



**AEROSPACE MATERIALS SYSTEMS
GROUP
ORGANIZATION AND OPERATING GUIDE**

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Foreword

The Aerospace Materials Systems Group Organization and Operating Guide presents policy and procedure in accordance with the SAE Technical Standards Board Governance Policy and the Aerospace Council Organization and Operating Guide.

1. OBJECTIVE, ORGANIZATION, AND OPERATION:

1.1 Objective: The objective of the Aerospace Materials Systems Group is to coordinate and utilize the knowledge, experience, and skill of engineers and technologists to develop and maintain material and process specifications that conform to sound, established engineering and material practices within the aerospace industry.

1.1.1 Purpose: The Technical Committees are the working groups of the Aerospace Materials Systems Group. The materials and processes to be covered are divided into categories or commodities. Each category is assigned to a committee that handles the initiation, preparation, and coordination of new specifications, the revisions of existing specifications, and the associated requirements for materials or processes in its category.

1.1.2 Specification Types: These specifications are designated "SAE Aerospace Technical Reports" and are generally referred throughout this document as "AMS". The following types have been established by the SAE Technical Standards Board:

- Aerospace Material Specification (AMS)
- Aerospace Information Report (AIR)
- Aerospace Recommended Practice (ARP)
- Aerospace Standard (AS)
- Aerospace Resource Document (ARD)

1.2 Organization: Organization of the Aerospace Materials Systems Group is composed of four technical areas:

- Metals and Related Processes (referred to as Metals Committees)
- Non-Metals and Related Processes (referred to as Non-Metals Committees)
- Non Destructive Testing
- Additive Manufacturing

1.2.1 The Aerospace Materials Systems Group includes the technical committees and any panels, task forces and advisory groups needed to fulfill the objective of the systems group. The operation of the systems group is subject to the authority of the SAE Aerospace Council Organization and Operating Guide and shall conform to the Technical Standards Board Governance Policy (TSB).

1.2.2 Officers of the Aerospace Materials Systems Group consist of a chairperson and a vice-chairperson.

- 1.3 Operation: The operating procedures of the Metals Committees shall be in accordance with this document. Committees within other Technical Areas (see 1.2) may establish their own operating procedures. The operating procedures of all committees shall be in accordance with the SAE Technical Standards Board Governance Policy and the Aerospace Council Organization and Operating Guide, both of which will take precedence in the case of a conflict with this document.
- 1.4 Systems Group Chairperson: Aerospace Materials Systems Group chairpersons shall be appointed by the Aerospace Council for a 2 year term, subject to renewal twice, but not to exceed a total service of six years. Systems group chairpersons are responsible for guiding and directing the programs of the systems group and reporting the systems group's progress at each Aerospace Council meeting.
- 1.5 Technical Committee Officers: The chairperson, vice-chairperson (optional), and secretary of a committee are appointed for a two-year term and may be reappointed for additional terms not to exceed a maximum of six years.
 - 1.5.1 Technical Committee Chairperson: Technical Committee chairpersons are appointed by the Aerospace Council as nominated by the committee or coordinating committee. Both Member–Users and Member-Producers are eligible for appointment as a committee chairperson. The duties of a committee chairperson are outlined in Attachment A.
 - 1.5.2 Technical Committee Secretary: Technical Committee secretaries are appointed by the committee chairperson with the concurrence of the Coordinating Committee. The duties of a committee secretary are outlined in Attachment B.
- 1.6 Coordinating Committee: A Coordinating Committee shall be established for the Metals Committees and may be established for the other committees. The Coordinating Committee consists of a chairperson, applicable technical committee chairpersons, the editorial consultants, and such other members as may be so designated by the coordinating committee chairperson. The Coordinating Committee serves as the executive committee of the technical committees and discusses and reviews policies and practices as applicable. The Coordinating Committee makes recommendations to the System Group Chairperson concerning the appointment of committee officers. For committees other than the Metals Committees, when no Coordinating Committee exists the duties of the Coordinating Committee are carried out by the applicable committee chairperson.
- 1.7 Technical Committees: Each technical committee has a chairperson and secretary with the Metals Committees having editorial consultants, and is composed of members with specialized knowledge of the particular materials and processes covered and who are technically qualified to contribute to the work of the committee. Each technical committee initiates, sponsors, coordinates, approves, and maintains all the specifications under its jurisdiction.

The current technical committees are:

Metals and Related Processes

- B - Finishes, Processes, and Fluids
- D - Nonferrous Alloys
- E - Carbon and Low Alloy Steels
- F - Corrosion and Heat Resistant Alloys
- G - Titanium, Beryllium, and Refractory Materials

Non Destructive Testing

- K - Nondestructive Methods and Processes

Non-Metals and Related Processes

- CACRC - ATA/IATA/SAE Commercial Aircraft Composite Repair Committee
- CE - Elastomers
- G-8 - Organic Coatings
- G-9 - Aerospace Sealing
- J - Aircraft Maintenance Chemicals and Materials (AMCM)
- M - Aerospace Greases
- P - Polymeric and Composite Materials
- P-17 – Polymer Matrix Composites

Additive Manufacturing Committee (AMS-AM)

- 1.8 The Aerospace Materials Advisory Group (AMSAG): In order to meet the needs of aerospace users and industry concerning aerospace materials standardization, the AMS Advisory Group gives high-level materials engineering leaders from global OEMs, Tier 1 suppliers and government agencies a venue to view and shape the AMS program and its output standards. The Advisory Group may develop position papers, strategies, overview documents, gap analyses, recommendations etc. but will not write or approve technical reports. The Advisory Group may provide recommendations for and support other SAE endeavors related to aerospace materials, including but not limited to ground vehicle standardization, technical conferences and events, professional development, student and professional membership and technical publications other than standards.

- 1.9 The Aerospace Metals Engineering Committee (AMEC): AMEC is established within the AMS Metals Committees to undertake projects deemed too complex to be handled expeditiously by the technical committees or which overlap two or more committees' areas of responsibility. Examples include development of proposed drafts for initiation or revision of complex specifications, cooperative investigations aimed at developing data for specifications, design and introduction of new materials and processes, and solving common problems. AMEC may develop and publish Aerospace Information Reports (AIRs) under its own auspices. Other aerospace documents: Aerospace Recommended Practices (ARPs), Aerospace Standards (AS), and AMS documents originated by AMEC must be forwarded to the appropriate technical committee for approval. AMEC normally holds two to three day plenary meetings four times each year and may hold additional special meetings.
- 1.10 The Aerospace Surface Enhancement Committee (ASEC): ASEC was created within the AMS Metals Committees to focus on surface enhancement technologies including shot peening, laser peening, roller burnishing and other surface treatments. ASEC may develop and publish Aerospace Information Reports (AIRs) under its own auspices. Other aerospace documents: Aerospace Recommended Practices (ARPs), Aerospace Standards (AS), and AMS documents originated by ASEC must be forwarded to the appropriate technical committee for approval.
- 1.11 Editorial Committee: An Editorial Committee shall be established for the Metals Committees and may be established for the other committees. The Editorial Committee is composed of the editorial consultants, the group chairperson, and the SAE staff representative. It determines and establishes editorial policies and decides major editorial questions. The Editorial Committee is chaired by the SAE staff representative or a Lead Editorial Consultant as described in Attachment C.
- 1.12 Subcommittees, Panels, and Task Forces: Subcommittees, panels, and task forces may be established to work under the direction of the technical committees. They are created by technical committees to cover specific subject areas that may be too broad or too specialized to be handled by the full committee. Panels/task forces are composed of a chairperson, a secretary, and those members particularly concerned with its assigned purpose.
- 1.13 Membership:
- 1.13.1 General Requirements: Members of AMS committees shall be appointed by the committee chair based on their knowledge concerning one or more material areas. All committee members are expected to:
- Attend a majority of the meetings of the committee
 - Reply to a majority of the ballots and questionnaires circulated to the members
 - Volunteer for and complete the sponsorship and coordination of specifications, as assigned

