ , frequency.	The abbreviation cps is rarely used anymore to express frequency. The preferred symbol is Hz.
°F	Fahrenheit temperature scale	Pure water boils at 212°F.
Ft	foot or feet <i>Note: Never use an apostrophe (') to denote foot or feet.</i>	The length of the sample shall be 1.5 ft [450 mm].
ft ²	square foot or square feet	The minimum area required for the test is 200 ft ² [20 m ²].
ft•lbf	foot-pound force	The minimum mean Charpy impact energy is 15 ft•lbf at 0°F.
Gal	gallon(s)	The capacity of the gasoline tank is 20 gal.
In	inch(es) <i>Note: Do not use (") symbol for inches. "Inch" or "inches" should be spelled out in text if in the context of the sentence it could be confused with the word "in".</i>	The sample length shall be 10 in [250 mm] or greater. The pipe shall be 10 inches [250 mm] in diameter.
in ² (Also sq in)	square inch(es)	The area of the sample shall be a minimum of 100 in ² .
Ksi	kips per square inch, or one thousand (k) pounds per square inch	The minimum tensile strength for an E7018 electrode is 70 ksi.
Lb	pound	The part shall not be more than 1 lb 5 oz.
Lbs	pounds	The part shall not weigh more than 5 lbs.
,	minute, unit of angular measure = 1°/60'	The angle measures 45° 15' from the vertical plane.
psi (Also lb/in ²)	pounds per square inch	The minimum tensile strength of a class 70 electrode, e.g., E7018, is 70,000 psi.
lb/in ² (Also psi)	pounds per square inch	The minimum tensile strength of a class 70 electrode, e.g., E7018, is 70 000 lb/in ² .
Rpm	revolutions per minute	Maximum engine speed: 6000 rpm
"	second, angular measure " = 1/60' <i>Note: Do not use " or " for inches or ditto marks.</i>	A 45°15'30" angle
sq ft (Also ft ²)	square feet	The minimum area required for the test is 200 sq ft (20 m ²).
sq in (Also in ²)	square inch(es)	The area of the sample shall be a minimum of 100 sq in [625 mm ²].

9.3.3 Numerical Conversions and Equivalents. All conversions shall comply with AWS A1.1, *Metric Practice Guide for the Welding Industry*.

9.4 Statement on Safety (Clause 1.3). All ANS shall include a paragraph in the “General Requirements” titled “Safety”.

9.4.1 Extent of Coverage. The “Safety” paragraph shall begin with one of the following options, at the discretion of the responsible committee:

- (a) “Safety and health issues and concerns are beyond the scope of this standard and therefore are not addressed herein.”

[Examples include AWS A2.4, *Standard Symbols for Welding, Brazing, and Nondestructive Examination*, and AWS A3.0M/A3.0, *Standard Welding Terms and Definitions*.]

- (b) “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.”

[Examples include AWS D1.1/D1.1M, *Structural Welding Code—Steel*, and AWS D14.3/D14.3, *Specification for Welding Earthmoving, Construction and Agricultural Equipment*.]

- (c) “Safety issues and concerns are addressed in this standard, although health issues and concerns are beyond the scope of this standard.”

[Examples include AWS C4.2/C4.2M, *Recommended Practices for Safe Oxyfuel Gas Cutting Torch Operation* and A5.14/A5.14M, *Specification for Nickel Bare Welding Electrodes & Rods*.]

- (d) “Safety and health issues and concerns are addressed in this standard.”

[Examples include ANSI Z49.1, *Safety in Welding, Cutting and Allied Practices*.]

9.4.2 Sources of Information. After the information required by the S&M, the following shall be included within the “Safety” clause:

“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

9.4.3 Coverage of Welding Safety and Health Issues

9.4.3.1 All safety and health information shall be consistent with these rules and ANSI Z49.1.

9.4.3.2 For ANS using the Scope language of 9.4.1(a), safety or health information shall not be included in the body nor the annex of the ANS. If any safety or health information is included in the document, the language of 9.4.1(a) shall not be used.

The A5 Filler Metal Specifications are an exception to this requirement.

9.4.3.3 For ANS using the Scope language of 9.4.1(b), safety or health information should be limited to unique concerns of interest involving the work, processes, materials, or other circumstances surrounding the work. General welding safety and health information should not be included.

9.4.3.4 For ANS using the Scope language of 9.4.1(c), safety information should address all unique concerns of interest involving the work, processes, materials, or other circumstances surrounding the work, and may extend beyond unique concerns of interest.

9.4.3.5 For ANS using the Scope language of 9.4.1(d), safety or health issues should be extensively addressed, consistent with other aspects of the Scope of the document.

9.4.4 Related Safety and Health Issues. After the information required by the S&M, the following shall be included within the “Safety” paragraph:

“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 and meet applicable regulatory requirements. ANSI Z49.1 should be considered when developing the safety program.”

9.4.5 For adoption of ISO standards, the committee shall prepare a National Normative Annex with a scope that includes safety and health information as specified within this specification.

9.5 Normative References (Clause 2).

9.5.1 Boilerplate Introductory Text. Since only normative references are mandatory for the use of the document, they alone shall be listed in Clause 2. All other references shall be listed in an informative annex titled “Informative References” (see Annex P). Determining which ANS are normative and which are informative shall be based on their use and context (required or mandatory language = normative; nonmandatory language = informative) in the ANS being prepared. The boilerplate text below shall be used to introduce normative references, which can be either dated or undated:

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.

