



National Center for Advanced Materials Performance

Document Number: NSP 120 Operating Procedures and Bylaws for NCAMP Manufacturers Advisory Board (MAB)

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Acronyms

MAB	Manufacturers Advisory Board.
PRT	Performance Review Team
RGB	Regulatory Governing Board
SAB	Suppliers Advisory Board
CMH-17	Composite Materials Handbook 17 (formerly MIL-HDBK-17)

Preface

The National Center for Advanced Materials Performance (NCAMP) develops and maintains an aerospace industry-shared composite material property database along with their material and process specifications. The NCAMP shared material property database contains material property data of common usefulness to a wide range of aerospace projects. The intent of NCAMP is to promote the publication of data for advanced composite materials which may be used in the design and certification of aircraft structure. However, it is not anticipated that the data provided will fulfill all the design needs of every project. Each user will need to assess the data available against the specific properties, environments, laminate architecture, and loading situations of their individual projects. In most structural applications, additional testing will be required.

The composites industry is guided by Composite Materials Handbook 17 or CMH-17 (formerly known as MIL-HDBK-17). While some users regard CMH-17 as the equivalent of the metals industry standards organization, MMPDS (formerly known as MIL-HDBK-5), MMPDS remains the only U.S. government-recognized public source of published design-allowable properties for commercial and military aircraft structures and mechanically fastened joints. The composite material allowables published in revision F and earlier CMH-17 generally are not accepted by the FAA, NASA, or the U.S. Department of Defense (DoD) for aircraft certification and airworthiness without additional substantiating evidence. NCAMP, in partnership with the FAA and CMH-17, began the effort of changing this in 2005. As a result, NCAMP developed its Standard Operating Procedures (document: NSP 100) to describe procedures for material property data acquisition, material qualification, material allowable generation, and material equivalency processes. The procedures described in NSP 100 are intended to generate data and specifications for advanced composite materials which may be used in the design and certification of aircraft structure. In addition, *Complete Documentation* sections have been created in CMH-17 revision G for datasets designed to meet the rigors of U.S. government certification requirements. The NCAMP's material property data acquisition process is designed to generate basic material property data with sufficient pedigree and control for submission to the *Complete Documentation* sections.

The NCAMP organization, as described in NSP 100 and shown in Figure 1 below, consists of Manufacturers Advisory Board (MAB), Performance Review Team (PRT), Suppliers Advisory Board (SAB), and Regulatory Governing Board (RGB).

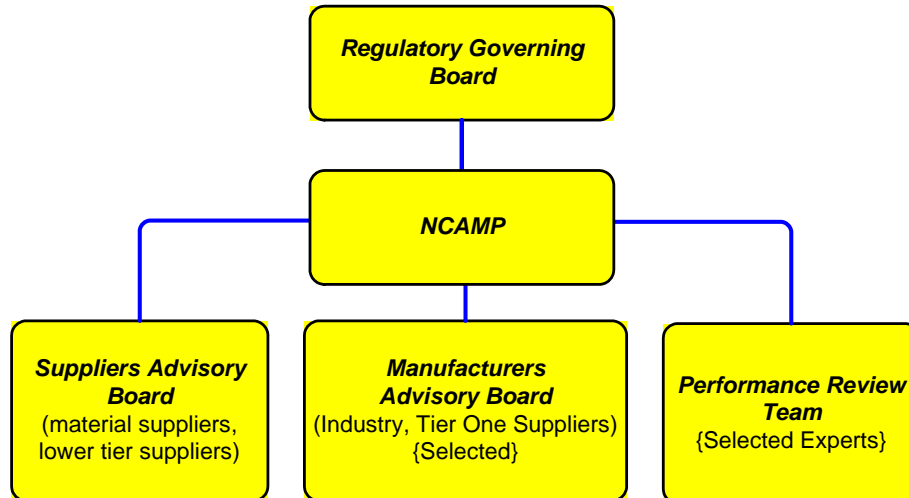


Figure 1. NCAMP Organizational Structure

The Manufacturers Advisory Board (MAB) consists of aerospace companies that are Original Equipment Manufacturers (OEMs), primes, and tier-1 suppliers. There are currently more than forty five (45) MAB members. Every MAB member has to designate an individual to serve as a company representative on the NCAMP MAB. The representative, known as Company Appointed MAB Member, serves as the official point-of-contact between NCAMP and the company for activities such as voting and document review. MAB plays an important role in ensuring that the NCAMP process, procedures, material properties, and specifications meet aerospace application requirements. Each MAB member has the responsibility to provide feedback and comments to NCAMP staff to ensure that the NCAMP deliverables meet their individual needs.