1.13.2 Member Grades:

- 1.13.2.1 Voting Member (“Member-User”, “Member-Producer” and “Member-General Interest”): Voting members consist of those designated to respond with a formal vote to each committee ballot. No more than one voting member may be appointed to a committee from a single engineering entity except for the Non-Metals and Non Destructive Testing Committees. In those committees, because of the specialized knowledge required for participation, two or more voting members may be appointed from the same engineering entity. An "engineering entity" is generally considered to be a company facility at a specific location. The Technical Committee Chairpersons shall be responsible for overseeing engineering entity representation within each respective group.
- 1.13.2.1.1 Member-User includes individuals from an engineering entity.
- 1.13.2.1.2 Member-Producer includes individuals from producers of the various materials and processes.
- 1.13.2.1.3 Member-General Interest includes individuals with voting member status that are neither Member-Users or Member-Producers.
- 1.13.2.1.4 Voting rules may differ among the different Committees. Refer to Appendix 1 on voting member rules.
- 1.13.2.2 Supplier Members (nonvoting): Producers/processors of the various materials and processes are an integral part of the AMS organization. Supplier members participate by attending meetings on their particular commodities, answering questionnaires, and furnishing pertinent information/technical data. They receive all committee correspondence and ballots. Supplier members have no formal vote, but their comments are encouraged and shall be taken into consideration.
- 1.13.2.3 Liaison Members (nonvoting): Liaison members receive all committee correspondence and ballots. They have no formal vote, but their comments are encouraged and shall be taken into consideration.
- 1.13.2.4 Honorary Members: Honorary members are selected from those who have given outstanding service to the systems group for a long period of time. Selections are determined by the Coordinating Committee and are based on distinguished service. Recognition as an Honorary Member does not affect other aspects of the committee member’s status (i.e., eligibility for committee leadership assignments, commenting to ballots, member voting responsibilities, etc.).

1.13.2.5 Editorial Consultants: Editorial consultants are individuals experienced in technical writing who review specifications for editorial correctness and technical clarity. They decide questions of ambiguous or obscure wording and review specifications for consistency, clarity, and format before publication. The editorial consultants are retained by SAE to advise the committees concerning all aspects of drafting AMS documents. They have no formal vote, but their comments are encouraged and shall be taken into consideration. The duties of an editorial consultant are outlined in Attachment D.

1.13.3 Member Qualification: Membership on the committees and subgroups consists of individuals who are appointed by the committee chair on the basis of need for their particular services and the individual qualifications which enable them to contribute to the work of the committee. Committees should be composed of members, who in addition to being technically qualified, are in a position to render policy guidance to the committees. The committee membership consists of individuals selected such that the technical committee will be competent and authoritative in its field. Committee members should be chosen to establish and maintain balance within the technical committee in accordance with the TSB Governance Policy. SAE membership, although encouraged, is not a prerequisite for committee membership.

1.13.4 Condition of Membership: In discharging their responsibilities, members function as individuals intending to represent the best interests of the aerospace industry, and not as agents or representatives of any organization with which they may be associated.

1.14 Scope of Each Aerospace Materials Systems Group Committee

1.14.1 Metals and Related Processes

AMS AEROSPACE METALS ENGINEERING COMMITTEE SCOPE

The aim of the AMS Aerospace Metals Engineering Committee (AMEC) is to provide the aerospace industry and government agencies, in the public interest, with the technical benefits that accrue from cooperative activities and through the interchange of ideas and experience of members.

AEROSPACE SURFACE ENHANCEMENT COMMITTEE SCOPE

The aim of the Aerospace Surface Enhancement Committee (ASEC) is to provide the aerospace industry and government agencies, in the public interest, with the technical benefits which accrue from cooperative activities and through the synergistic interchange of ideas and experience of members. ASEC was created to focus on surface enhancement technologies including shot peening, laser peening, roller burnishing and other surface treatments.

AMS COMMITTEE B SCOPE

The committee of Finishes, Processes, and Fluids, AMS Committee B, shall prepare, coordinate, and revise documents related to processing technology, such as plating, brazing, coatings, and compounds, through the participation of process suppliers, users, and interested government agencies. Committee activities shall provide a forum for the cooperative interchange of ideas and experience of the participants, resulting in the publication of specifications that embody sound, established aerospace industry practices, and requirements to serve the suppliers and customers of aerospace processes.

AMS COMMITTEE D SCOPE

The committee of Nonferrous Alloys, AMS Committee D, shall prepare, coordinate, and revise documents related to nonferrous metals technology, such as aluminum, magnesium, and copper, through the participation of metals suppliers, users, and interested government agencies. Committee activities shall provide a forum for the cooperative interchange of ideas and experience of the participants, resulting in the publication of specifications that embody sound, established aerospace industry practices and requirements to serve the suppliers and customers of aerospace materials.

AMS COMMITTEE E SCOPE

The committee of Carbon and Low Alloy Steels, AMS Committee E, shall prepare, coordinate, and revise documents related to carbon and low alloy steels technology, through the participation of metals suppliers, users, and interested government agencies. Committee activities shall provide a forum for the cooperative interchange of ideas and experience of the participants, resulting in the publication of specifications that embody sound, established aerospace industry practices and requirements to serve the suppliers and customers of aerospace materials.

AMS COMMITTEE F SCOPE

The committee of Corrosion and Heat Resistant Alloys, AMS Committee F, shall prepare, coordinate, and revise documents related to corrosion and heat resistant steels and alloys and specialty steels and alloys technology, such as stainless steels and nickel and cobalt base alloys, through the participation of metals suppliers, users, and interested government agencies. Committee activities shall provide a forum for the cooperative interchange of ideas and experience of the participants, resulting in the publication of specifications that embody sound, established aerospace industry practices and requirements to serve the suppliers and customers of aerospace materials.

AMS COMMITTEE G SCOPE

The committee of Titanium, Beryllium, and Refractory Materials, AMS Committee G, shall prepare, coordinate, and revise documents related to titanium and refractory metals such as molybdenum, tantalum, and columbium (niobium) through the participation of metals suppliers, users, and interested government agencies. Committee activities shall provide a forum for the cooperative interchange of ideas and experience of the participants, resulting in the publication of specifications that embody sound, established aerospace industry practices and requirements to serve the suppliers and customers of aerospace materials.

1.14.2 NonDestructive Testing

AMS COMMITTEE K SCOPE

The committee of Nondestructive Methods and Processes, AMS Committee K, shall prepare, coordinate, and revise documents related to nondestructive testing technology, such as fluorescent penetrant, magnetic particle, X-ray, ultrasonic, and eddy current, through the participation of manufacturer's suppliers, users, and interested government agencies. Committee activities shall provide a forum for the cooperative interchange of ideas and experience of the participants, resulting in the publication of specifications that embody sound, established aerospace industry practices, and requirements to serve the suppliers and customers of aerospace materials.

