1.0 GENERAL

This charter establishes the objectives and operating procedures for SAE International (SAE) AMS-AM Additive Manufacturing Committee.

The AMS-AM Committee shall operate according to the provisions of this charter and the procedures established by the Technical Standards Board and the Aerospace Council of SAE International as reflected in the Technical Standards Board Governance Policy and Aerospace Council Organization and Operating Guide.

2.0 SCOPE AND OBJECTIVES

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.

The objectives of the AMS-AM committee are to:

- Develop Aerospace Material Specifications (AMS) for the procurement of additive precursor and manufactured materials including metals, plastics, ceramics, composites, and hybrids made by additive technologies. When applicable, ensure the material specification is tied to the appropriate shared material property database. (see figure 1)

- Publish recommended practices, specifications, and standards for processing and fabrication of end products from AM materials.

- Provide a forum for the exchange of technical information related to additive manufacturing.

- Further the adoption of industry sponsored material specifications through coordination with MMPDS, CMH-17, ASTM, AWS, Nadcap, other AMS committees and associated organizations.
• Coordinate requirements for publishing data in shared material property databases with MMPDS Emerging Technology Working Group for new metallic materials and CMH-17 for new composite materials.

• Establish a system to ensure material specifications are controlled and traceable to statistically substantiated data analyzed by documented procedures.

3.0 ORGANIZATION

AMS-AM is a Technical Committee of the Aerospace Materials Systems Group. The committee is established and approved by the Aerospace Council. As necessary, subordinate groups such as technical subcommittees or working groups will be organized to facilitate committee projects. The Committee Chairperson appoints the Chairperson of subordinate groups. The work of subordinate groups is subject to review and approval by AMS-AM. The AMS-AM organizational structure is shown in Figure 1.

![AMS-AM Organizational Structure](image)

3.1 Technical Committee Structure

The AMS-AM Committee consists of technical experts from government, industry, regulatory agencies and academia.

3.2 Coordinating Team
The Coordinating Team assists the Chairperson with the governance of the AMS-AM Committee through activities such as preparing meeting agendas, approving new projects, recommending new members, coordinating subcommittee activities, and reviewing existing projects. The members of the Coordinating Team include the AMS-AM Chairperson, Vice Chairperson, Secretary, subcommittee officers, and regulatory authority representatives.

3.3 AMS-AM Officers

The Committee shall have a Chairperson, Vice Chairperson, and Secretary. Technical Committee Chairpersons are nominated by the committee and forwarded to Aerospace Council for review and approval.

3.3.1 Duties of the Chairperson

The Committee Chairperson serves a two-year term of office, renewable two times (not to exceed a total service of six years). Chairperson responsibilities include:

- Plan and conduct meetings in conjunction with SAE staff
- Coordinate meeting agendas and forward to SAE for distribution
- Manage and assign projects to balance and expedite the work of AMS-AM
- Review membership annually to maintain an active and balanced committee
- Appoint AMS-AM Representatives to liaise with other standards development organizations and related bodies involved in aerospace additive manufacturing
- Establish subcommittees, appoint their chairperson, and supervise their operation
- Ensure the committee operates within its defined scope and according to SAE policies and procedures
- Coordinate with other committees on related projects
- Monitor committee ballots
- Elevate issues, concerns, problems or Opportunities to Aerospace Council

3.3.2 Duties of the Vice Chairperson

The Vice Chairperson is appointed by the Technical Committee Chairperson to assist him/her in the management duties of the committee. Responsibilities of the Vice Chairperson include:

- Assist the Chairperson
- Chair meetings in the absence of the Chairperson
- Assume the Chairperson’s responsibilities in the event of prolonged absence or resignation of Chairperson

3.3.3 Duties of the Secretary

Appointed by the Technical Committee Chairperson, the Secretary is responsible for recording all meeting minutes and such other functions as may be directed by the Chairperson. Secretary responsibilities include:

- Prepare minutes of meetings and forward to SAE for distribution
- Assists SAE in maintaining records of disposition on committee matters
- Monitor and record meeting attendance
- Write technical correspondence as agreed by the committee
4.0 MEMBERSHIP

4.1 Committee Participation

Committee membership shall be in accordance with Aerospace Council guidelines. The Committee will strive for an equitable balance of representation of technical experts in the field of additive manufacturing including materials, processes, equipment, post-processing (such as heat treatment, machining, surface treatment, etc.), NDI, and mechanical testing.

The primary classifications of participants include: Voting member, Liaison, Consultant, and Mailing List Recipient. AMS-AM utilizes an additional classification of Representative.