This document represents the first attempt to define formal operating procedures and bylaws for the MAB. It is a working document that will be revised as more effective procedures are created. Although MAB is currently an NCAMP board, it is envisioned that this board will be merged with CMH-17 committee in the future as part of the ongoing CMH-17/NCAMP harmonization process.

ARTICLE I NAME, PURPOSE AND GOALS

Section 1. Name

The name of this organization shall be **Manufacturers Advisory Board (MAB)**.

Section 2. Purpose

The purpose of the document is to provide consistent approach and procedures for the **Manufacturers Advisory Board (MAB)**.

Section 3. Scope of Activities

1. Provide a means for interaction, discussion of common issues, and problem solving among participating companies.
2. Consolidate the common interests related to advanced composite material allowables and specifications.
3. Develop the framework and, if necessary, provide resources to ensure successful execution of projects that serve material end-user and industry interests.
4. Provide feedback to NCAMP to ensure generation and maintenance of reliable material allowables database and specifications.
5. Provide assistance and feedback to NCAMP for the development of analysis methods, material property data, and design data in partnership with CMH-17.

ARTICLE II MEMBERSHIP**Section 1. General MAB Qualifications**

1. Every employee of aerospace companies that are Original Equipment Manufacturers (OEMs), primes, and tier-1 suppliers is permitted to become an MAB member.
2. MAB members shall represent the company and material end-user interests in the development or support of composite material allowables and specifications.

Section 2. Application for MAB Membership

Application for MAB membership must be coordinated through the NCAMP staff. There is no fee or dues to become an MAB member. The list of current MAB members is maintained by NCAMP.

Section 3. Benefits and Responsibilities

1. All MAB members will have access to the NCAMP Portal and free electronic copies of all un-restricted NCAMP publications.
2. MAB members are encouraged to participate in all NCAMP activities such as technical discussions and propose agenda items

ARTICLE III GOVERNANCE

MAB meetings will provide a forum for the introduction, discussion and possible assignment of action for pertinent issues or concerns brought forth by any MAB member. Specific agenda items will be assigned to an individual(s) for detailed review and discussion.

Section 1. Voting Procedures

The ballot may be in the form of a webpage, Adobe Acrobat file, or email. Detailed information about the purpose of the ballot must be provided to the voting members. The votes will be considered by RGB and NCAMP staff for the purpose of making a final decision on the matter.

Section 2. Voting Members

1. MAB will oversee all test plans, material specifications, process specifications, data reports, and allowables reports and vote on all changes. For technical matters such as document review and approval, every MAB member will receive a ballot.
2. RGB and the NCAMP Manufacturers Advisory Board (MAB) will participate in material selection process. For material selection matters, every company will receive a ballot. The individual companies will identify their own representatives, known as Company Appointed MAB Member, to receive and submit the ballot on behalf of the companies. Company Appointed MAB Member are appointed by the individual company managements, usually the vice-president of engineering, to be the official point-of-contact with NCAMP.

Section 3. Waiver Procedures

When it is in the best interest of NCAMP members, the MAB shall have the right to waiver rules documented herein.

ARTICLE IV MEETINGS

MAB meets on as-needed basis; typically, upon request of an MAB member or at the onset of a program when input from various companies are needed. Changes and revisions to documents are typically communicated and balloted electronically. At this time, there are no regularly scheduled MAB meetings.

Section 1. Meeting Procedures

NCAMP MAB meeting procedures shall be as follows:

1. NCAMP staff will open the meeting with an introductory statement and provide a report of the current NCAMP activities.
2. NCAMP staff will ask for comments on the prior meeting's minutes, if any, and propose their approval of the minutes with amendments, if any.
3. NCAMP staff will review the current status of all open agenda items. New agenda items will be identified.

Section 2. Item Introduction Procedures

1. An MAB member may coordinate with NCAMP staff to define a proposed item. This coordination activity can occur outside of MAB meetings. NCAMP staff will be responsible for communicating the proposal to the other MAB members.
2. Alternatively, an item can be proposed at the meeting.

ARTICLE V APPROVAL AND MODIFICATION OF BYLAWS

1. The initial approval of these By-Laws will require a review by all MAB members and acceptance by Company Appointed MAB Member.
2. A vote of the Company Appointed MAB Member will be taken for any proposed modifications of the By-Laws.