1.14.3 Non-Metals and Related Processes

AMS COMMITTEE CACRC SCOPE

The charter of the ATIA/SAE Commercial Aircraft Composite Repair Committee (CACRC) is to develop procedures for maintenance, inspection and repair of commercial aircraft composite structure and components. The six CACRC task groups are: Airline Inspection and Repair Conditions, Repair Materials, Repair Techniques, Inspection, Design, and Training.

AMS COMMITTEE CE SCOPE

The AMS Elastomers Committee (CE) maintains Aerospace Material Specifications (AMSs), Aerospace Recommended Practices (ARPs), Aerospace Information Reports (AIRs), and Aerospace Standards (ASs) on elastomeric materials. CE reports to the Aerospace Materials Systems Group and coordinates and maintains liaison with other industry, government and inter-standardization groups on elastomeric materials. A significant part of this activity is concerned with elastomeric fluid sealing materials, their applications, material, development, testing, quality, design parameters, and design practices.

AMS COMMITTEE G-8 SCOPE

The committee of Organic Coatings, AMS Committee G-8, is to address issues such as application, corrosion, environmental, material compatibility, OSHA, performance requirements, specifications, surface preparation, and testing concerning organic coatings and to provide a vehicle for dealing with them.

AMS COMMITTEE G-9 SCOPE

The committee of Aerospace Sealing, AMS Committee G-9, shall be primarily concerned with the sealing of aerospace vehicles for fluid containment and environmental protection by the use of sealants which are applied and cured to resultant solid materials or remain mastic. This includes the preparation of sealant material specifications, aerospace recommended practices for sealing processes and related activities. Examples of applications are the sealing of integral fuel tanks, fuel cell cavities, crew compartments and passenger areas, access doors, fasteners, avionics compartments, windshields, firewalls, etc. The committee shall also be involved with elastomeric fuel cell bladders. The committee shall address the effect on the environment of cured and uncured sealant materials and their empty or used containers and recommend approved practices for their proper disposal. The committee shall participate in discussions on various sealing materials and processes and provide comments and views on relevant research and development efforts.

AMS COMMITTEE J SCOPE

The committee of Aircraft Maintenance Chemicals and Materials (AMCM), AMS Committee J, objectives are to comply with major airframe and engine manufacturers' basic requirements for aircraft maintenance and chemical materials, such as aircraft cleaners, disinfectants, and paint removers. These are further coordinated with airline requirements, utilizing the knowledge, experience, and skills of engineers and other professionals in preparing documents or initiating workshop discussions related to Committee J activities. These documents conform to sound, established practices in the aerospace industry. This will provide aerospace and other industries, including government agencies, with technical benefits derived from cooperative contributions from Committee J members.

AMS COMMITTEE M SCOPE

The committee will encourage and assist the industry in solving aerospace lubrication problems involving greases and anti-seize compounds by utilizing the talents and expertise of airframe designs, component manufacturers, lubricant producers and end users.

AMS COMMITTEE P SCOPE

The AMS-P Polymeric Materials Committee writes and revises Aerospace Material Specifications (AMS), Metric Aerospace Materials Specifications (MAM), Aerospace Recommended Practices (ARP), Aerospace Standards (AS) and Aerospace Information Reports (AIR) for polymer materials such as plastics as assigned to the committee. A team commitment is focused on meeting requirements of the aerospace industry and government agencies through the timely writing, revision, and up-to-date specifications that permit proper control and are adequately user-friendly to prevent the need for duplication on the individual company/business/institution level.

AMS COMMITTEE P-17 SCOPE

The committee Polymer Matrix Composites AMS Committee P-17 has responsibility for writing and revising Aerospace Material Specifications (AMSs), Metric Aerospace Material Specifications (MAMs), Aerospace Recommended Practices (ARPs), and Aerospace Information Reports (AIRs) for polymer matrix composite material technology as assigned to the committee. A team commitment is focused on meeting requirements of the aerospace industry and government agencies through the timely writing, revision, and up-to-date specifications that permit proper control and are adequately user-friendly to prevent the need for duplication on the individual company/business/institution level.

1.14.4 Aerospace Materials Advisory Group

AEROSPACE MATERIALS ADVISORY GROUP SCOPE

The Advisory Group addresses both metallic and non-metallic specifications existing and to be developed within the SAE Aerospace Standards program and takes a holistic view of aerospace materials & process specification and procurement needs by the aerospace industry and user community, including consideration of standardization needs for new materials, process and technology development, and the associated timeframes.

1.14.5 Additive Manufacturing Committee

AMS COMMITTEE AM SCOPE

SAE AMS-AM, Additive Manufacturing, is a technical committee in SAE's Aerospace Materials Systems Group with the responsibility to develop and maintain aerospace material and process specifications and other SAE technical reports for additive manufacturing, including precursor material, additive processes, system requirements and post-build materials, pre-processing and post-processing, non-destructive testing and quality assurance.

Recognizing the contributions of other standards development organizations (SDO) and related bodies, the committee will collaborate with organizations such as MMPDS, ASTM Committee F42 on Additive Manufacturing, AWS D20, Nadcap Welding Task Group, America Makes, CMH-17, and regulatory authorities such as FAA, EASA, US DoD, and NASA. The AMS-AM committee will participate in relevant AM standards coordination events and appoint representatives to liaise with relevant standards development organizations involved in aerospace additive manufacturing.

2. POLICY INFORMATION:

- 2.1 THE USE OF AMS IS ENTIRELY VOLUNTARY. The preparation and publication of AMS is undertaken with aerospace usage in mind, but there is no legal or other reason making their use mandatory. Similarly, the use of AMS documents is not restricted to aerospace industry applications.
- 2.2 AMS DOCUMENTS SUPPORT AEROSPACE PRODUCT DESIGNS. They establish material and process requirements intended for applications in aerospace and other industries that may incur a significant consequence of failure. For this reason, committee participation is encouraged from design authorities, regulating agencies, government facilities, producers, processors, and those who support them.
- 2.3 AMS ARE PROCUREMENT SPECIFICATIONS, not design specifications. Only certain characteristics and limits are included, compliance with which is intended to ensure procurement of a specific form and condition of a specific material or process. Other properties which a designer might like to know, but which will be inherent in the material or process as specified, are not included.
- 2.4 TWO PROSPECTIVE USERS of a proposed new material or process must exist before a specification will be drafted. This is to avoid creating new special purpose or one-user specifications that have no general utility. Usage is considered "production" if it involves repetitive procurement of the material/process if the absence of the proposed AMS document would require procurement under at least two other specifications.

When a draft of a new document is prepared, the sponsor provides the committee with names and addresses of the two users of the material or process.
- 2.5 NEW SPECIFICATIONS may be proposed or sponsored by a member of a committee, a supplier, or any interested party. However, the proposal does not proceed to ballot until authorized by the committee chairperson.
- 2.6 MATERIAL PROPERTY VALIDATION IN AMS METALS DOCUMENTS: Mechanical properties to be stated in AMS specifications covering metallic materials shall be validated by Battelle in accordance with instructions posted on the specific AMS Metals Standard Works committee home pages.