4.1.1 Voting Member

Voting Members are to contribute to the work of the Technical Committee, vote on all Technical Report ballots in a timely manner, and maintain active participation. Balance among the different interest groups of voting members (user, producer, general interest) shall be maintained.

Individuals who have interests and expertise in the activities of the Technical Committee and/or Sub-Committees can request voting membership. Requests should be submitted to the Committee Chairperson, who determines the voting membership interest group and notifies SAE Staff. Names are forwarded to the Aerospace Council for approval. Membership in SAE is encouraged of all Technical Committee Members.

4.1.2 Liaison

Liaisons coordinate with parallel activities occurring in the government, other associations, and related SAE Technical Committees and may serve in an advisory capacity on specific projects. Liaisons receive ballots and may provide comments; however, they do not have an approval/disapproval vote.

4.1.3 Consultant

Consultants are under contract to SAE and serve in an advisory capacity on specific projects. Consultants receive Technical Report ballots and may provide comments; however, they do not have an approval/disapproval vote.

4.1.4 Mailing List Recipient

Mailing List Recipients receive information on Technical Committee meetings. They do not receive information related to Technical Report ballots.

4.1.5 Representative

Representatives are appointed by the Chairperson to facilitate communication and exchange pertinent information with relevant SDOs and related bodies involved in aerospace additive manufacturing such as MMPDS, ASTM Committee F42 on Additive Manufacturing, AWS D20, Nadcap Welding Task Group, America Makes, and CMH-17.

Appointment as a Representative does not impact the individual’s AMS-AM committee participation classification; e.g., it is possible to be a voting member of AMS-AM and also serve as a representative to ASTM F42. Representatives to relevant SDOs shall not vote on behalf of AMS-AM; their role is strictly to facilitate communication between organizations with an interest in additive manufacturing for aerospace applications. When participating in a relevant SDO’s
activity, AMS-AM Representatives participate in accordance with the relevant SDO’s policies and procedures.

4.2 Member Responsibilities

In discharging their responsibilities, members function as individuals dedicated to the objective of the AMS-AM Committee and not as representatives of any organization with which they may be associated.

Governmental employees participate in accordance with government regulations.

Members are expected to actively support the work being accomplished within the committee by supporting telecons, attending meetings, sponsoring projects, participating in discussion forums, and reviewing and responding to ballots.

A member who is absent from more than half of the committee meetings (including the semi-annual face-to-face as well as monthly virtual meetings) during an eight-month period without alternate representation may have his/her voting membership revoked by the AMS-AM Chairperson. Failure to respond to a minimum of 75% of ballots over the course of 12 months without justification, may result in revocation of voting membership.

5.0 OPERATION

5.1 Project Authorization

Each proposed project document, including document revisions, will be approved by the Coordinating Team. The Coordinating Team will assign a sponsor for proposed new documents or revisions to existing documents. The sponsor shall develop all documentation and be responsible for all coordination necessary to prepare the new document or revision for ballot to the committee membership.

5.2 Voting

Material Specifications, recommended practices, and standards will be voted on by the Committee members following the process outlined in the Aerospace Council Organization and Operating Guide. Resolution of the comments will be coordinated by the document sponsor. Every technical comment to a committee ballot shall be resolved by consensus methods and the disposition documented on the SAE Standard Works Committee ballot page or in meeting minutes.

After resolution of the comments, a letter ballot may be circulated to all members of the committee for final approval. Only Committee members may vote on ballots. Vote results will be tabulated in accordance with Aerospace Council Guidelines.

Voting on ballots shall be monitored by the Coordinating Team and the results reported to the AMS-AM Committee when a specification has been approved by the Committee membership.

5.3 Meetings

The Committee holds face-to-face meetings twice a year. Virtual meetings of the Committee will be scheduled when the need exists to conduct committee or individual specification business in between face-to-face meetings.
The Committee meeting agenda shall be prepared by the officers and disseminated with the next meeting announcement by SAE staff.

All Committee meetings shall be conducted in accordance with established SAE procedures and practices.

Meeting minutes shall be recorded by the Secretary and will be posted on the committee website.

5.4 Attendance

Attendance at the meetings is open to anyone with an interest in additive manufacturing. Attendance shall be monitored and recorded by the Secretary.

5.5 Upgrade/Downgrade

Users of the AMS-AM Committee 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 specification 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.

6.0 Revisions to Charter

Amendment of this charter will be accomplished by a member submitting a written proposal to the Committee Chairperson at least 30 days prior to the meeting where it will be reviewed. Proposed amendments will require a two thirds approval of the members present. A quorum of greater than 50% of the eligible voting membership must be present.