

Meeting Agenda

To: MMPDS/MIL-HDBK-5 Coordination and Industry Steering Group Members
Date: September 10, 2002
Subject: Agenda for 2nd MMPDS, 102nd MIL-HDBK-5, and 10th ISG Coordination Meeting

Hotel Information

As previously announced, the 2nd MMPDS, 102nd MIL-HDBK-5, and 10th ISG meetings will be held October 7-10, 2002, at the Hampton Inn Cocoa Beach in Cocoa Beach, Florida. Your attendance and active participation is encouraged.

The Hampton Inn Cocoa Beach is located approximately one hour from the Orlando Airport and 45 minutes from the Melbourne Airport. Directions from both airports, as well as general driving directions, are attached. For further information on the hotel and surrounding areas you can go to their web site – www.hamptoninncoabeach.com, phone toll free 877-492-3224, or fax 321-784-7812. The group code to use when making reservations is **MIL-5 Meeting**. The hotel guaranteed its corporate rate of \$89/night through September 6, 2002. Reservations made after this date will be accepted on a space-available basis, and the rates may be higher. The government rate was quoted as the government per diem for that area -- \$105/night, so it may be advisable for government personnel to request the corporate rate.

Registration

A pre-registration form has been prepared and is enclosed. Please fill out the pertinent information and fax it to Sharon Lawles at Battelle before September 27, 2002. Her fax number is 614-424-3457 and her phone number is 614-424-7691. Alternatively, you may contact her by email at lawless@battelle.org to request that she send you the registration form as a Word document, in which case you can fill in the pertinent information and return the completed form to her by email.

A registration fee of \$40.00 U.S. per person will be charged for participation at the 102nd MIL-HDBK-5 Coordination Meeting. This fee will be used to help defray the cost of refreshments served at the meeting and meeting room charges. Advance payment of the registration fee is encouraged*. The registration fee may be paid in advance by check to Battelle, in care of Sharon Lawles, 505 King Avenue, Columbus, Ohio 43201-2693; or by credit card by completing the enclosed Credit Card Information form. You may fax the credit card form to Sharon at the above number or request that she send it to you as a Word document and return it to her by email. Those who register at the door may pay their registration fee by cash or check. Receipts will be provided in the mail or at the door, as appropriate.

* If your registration fee is paid in advance, and you are unable to attend, the registration fee will be refunded, upon request, following the meeting.

Meeting Information

The planned schedule of meetings is shown in the attached table. The general coordination meeting will take place on October 10, beginning at 8:30 a.m. Other steering group, task group, and working group meetings will be held earlier in the week. A variety of special presentations will be given during the course of the week; the planned timing of each of these presentations is noted either in the main list of agenda items or in the ISG agenda (see list of attachments).

One new task group will meet Wednesday afternoon. The Laser Additive Manufacturing (LAM) working group meeting will include presentations by Army and Air Force representatives interested in the eventual development of design allowable properties on this emerging class of materials.

As noted on the schedule most task group and working group meetings are open to all attendees. Because of the focus on new fastener analysis guidelines the Fastener Task Group meeting on Wednesday will be an open meeting and will be held jointly with the Fastener Industry Working Group. The steering group meetings on Monday will be limited to members only, with the exception of the afternoon session of the Industrial Steering Group, which will be open to all coordination-meeting attendees.

We look forward to your attendance and active participation in these aircraft metallic materials handbook coordination meetings.

Sincerely,

Steve Thompson
DoD Co-Chairman
MIL-HDBK 5 Coordination Group
Air Force Research Laboratories, Materials
and Manufacturing Directorate
Wright-Patterson AFB, Ohio

John Bakuckas
FAA Co-Chairman
MIL-HDBK 5 Coordination Group
Aging Aircraft Structural Integrity Research
Airworthiness Assurance R&D Branch
FAA William J. Hughes Technical Center
Atlantic City, New Jersey

SRT/JGB/RCR/sll

**Schedule of Meetings for the 2nd MMPDS, 102nd MIL-HDBK-5, and 10th ISG Coordination Meetings
October 7-10, 2002 – Cocoa Beach, Florida**