- 2.7 REVISIONS may be proposed by a member of a committee, a supplier, or any interested party. Guidelines are provided in Attachment E. Revisions are also initiated as a result of the Five Year Review Process (refer to example in Attachment F). The following note appears on each document: "SAE reviews each technical report at least every five years at which time it may be reaffirmed, revised, stabilized or cancelled. SAE invites written comments and suggestions." Comments received by SAE are provided to the editorial consultant and committee chairperson to help address future improvements to AMS documents.
- 2.7.1 UPGRADE/DOWNGRADE: Users of the documents, including those who are not known to the committee, must be protected from being harmed by a revision. Therefore, unless there has been a significant technological change in a material or a process, its production, technique, or in a processing method, no documents shall be revised when either of the following conditions exists:
- a. The proposed revision would result in downgrading the properties, characteristics, or availability of material or parts.
 - b. The proposed revision would result in upgrading the material and cause a significant availability or cost penalty to current users.
- Committee members, when evaluating revisions, are expected to be watchful for either of the above conditions. When such conditions cannot be remedied by adjusting the provisions of current documents, new documents shall be developed and issued.
- 2.8 DISAPPROVAL of drafts of new or revised specifications is one responsibility of AMS committee members. A disapproval is valid only if substantiated by detailed comments including the rewording or change that would be acceptable to the disapprover. A disapproval may be satisfied by a revision of the draft or may be withdrawn by the disapprover. If a disapproval cannot be resolved, the committee can vote to override the disapproval. If the disapprover does not accept this decision, it may be appealed to the Group Coordinating Committee with a communication stating the basis for the disapproval and a proposed change to the document. Additional avenues for appeal are defined by the Aerospace Council Organization and Operating Guide.
- 2.9 ONE SPECIFICATION NUMBER for each material, form, and condition is the general rule in AMS, although exceptions may be authorized by committee chairs. This policy enables a user to define the majority of their procurement requirements by means of a single specification number.

- 2.10 AMS NUMBERS ARE ASSIGNED to a new specification only after it has been approved by the committee for submittal to Aerospace Council; this is to prevent attempted use or inadvertent reference of an unpublished specification. Prior to submittal to Aerospace Council, the draft is designated as "X-YYZZ," with the "X" identifying the committee sponsoring the draft, the "YY" being the year the draft was initiated, and the "ZZ" denoting the order in which the draft was received for processing that year. The SAE administrator assigns the draft number. A redraft of the same unissued specification carries the same designation followed by a trailing dash number to designate each subsequent iteration.
- 2.11 REVISION FREQUENCY. Revisions to an AMS document are generally issued at 5-year intervals. As a general rule, at least one year must elapse after the publication of an AMS before a subsequent revision may be published. In the case of an error or omission that has technical impact, an AMS may be revised at an earlier date.
- 2.12 SPECIFICATION DESIGNATIONS: Specification designations are summarized below, see the Aerospace Council Organization and Operating Procedures for complete descriptions.
- 2.12.1 "ACTIVE" documents are those specification that are being used for new designs and are under the five (5) year review process. There are four sub-categories of Active documents: Issued, Revised, Reaffirmed, and Stabilized. The Noncurrent designation is no longer used.
- 2.12.1.1 "ISSUED" indicates those specifications that have been published for the first time and have not yet been revised.
- 2.12.1.2 "REVISED" indicates those specifications that are active and have been updated and re-published.
- 2.12.1.3 "REAFFIRMED" indicates those specifications that have been reviewed by the Technical Committee and deemed to be current with no need for immediate revision.
- 2.12.1.4 "STABILIZED" indicates those specifications that have been frozen at the last active revision level. Stabilized status may be given because the specification content is not expected to change in the foreseeable future, the committee no longer has the expertise, no users can be found, or the using community is moving towards newer technology. See the Aerospace Council Organization and Operating Procedures for a full description of the Stabilized Status. A Stabilized specifications requires no further review however it may be revised and returned to active status if required.

- 2.12.1.5 "NONCURRENT" designation is no longer used. It previously indicated those specifications that are not being kept up-to-date. Such specifications may have been widely used in the past and may be required for production of some existing designs in the future, but the systems group does not recommend a noncurrent specification for widespread use in new designs. Eventually, a noncurrent specification will be stabilized when no usage is reported or no further technical revisions anticipated, or it may be restored to full current status if usage increases or technical updating/revision is required.
- 2.12.2 "CANCELLED" specifications are those that are deemed "not fit for use" due to a clear safety issue or when its technical requirements are totally superseded by another document. Cancellation should be rare. When a committee determines a need for Cancellation the Chair of the committee shall alert the Chair of the Aerospace Council for determination of the appropriateness of the Cancellation prior to the start of the Committee ballot.
- 2.13 PREPARATION OF PROPOSED SPECIFICATIONS - Additional guidelines instructing individuals for preparing new and/or revised AMS may be established by each committee and made available through the AMS Committee web pages.
- 2.13.1 AMS Document Origination Guidelines have been developed to assist sponsors in becoming familiar with AMS procedures for document preparation and review. These guidelines are provided as Attachment G.
- 2.13.2 Reference to a recently published AMS covering a similar material or process is also a helpful guide in preparing new document drafts. A list of such documents may be maintained by each committee or made available by contacting the editorial consultant for the committee with jurisdiction.
- 2.13.3 EDITORIAL STYLE MANUAL. Specific editorial details including, for example, what standard paragraphs should be included in "Technical Requirements" and "Quality Assurance Provisions" and what types of information are contained under "Notes," are contained in the "Editorial Style Manual for the Preparation of Aerospace Material Specifications (AMS)", available through a link on each committee web page.
- 2.13.4 CHANGE SUMMARY SHEET. An Aerospace Material Specification Change Summary Sheet is a cover sheet for draft documents, new or revised. This cover sheet is intended to help the sponsor focus the reviewer's attention on the recommended technical changes within the draft document. The sponsor should use this cover sheet to briefly explain the reasons for the proposed specification (in the case of a new AMS) or to highlight and justify the technical changes (in the case of revision to an existing AMS). An example Change Summary Sheet form is included as Attachment H.

In accordance with the need for two prospective users to establish a new specification (see 2.4), the Change Summary Sheet (Attachment H) should include the names and business locations of two users, identify the status of property substantiation (see 2.6), and list the specification used as a model template (as applicable).

- 2.14 MEETINGS: Regular committee meetings will be held during the semiannual meetings of the Technical Area where appropriate. At the Technical Area meeting at least one-half day will be allotted to each technical committee. To give every member a chance to attend the meetings of all the committees, simultaneous sessions will be avoided, whenever possible, in establishing the meeting schedule.

The chairperson will approve an agenda for each meeting, setting forth the items intended to be covered. Items not on the agenda may be offered under "NEW BUSINESS."

Agendas and meeting announcements will be issued from SAE to committee members, consultants, and interested suppliers, etc. The chairperson of the committee may recommend others to be invited.

Minutes of each committee meeting will be prepared under the direction of the chairperson. They will be made available by SAE to all members of the committee.

- 2.15 CORRESPONDENCE: Typical correspondence within a committee includes: specification drafts, ballots, summaries of replies, questionnaires, and various communications between committee members. Electronic communications, both by email and by Committee web page postings, are used by most committees. In order to maintain activity between meetings, frequent correspondence between document sponsors, editorial consultants, committee leadership, and committee members is strongly encouraged.

Correspondence such as specification drafts, ballots, and summaries, are coordinated by the SAE office. Standard practice for committees with editorial consultants is that the editorial consultant receives a starter document in MS Word format from SAE, makes appropriate editorial and general agreement changes and sends the document to the sponsor who then makes any technical any changes and sends it back to the editorial consultant who prepares it for balloting and then sends it to SAE. All editing is to be performed using the MS Word Track Changes function. For those committees without editorial consultants, the sponsor receives the MS Word document and makes all changes and returns the draft to SAE for balloting.

Correspondents are expected to copy the editorial consultant of the committee on all relevant correspondence.