9.6 Terms and Definitions (Clause 3).

9.6.1 The A5 Filler Metal Specifications are an exception to Terms and Definitions being listed in Clause 3.

9.6.2 ANS shall use standard terminology as specified in AWS A3.0M/A3.0, *Standard Welding Terms and Definitions, Including Terms for Adhesive Bonding, Brazing, Soldering, Thermal Cutting, and Thermal Spraying*. Alternate terms and definitions may be used, provided the following guidelines are followed.

Technical terms and industry jargon of importance to the document’s subject and that are not defined in AWS A3.0M/A3.0 shall be defined in this clause.

The terms defined in AWS A3.0M/A3.0 shall not be listed unless the definition of a term in AWS A3.0M/A3.0 is inappropriate for the meaning intended by the technical committee drafting the ANS. In that case, the technical committee’s definition of the term shall be included in Clause 3. The technical committee shall bring its definition of that term to the attention of the committee responsible for AWS A3.0M/A3.0.

Additional terms and definitions not required for the use of the document and not included in Clause 3 may be included in an informational annex if the Committee considers them a valuable addition to the document. Terms and definitions shall not be included in a normative annex. Definitions needed in order to use a normative annex shall be included in Clause 3.

Dictionary terms shall not be included unless used with a specific connotation that differs from the dictionary definition.

Example of Common Usage Exception:

Engineer. The duly designated individual who acts for, and on behalf of, the Owner on all matters within the scope of the code.

9.6.3 The following boilerplate text shall introduce the list of 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.

9.7 Contract Language, Commercial Terms, and Conditions. Provisions involving guarantees, warranties, and other commercial terms and conditions shall not be included in an ANS.

9.7.1 Trade Names. Generic terms shall be used whenever possible to avoid reference to trademarks or other proprietary designations (e.g., use “tissue paper” instead of “Kleenex”). If it is necessary to use proper names or trademarks of organizations or companies, the provisions of the *AWS Patent Policy* shall be followed.

9.7.2 Patented Processes or Products. Patented processes or products should not be included or referred to in text unless absolutely essential for the ANS. If a patented process or product is included as part of an ANS, the latest TAC and AWS patent policies shall be complied with.

9.7.3 It is not acceptable to include manufacturer lists, service provider lists, or similar material in the text of an ANS or an annex (or the equivalent). Where a sole source exists for essential equipment, materials, or services necessary to determine compliance with the ANS, it is permissible to supply the name and address of the source in a footnote or informative annex as long as the words “or the equivalent” are added to the reference.

9.8 Referencing Sources.

9.8.1 General. Source information on publications not included in Clause 2 as normative references may be displayed in footnotes, source lines, or listed in an Informative Annex (see 10.1). The most recent edition of all sources shall be cited in the document unless a dated reference is required. As the titles of documents often change during the revision process, all cited titles and other information about the reference shall be verified for completeness and accuracy.

9.8.2 Reproducing and Adapting Information from Other Documents.

9.8.2.1 Listing of References to Other AWS Documents. When necessary and appropriate, AWS documents shall include references to other pertinent AWS documents (especially core documents such as AWS A1.1, AWS A3.0, AWS A2.4, AWS B2.1, AWS B4.0, and so forth). Reproducing verbatim information (e.g., text, tables, and figures) should be avoided because the information cited could become obsolete when the source document is revised. All AWS documents from which material is adapted or reproduced shall be listed as dated references in the source lines of the reproduced or adapted figures or tables and in footnotes for text.

9.8.2.2 Listing of References to Other Organizations’ Documents. The verbatim reproduction of information (e.g., text, tables, and figures) from documents published by other organizations should be avoided. If it is absolutely necessary to reproduce or adapt information from a document published by another organization, permission shall be obtained in writing from the organization if the material is copyrighted. All documents from which material is adapted or reproduced shall be listed as dated references in the source lines of the reproduced or adapted figures or tables or in footnotes for text.

9.8.3 Tables:

9.8.3.1 Tables shall be labeled as “Table X.Y,” where X is the clause number in which the table is used and is followed by Y, a sequential number, e.g., 3.1, 3.2, 3.3, and so forth.

Tables shall be inserted at the end of the Clause where they are first referenced.

9.8.4 Figures:

9.8.4.1 Figures shall be labeled as “Figure X.Y,” where X is the clause number in which the figure is used and is followed by Y, a sequential number, e.g., 3.1, 3.2, 3.3, and so forth.

Figures shall be inserted at the end of the Clause in which they are first referenced.

Tables are listed first, then figures.

9.8.5 Annex:

9.8.5.1 Normative Annex Preface. All normative annexes shall be prefaced (under the title) by the following text:

This annex is part of this standard and includes mandatory elements for use with this standard.

9.8.5.2 Informative Annex Preface. All informative annexes shall be prefaced (under the title) by the following text:

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

9.8.6 Commentary: Commentary sections shall be designated to match specific code provisions and shall be identified with a “C-” preceding each sequential clause number (e.g., C-1.1 is commentary on Subclause 1.1, C-Figure 2 is commentary on Figure 2, etc.). Annex C shall be omitted to avoid confusion when commentary is included in an ANS.

9.8.7 Index: All AWS documents used for an AWS Certification Endorsement shall contain an index. If a document is added to an endorsement after publication, the index shall be added at the next revision.