- 2.16 MAINTENANCE OF SPECIFICATIONS: It is the responsibility of each committee to maintain all active specification in its jurisdiction in an up-to-date and usable condition. To this end, each specification should be reviewed at least every five years, and in the case of composites specifications, every 30 months, to consider technical advances and editorial format.
- 2.17 FIVE YEAR REVIEW PROCESS: SAE Technical Standards Board Governance Policy provides that each technical report (standard or specification) shall be reviewed at least every five years. The Five Year Review Launch Process (refer to example in Attachment F) is generally used to ensure that each AMS document receives proper review. The SAE staff will, for each committee, help the editorial consultant prepare a list of the documents due for Five Year Review on a semiannual basis. The editorial consultant and committee chairperson will sort these into 5 groups: Revision Needed (Sponsors Needed List), Recommended for Reaffirmation (no changes required), Recommended for Stabilization (material/process not used in new designs), and Recommended for Cancellation (material/process meets the requirements for Cancellation as determined by SAE Aerospace Council, see 2.12.2). These actions are proposed via the committee agenda and approved/disapproved by a vote of each committee.
- 2.18 RECORDS: In addition to agendas and minutes, each committee chairperson, secretary, editorial consultant, and document sponsor should maintain sufficient notes and records to manage the progress of the specification drafts under their sponsorship.

3. COMMENTING ON BALLOTS:

- 3.1 Ballot Reply Practice: The general practice used when replying to AMS ballots (specification drafts, questionnaires, etc.) is summarized in Attachment I and described in detail below:

In compliance with the SAE Technical Board Governance Policy concerning "Ballot Approval by Technical Standards Board, Its Councils and Their Technical Committees: Where full agreement cannot be achieved, Technical Reports shall have the approval of at least seventy-five percent (75%) of the responding technical committee members who have voted approval or disapproval, provided that such approvals, disapprovals, or waives constitute at least fifty percent (50%) of all voting members receiving a ballot". The term "committee member" in this context refers to a Voting Member ("Member-User", "Member-Producer", Member-General Interest) of the committee as defined in 1.13.2.

All committee members (users, suppliers, producers, etc.) are requested to review each ballot and provide their comments as discussed in the following paragraphs.

All comments on ballots are to be indicated as technical (T) or informational (I):

"T" = Technical - A technical error, missing requirement, or improper requirement that needs action by the committee and further balloting for implementation. Technical comments must ALWAYS be accompanied by the reason for the comments and a suggested improvement that would resolve the issue.

"I" = Informational - A non-technical correction required. These comments may be accepted or rejected by the sponsor or deferred to the editorial consultants for action. Another class of Information Comment are changes that have been previously approved by the committee for implementation "across the board" in similar specifications, for example in a general agreement.

In addition to providing comments, voting members are asked to vote each ballot "Approve", "Disapprove", or "Waive".

3.1.1 Approve: This is understood to mean that the voter is in general accord with the proposal and has no significant objection to its issuance as drafted. Even a person who is not very familiar with the material or process described or who does not plan to use it should "approve" if they find nothing wrong with the draft. Informational ("I") comments may be included with an approval vote.

3.1.2 Disapprove: This is understood to mean that the voter sees items that are not acceptable. These should be labeled as Technical ("T") comments and include:

- unobtainable or doubtful properties,
- technical errors,
- unnecessary or cumbersome requirements,
- ambiguous or incomplete requirements,
- major editorial or errors in the document structure,
- improper classification,
- policy matters, etc.

Simple editorial errors or suggestions for alternative wording should be identified with an Informational ("I") comment, not as a "Disapproval" vote, although a Disapproval vote may include "I" comments in addition to the "T" comment(s) that was the reason for disapproval.

All disapprovals MUST BE ACCOMPANIED by an explanation of objections and substantiating data as applicable and by the exact wording that would make the draft acceptable. When the disapproval is based on one or more specific paragraphs of the draft, they must be so identified.

If the document sponsor is able to resolve the disapproval with no technical change, the document may then proceed to Aerospace Council ballot (the next step toward publication). When resolution cannot be reached between the sponsor and disapprover, the disposition will be determined by the committee. If a technical change is made to the wording previously balloted, the document will be reballoted to the cognizant committee on a 14-Day Affirmation (a few changes easily communicated) or another 28-Day Ballot (multiple changes that require full context of the specification to be balloted). For Metals committees only, a 14-Day Affirmation requires a voice vote of the committee at a semi-annual meeting. 28 Day Limited Scope Ballots may be used for resolutions that occur between meetings of the Metals committees.

- 3.1.3 Waive: This is understood to mean that the voter does not know enough about the subject to approve or disapprove, or wishes to acknowledge the ballot without making a positive or negative vote. Again, it is legitimate to append comments or suggestions.

Waive replies have a special significance in AMS voting requirements. Ballots may not proceed for action unless replies are received from at least 50% of the voting membership. "Waive" replies are subtracted from the total number of voting members of the committee (up to a maximum of 20% of the voting membership), thus reducing the number of additional responses needed to proceed with that item.

- 3.2 Disapprovals at Aerospace Council Level: When an Aerospace Council disapproval on a specification is received by SAE, the disapprover will have 30 days in which to submit background information to SAE. The disapproval and all substantiating background data will be forwarded to the document sponsor, who will try to resolve the disapproval. If the document sponsor is able to resolve the disapproval to the satisfaction of the disapprover with no technical change, the document will then proceed to publication. If there is a technical change made, the document will be returned to the cognizant committee for reballoting on a 28-Day Limited Scope Ballot. If a resolution cannot be reached after 30 days, the document will be returned to the committee for consideration as follows:

The cognizant committee will be sent the background information regarding the Aerospace Council disapproval. This will be sent through the SAE office to the document sponsor. This will be done no later than 60 days from the due date of the Aerospace Council ballot which listed the council disapproval. This background information will contain the disapproval comments and additional data to support the disapproval. It will also contain the document sponsor's rebuttal of the disapproval and reasons why a compromise or resolution cannot be reached. The responsibility of the committee will be to decide whether or not the draft document should be published as is or be redrafted. This will be accomplished by ballot to the committee directing the committee to vote for redrafting the document or send it to council for a decision to publish with no change. An approval vote of 75% of the responding voting membership is required to either redraft or forward the document to council for a decision to publish. No disapprovals will be considered in this vote. If 75% approval is not reached, the committee will discuss the future of the project at the next meeting. If the committee approves publication with no change to the document, the document will be balloted to the Aerospace Council with background data and history. The Aerospace Council will decide whether or not to publish the document. Two council disapprovals against publishing the document will be sufficient to preclude publication. In this case, the project will be referred back to the committee accompanied by the corresponding Aerospace Council comments.

- 3.3 AMS Questionnaire: Committees use questionnaires or Work Area topic forums to obtain information, determine consensus on a topic, or to establish policy. The procedure for distributing such a questionnaire and collecting response is similar to the 28 Day Ballot.

AMS ballots or questionnaires may ask about the usage of the material or process or how various requirements could be addressed. This should be answered as accurately as possible, because it affects the issuance and obsolescence of the specifications. The question: "Are you using a product that is or could be defined by this specification?" means: "Will you now or in the very near future actually use this specification to procure material or perform a process?" Some voters consider that they should indicate "plan to use" if they merely think it a good idea to have it "on the books," but this is incorrect and only confuses the survey of actual usage.

- 3.4 Draft: The committee chairperson assigns a "sponsor" to prepare a draft of the new or revised specification for circulation to the committee members. This "sponsor" may be the proposer, or some other member familiar with the particular material or process.

The sponsor will conduct such investigation and correspondence with recognized authorities on the subject as deemed appropriate and will prepare an electronic draft.

New AMS Documents - Drafts should be prepared only after consultation with the editorial consultant for the technical committee with jurisdiction. The editorial consultant will provide a similar AMS to be used as a model. Refer to 2.13 and Attachment G for additional information.

Revised AMS Documents - A starter draft is generally sent from the editorial consultant to the sponsor after the editorial consultant has received a starting electronic copy from the SAE office. After the editorial consultant has added any editorial and general agreement changes, the sponsor may insert technical changes and return the draft to the editorial consultant who will prepare for balloting.

The sponsor or the committee chairperson may designate additional recipients for the draft if other interested parties are identified (e.g., alloy producers, welding rod manufacturers for a specification on alloy welding rods, etc.). Plans for distribution to non-members should be established for each ballot by the committee chairperson.

The sponsor must also provide a "Change Summary Sheet" or "New Document Summary Sheet" explaining what is being proposed and why. The typical form is provided as Attachment H.

Sponsors are also requested to complete a "New Project Request Form", available from each committee web page. In the interest of expediting the balloting process, New Project Requests may be initiated for the sponsor between or during the biannual committee meetings.

- 3.5 Ballot: The SAE office will circulate a ballot with each draft, inviting members to provide comments, and, on occasion, to help determine current usage of the material/process. Voting members have the additional responsibility to vote "Approval", "Disapproval", or "Waive". Ballots are distributed electronically through the internet. Replies received after the response due date will not be considered unless an extension has been granted in advance by SAE. All technical comments will be considered and dispositioned by the committee through communications or presentation coordinated by the document sponsor and editorial consultant.

All disapproval responses require a corresponding statement of correction presenting exactly what is desired to be incorporated into the specification by paragraph number and, any changes necessary in all subsequently affected paragraphs. The reason for the disapproval and the change desired that would resolve the issue must be presented for the disapproval to be considered by the committee.

- 3.6 Summary of Replies: SAE Standard Works automatically tallies by paragraph number all comments made by reviewers. The summary is provided within each ballot page in Standard Works.

- 3.7 Disposition of Informational Comments: The sponsor will review the Summary of Replies and provide the editorial consultant with their recommended disposition of informational “I” comments.
- 3.8 Disposition of Technical Comments:
- 3.8.1 Prior to committee meetings, the sponsor should attempt to resolve any “T” comments and disapprovals with the reviewer who made them. For any “T” comment that can be resolved with no technical changes, the reviewer should withdraw their “T” comment by stating such within the ballot in Standard Works. For just a very few “T” comments and disapprovals that are resolved with a technical change, a 28-Day Limited Scope ballot can be sent out.
- 3.8.2 During Committee Meetings: The sponsor and the technical committee will work to resolve “T” comments and any disapprovals. If the committee agrees on a proposed resolution of a comment that results in a technical change to the document, the sponsor shall request that the editorial consultant prepare a 14-Day Affirmation ballot addressing the proposed resolution. If there are too many “T” comments to be addressed during a committee meeting or serious objections to the draft, the sponsor may be requested to prepare a redraft and submit it to the editorial consultant for an additional 28-Day Ballot. If reconciliation of all technical objections cannot be accomplished by the committee, the committee will decide by vote to (a) not accept the disapproval or technical comment, (b) reaffirm the specification without change, or (c) prepare a redraft. In the latter case, the chairperson will assign the same or a new sponsor to prepare the redraft, or a task force may be appointed for the purpose.
- 3.9 If there are no unresolved technical comments or disapprovals, or if these are withdrawn by the commenter, the document is released from committee.
- 3.10 Release: Approved drafts will be corrected by the editorial consultant as agreed upon by the document sponsor and committee, and forwarded to SAE for balloting to the Aerospace Council. The document sponsor will also receive a final version to review. Upon approval by the Aerospace Council, the specification will be published.
- 3.11 Voting to Disposition Technical Comments: Ordinarily, the votes of all those present at committee meetings will be counted when voice voting on motions. However, if in the judgment of the chairperson, the objectives of the committee would be better served, they may restrict the voting to only the committee voting members (See 1.13.2.1).
- 3.12 Recirculation of Drafts: Whenever a technical change is proposed to an item in a previously circulated and voted upon draft, even if that change is decided at a meeting of the committee, the technical change(s) must be circulated to all committee members so that previous reviewers will have an opportunity to review the effect of the change on their prior vote.

The committee chairperson will decide what kind of recirculation, if any, is required for uncoordinated changes (those outside the visibility of the entire committee); the group chairperson will arbitrate cases of disagreement.

Members should be reminded of the delaying effect resulting from last-minute changes to coordinated and approved drafts. The committee may decide that such changes can be postponed to a later date so as to expedite release of a needed specification.

3.13 Ballot Periods: The current balloting procedures of the systems group are as follows:

28-Day Ballot: The circulation of a new draft or of a revision to an existing specification. Response is expected from all recipients within the 28-day period of the ballot. A summary of replies will be prepared after the due date.

28-Day Limited Scope Ballot: To expedite the AMS process so that necessary technical changes in a document can be made efficiently, a limited scope ballot may be used when authorized by the committee chairperson. Committee member voting and comments are confined to the changes indicated on the Limited Scope Ballot. Refer to Attachment J for guidelines concerning Limited Scope Ballots.

14-Day Affirmations: Technical change(s) proposed to a balloted specification will be circulated on a 14-Day Affirmation to confirm those additional changes. A response should be made only if an item on the 14-Day Affirmation is disapproved. No response indicates acceptance of the change(s) proposed by the 14-Day Affirmation ballot.

3.14 Reaffirmation: When neither technical nor editorial changes are needed on a document five years old or older, the document may be reaffirmed without change. At a regular meeting, the committee may voice vote to have a document reaffirmed without change. The SAE office will then have the status block of the current document updated to reflect the reaffirmation. No changes of are to be made to the text of the document when it is reaffirmed.

DUTIES OF COMMITTEE CHAIRPERSON

1. Review and approve the agenda prepared by the editorial consultant for the committee meeting.
 - a. Add any additional items or requirements to the meeting agenda.
 - b. Return the approved agenda to the editorial consultant who will make any last minute updates before submitting to SAE for distribution to members prior to the meeting.
2. Chair the semiannual meeting of the committee.
 - a. Run the committee meeting in accordance with Robert's Rules of Parliamentary Procedures, reviewing all agenda items.
 - b. Ensure that sufficient approval votes are documented to proceed with action on the draft.
 - c. Take a voice or hand vote of members to resolve all technical comments and disapprovals.
 - d. Decide when a "voting members only" vote is necessary to resolve a sensitive issue.
 - e. Establish the future action required of each agenda item by vote.
 - f. Establish any ad hoc committees or task forces necessary to assist in the solution of major problems to specific documents.
 - g. Ensure the taking of an attendance record of members present and return to the SAE staff.
 - h. Assign sponsors to each specification entering the Five Year Review Process..
3. Assist the committee secretary, along with the editorial consultant, to refine the minutes of the committee meeting including action items prior to leaving the meeting venue.
 - a. Review and amend/approve the final meeting minutes prior to publication to members.
4. Attend the Coordinating Committee meeting as a voting member to assist in establishing policy.
5. Work with the editorial consultants between meetings to establish a list of documents requiring Five Year Review or other change.
 - a. Assign sponsors to each specification as part of the Five Year Review Process. This task may begin between meetings, after the editorial consultant prepares the Sponsors Needed List.
6. Answer technical inquiries regarding AMS documents sent by SAE staff.
7. If applicable, direct technical inquires to specific committee members for response.

DUTIES OF COMMITTEE SECRETARY

1. Attend semiannual meetings for the committee as official recording secretary (or arrange an alternate).
 - a. Record all minutes necessary to ensure an accurate description of decisions made by the committee.
 - Approval of documents (to Aerospace Council, to 14-Day Affirmation, or to 28-Day Ballot)
 - Disposition of each technical "T" comment including wording, when different from commenter's proposal.
 - In case of a document voted for 14-Day Affirmation, note the paragraph numbers and specific wording to appear on the 14-Day Affirmation.
 - General Agreement Actions approved by the committee.
 - Decisions concerning other items of committee business.
2. Assist chairperson in running the committee meeting.
 - a. Clarify proposed motion(s) made by members.
 - b. Assist in the counting of all formal votes.
 - c. Act as temporary chairperson when chairperson is sponsor of an agenda item.
 - d. Act as temporary chairperson when chairperson is unavailable.
3. Prepare the minutes (or a detailed draft) of the committee's actions with assistance of chairperson and editorial consultant. Finalization of the minutes is expected within 30 days of the meeting.
 - a. Provide the final draft of the minutes to the SAE staff for publication to members.

**ADDITIONAL DUTIES OF LEAD EDITORIAL CONSULTANT
OR SAE ADMINISTRATOR**

1. Prepare and ensure distribution of the agenda for the Editorial Committee meeting.
2. Chair the Editorial Committee Meeting.
3. Finalize and ensure distribution of the minutes of the Editorial Committee meeting.
4. Report items/decisions of significance to the technical committee membership and to the Coordinating Committee.
5. Direct technical inquiries regarding AMS documents to the committee chairman or editorial consultant as applicable.

DUTIES OF EDITORIAL CONSULTANT

Editorial consultants are contractual employees of SAE and work under the direction of the SAE staff. The following details outline the expectations of the AMS Metals Committees concerning the responsibilities of the editorial consultant. From time to time, SAE may alter these duties.

1. Maintain a file of committee activities tracking each document.
2. Prepare a meeting agenda to be finalized and approved by the committee chairperson.
3. Champion the five year review process (refer to Five Year Review Launch Process):
 - a. Prepare starter list using SAE data (refer to Documents listing on each committee web page).
 - b. Prepare the following lists for the agenda:
 - Sponsor Needed List
 - Recommended for Reaffirmation
 - Recommended for Editorial Revision
 - Recommended for Stabilization
 - Recommended for Cancellation
 - c. As directed by the chairperson, submit ballots for committee action concerning specs on the Stabilization and Cancellation lists.
 - d. As sponsors on the Sponsor Needed List are identified by the chairperson, prepare editorially marked specs and send to the sponsor for their review to incorporate any technical changes prior to subsequent balloting.
 - e. After voice vote at each meeting concerning Reaffirmation and Editorial Revision lists, take appropriate actions to carry out committee decisions.
4. Editorially markup sponsor initiated documents (drafts for new documents and any revisions not initiated via 3d above) and forward as directed by SAE for balloting.
5. Prepare 14-Day Affirmation ballots resulting from committee decisions.
6. For documents voted for balloting to the Aerospace Council, forward finalized specification as directed by SAE for AC ballot preparation.
7. As appropriate, prepare Stabilization or Cancellation notices, General Agreement or ReAffirmation Ballots, Editorial Revision Drafts, and questionnaires, and forward as directed by SAE for balloting.
8. Assist chairperson and SAE staff with editorial procedure.
9. Support committees as assigned by SAE staff.
10. Participate in updating the Editorial Style Manual and AMS Index.
11. Attend the assigned AMS technical committee meetings, the Editorial Committee meeting, and the Coordinating Committee meeting.
12. As appropriate, review and comment on circulated ballots. Devote particular attention to ASC ballots and to specification drafts for new materials and processes.
13. Assist committee secretary in preparation of minutes.

14. Maintain general agreements for the committee, summarize them in the applicable technical committee's work area within Standard Works and incorporate them, as applicable, into drafts.
15. Assist and encourage sponsors with the writing and production of specifications, as required.
16. Respond to technical inquires as directed by SAE staff.
17. Work with sponsors of new documents as needed to optimize the initial draft for balloting.

AMS DOCUMENT REVIEW & REVISION GUIDELINES

Editorial Consultant Action:

After sponsor is authorized by committee, send the sponsor a starter draft with editorial changes marked.

Initial Sponsor Actions

- 1) After being authorized by committee, use the “New Project Request” link within the committee web to complete a “New Project Request Form”.
- 2) For new mechanical properties in the Metals Committees, submit raw data to the Battelle AMS representative for analysis per SAE or MMPDS guidelines to determine if data supports the desired minimums. Battelle holds raw data as company confidential and returns analysis summary to data supplier for submission to AMS committee.
- 3) Review the editorially marked copy, noting any technical items that require revision. Technical errors, missing requirements, and improper requirements are examples of technical items that require balloting and action by the committee.
- 4) Starting with the editorially marked copy, use the MS Word “Track Changes” to delete the "old text" and insert any proposed "new text". Return the marked-up draft to the editorial consultant for balloting to the applicable committee. Include a "Change Summary Sheet".

SAE Actions

Drafts - SAE will notify committee members of 28 day ballots for draft documents that are posted on Standard Works.

Members will note their comments within the Standard Works ballot. A link to the "Summary of Replies" will be posted within each ballot.

Follow-up Sponsor Actions

Review the Summary of Replies. Try to resolve all technical (T) comments with the commenter(s) in advance of the committee meeting. Also decide what recommendation you want to propose to the editorial consultant concerning any informational (I) comments.

If you are able to resolve all comments without making any additional technical changes to the circulated draft, send an email to the editorial consultant describing the disposition of each comment. If the resolution requires technical changes, the committee must review these. Committee review may be accomplished in-between meetings through a 28 day limited scope ballot as described in Attachment J. This will allow the document to move to the next level of the process.

If you are not able to resolve the technical comments, you will be given an opportunity to lead a discussion towards resolution of these comments at the next committee meeting.

Five Year Review Launch Process	
(Performed in preparation for committee meetings.)	
Editorial Consultant: Uses the Standard Works "Document List" to determine which documents are approaching 5 years since their last review and sorts them into the following categories.	
Five Year Review Lists	Process
<p>Recommended for Reaffirmation: Document is not currently reaffirmed; No obvious technical revisions required; Boiler plate wording is current.</p>	<p>Recommended for Reaffirmation:</p> <ol style="list-style-type: none"> 1) Chair & EC – Review reaffirmation list, adding and subtracting documents as needed. 2) EC - Add reaffirmation list to agenda for the upcoming committee meeting. 3) Committee – During course of meeting, add additional documents to the reaffirmation list. 4) EC – Ballot reaffirmation list to committee members.
<p>Recommended for Editorial Revision: No obvious technical revisions required; General Agreement or significant editorial updates are required.</p>	<p>Recommended for Editorial Revision:</p> <ol style="list-style-type: none"> 1) Chair & EC - Review editorial revision list, adding and subtracting documents as deemed appropriate. 2) EC - Add list to the agenda for the upcoming committee meeting. 3) Committee – Review list, removing documents that need technical revision and adding them to the Technical Revision list. 4) EC – Revise documents and ballot to committee members.
<p>Recommended for Stabilization: Document is no longer in need of technical revision; Document is not intended for new designs; There are other documents that should be used instead.</p>	<p>Recommended for Stabilization:</p> <ol style="list-style-type: none"> 1) EC – Adds list to agenda for the upcoming committee meeting. 2) Committee – Reviews each document proposed for Stabilization and agrees on stabilization notice wording and recommended documents to use in its place. 3) EC – Ballots the document to the committee.
<p>Recommended for Technical Revision: Document was last reaffirmed; Technical changes are evident;</p>	<p>Recommended for Technical Revision:</p> <ol style="list-style-type: none"> 1) EC – Add list to the agenda for the upcoming committee meeting. 2) Chair – During committee meeting, circulate list for members to sign up to sponsor documents. Documents not getting sponsors are added to reaffirmation list. 3) EC – Create New Project Record for each sponsored document and then let SAE know to change them over to the actual sponsor. 4) SAE – Sends draft to EC for editorial revision who then sends it to the sponsor for technical revision. 5) Sponsor – Makes technical changes, prepared Change Summary and sends to EC for balloting to the committee.

AMS DOCUMENT ORIGATION GUIDELINES

Proposals for a new AMS document requires the approval of the applicable committee chairperson. It must also be shown that there are at least two potential aerospace users of the material/process. The sponsor will be asked to prepare a draft based on the format of a recently published similar specification, an MS Word version of which can be provided by the editorial consultant.

Property values appearing in a new AMS for metals requires statistical substantiation in accordance with AMS guidelines posted on the Standard Works home page of each metals committee.

Editorial Consultant

After the new document project is authorized by committee, work with sponsor to determine closest similar document, and send the sponsor an MS Word draft of that document with any appropriate editorial changes made.

Initial Sponsor Actions

- 1) After being authorized by committee, use the "New Project Request" link from the committee website to complete a "New Project Request Form".
- 2) Prepare a draft AMS using the MS Word document provided by the EC. Make sure that the "Track Changes" is turned on. Return the marked-up draft to the editorial consultant requesting that it be balloted to the applicable committee. Include a "Change Summary Sheet".
- 3) For new mechanical properties, submit raw data to Battelle AMS representative for analysis per SAE or MMPDS guidelines to determine if data supports the desired minimums. Battelle holds raw data as company confidential and returns analysis summary to data supplier for submission to AMS committee.

Editorial Consultant

Upon receipt of the marked up draft, review all changes to ensure formatting is correct and that the technical editorial content is stated correctly. Assign a draft number. Before sending to SAE for balloting, accept all changes in the "Track Changes" function in MS Word.

SAE Actions

Drafts - SAE will notify committee members of 28 day ballots for draft documents that are posted on Standard Works.

Members will note their comments within the Standard Works ballot. A link to the "Summary of Replies" will be posted within each ballot.

Follow-up Sponsor Actions

Review the Summary of Replies. Try to resolve all technical (T) comments with the commenter(s) in advance of the Committee meeting. Also decide what recommendation you want to propose to the editorial consultant concerning any informational (I) comments.

If you are able to resolve all comments without making any additional technical changes to the circulated draft, send an email to the editorial consultant describing the disposition of each comment. If the resolution requires technical changes, the committee must review these. Committee review may be accomplished in-between meetings through a 28 day limited scope ballot as described in Attachment J. This will allow the document to move to the next level of the process.

If you are not able to resolve the technical comments, you will be given an opportunity to lead a discussion towards resolution of these comments at the next committee meeting.

REVIEW OF BALLOTS

WHO CAN COMMENT - All members of the applicable AMS committee without regard to voting status are encouraged to comment. All comments are dispositioned through the same process and consideration without regard to the voting status of the commenter.

HOW TO RESPOND

- Ballots are posted to the SAE Standards Works internet web pages for review and comment. Notification for each ballot is sent to each committee member via email containing a link to the ballot.
- **28-Day Ballots** contain proposals for new AMS or revisions to existing AMS that are circulated to committee members. Members have 28 calendar days to respond. Comments from all members are equally valued, but **supplier members** and **liaison members** are not required to respond to ballots outside their area of expertise.
- **14-Day Affirmation Ballots** document technical changes to a balloted specification. These Affirmation Ballots do not require a reply, except to disapprove the change.

VOTING MEMBER COUNT - Each **voting member** is expected to respond to every 28-Day Ballot. A balloted document cannot proceed for additional committee action unless a majority of the voting members on the committee respond to the ballot by selecting one of the following radio buttons:

Approve - Document is acceptable for publication after consideration of any "I" issues.

Waive - The reviewer does not understand enough about the material/process to make any type of assessment. If you know something about the material/process and have read the document, you are asked to vote Approve or Disapprove.

Disapprove - Document is not acceptable because of technical problems. Disapprovals must be accompanied by "T" comments (the reason for disapproval) and suggested wording that would make the document acceptable.

COMMENTS TO BALLOTS – Go to the SAE Standards Works ballot page linked from the notification email you received. Select the button that indicates the type of comment and type the paragraph number and comment before pressing the **Submit Vote** button.

Comment Types:

"T" = Technical - A technical error, missing requirement, or improper requirement that needs action by the committee and further balloting for implementation.

Technical comments must ALWAYS be accompanied by the reason for the comments and a suggested improvement that would resolve the action to your satisfaction. A **Technical Comment** by any member acts as a disapprove of the document until that comment is resolved by the committee.

"I" = Informational - A non-technical correction is required or suggested. These comments may be accepted by sponsor or referred to the editorial consultant for action.

AMS LIMITED SCOPE BALLOT GUIDELINES

Revision to AMS documents is normally accomplished by a Ballot that includes the text of the entire specification and all proposed changes. In that case, reviewers are free to comment on the proposed changes and to suggest changes to any portion of the document. However, in certain circumstances, it is in the best interest of AMS to limit the scope of a ballot to cover just a few items. These guidelines apply to that situation.

1. Sponsor **MUST** have concurrence of the Committee Chairperson prior to initiating a Limited Scope Ballot. Exception to this requirement is granted when the sponsor is proposing further technical changes while trying to resolve technical comments in between committee meetings. In this case the LS ballot shall not be issued until after the prior ballot has been closed.
2. The "Change Summary Sheet" (cover letter) **MUST** include reasons for the change and justify the use of a limited scope ballot.
3. Sponsor shall prepare the marked document and forward to the editorial consultant. The file presented for Limited Scope Ballot shall include only the relevant portions of the document relating to the proposed change. The current wording and the proposed new wording must be readily discernible.
4. Responders are restricted to commenting **ONLY** on those issues relating to the proposed change. Any "T" comment **MUST** be accompanied by a proposed rewording that would make the document acceptable and the reason supporting the comment. Commenters are urged to contact the sponsor **BEFORE** submitting any "T" comments against a Limited Scope Ballot.
5. A period of 28 days will be allowed for comment to a Limited Scope Ballot, after which a Summary of Replies will be finalized. The normal committee process to disposition comments and determine additional actions shall apply.

APPENDIX 1

AMS Metals Committees Voting Member Rules

- Any member may petition a committee chair for voting member status on that committee. If they agree with the voting requirements and the chair approves them, the member will be able to vote on that committees ballots upon SAE changing their status in Standard Works.
- In order to maintain voting status in a given committee, a Member-User, Member-Producer and Member-General Interest must have voted on at least 50% of the ballots over the previous 6 month period. SAE staff and committee chairs will review these statistics during coordinating committee meetings.
- The total number of “Member – Producers” (voting) shall not exceed one less than the total number of “Member – Users” (voting).