Time Period	Monday		Tuesday	Wednesday		Thursday
	Steering Groups		Guidelines Task Groups	Materials Task Groups		General Coordination
8:30am – 10:00	10th ISG* (Limited to ISG 2002 members only)		SWG*	MTG*	Joint FIWG/FTG*	GCC*
10:00 – 10:15						
10:15 – 12:00						
12:00pm – 1:15	Lunch Break (individual responsibility)					
1:15 – 3:00	ASG	10th ISG* (Open to all interested meeting participants)	GTG*	MTG	Joint FIWG/FTG*	
3:00 – 3:15	Break			Break		
3:15 – 4:30	GSG			LAMWG		
4:30 – 5:30	Joint ISG/GSG					

* Catered break during meeting,

- ISG Industrial Steering Group
- ASG Airframer Steering Group
- GSG Government Steering Group
- SWG Statistics Working Group
- GTG Guidelines Task Group
- MTG Materials Task Group
- FIWG Fastener Industry Working Group
- FTG Fastener Task Group
- GCC General Coordination Committee
- LAMWG Laser Additive Manufacturing Working Group

**Agenda
for
2nd MMPDS and 102nd MIL-HDBK-5 Coordination Meetings
in
Cocoa Beach, FL
October 7-10, 2002**

Note: For the sake of simplicity the traditional terminology of MIL-HDBK-5 or MIL-5 is maintained throughout this agenda. However, unless otherwise noted, actions taken on these agenda items will also apply to the new MMPDS Handbook, which will be issued by the FAA in early 2003.

CHAPTER 1. GENERAL

- No Item No. **AMS Coordination. (GCC)** J. Jackson, Battelle, will provide a status report on relevant AMS material specifications that were approved or initiated between the 1st and 2nd MMPDS coordination meetings. The Fall AMS meeting will be held September 30th - October 4th in Seattle, WA.
- No Item No. **Meetings of Potential Interest to MIL-HDBK-5 Coordination Members. (GCC)** R. Rice, Battelle, will review the enclosed list of meetings. Note that the current list contains relevant technical society websites.
- No Item No. **Cancellation of Government Specifications and Subsequent Replacement Specifications. (GCC)** J. Jackson will provide a status report on the most recent information available from SAE/AMS. She will also review the recent specification actions of the AIA Early Warning Group.
- No Item No. **Special Presentation. (SWG)** J Goodman, Alcoa, will give a special presentation Tuesday morning in the SWG on Development of Statistical Design Limits on Crack Growth Data.
- No Item No. **Special Presentation. (SWG)** R Rice will give a special presentation presented on behalf of A. Quilter, ESDU, Tuesday morning in the SWG. The topic will be: Overview of Metallic Materials Data Handbook (European equivalent to MIL-HDBK-5).
- No Item No. **Special Presentation. (GTG)** S. Thompson, AFRL/MLSC, will give a special presentation Tuesday afternoon in the GTG on Determination and Presentation of Stress Corrosion Threshold Values.
- No Item No. **Special Presentation. (MTG)** M Niedzinski, Pechiney, will give a special presentation Wednesday on The McCook Buy-Out and Its Effect on Their Emerging Aircraft Alloys.

- No Item No. **Special Presentation. (LAMWG)** W Roy and D Snoha, Army, will give a special presentation Wednesday afternoon in the LAMWG on Army Experience with Laser Additive Manufacturing.
- No Item No. **Special Presentation. (LAMWG)** S Thompson, AFRL, will give a special presentation Wednesday afternoon in the LAMWG on Air Force Experience with LAM.
- No Item No. **Special Presentation. (LAMWG)** S Fantle and Brian Sova, Boeing, will give a special presentation Wednesday afternoon in the LAMWG on Boeing's Experience with LAM. An abstract is included.
- No Item No. **Special Presentation. (GCC)** R Brazill, Alcoa, will give a special presentation on Plane-Stress Fracture Toughness Testing and Analysis – Complications and Possible Solutions. An abstract is included.
- No Item No. **Special Presentation. (GCC)** R Rice, Battelle, will give a special presentation on Demonstration of Proposed New Statistical Analysis Procedure for Fasteners. Refer to Item 99-27.
- No Item No. **Government Steering Group. (GSG)** S. Thompson, AFRL/MLSC, will provide a GSG status report at the General Coordination Committee (GCC) meeting on Thursday morning. A closed meeting of the GSG will be held on Monday, October 7th, beginning at 3:15pm.
- No Item No. **Airframer Steering Group. (ASG)** J.T. Amin, Lockheed, will provide a ASG status report at the General Coordination Committee (GCC) meeting on Thursday morning. A closed meeting of the ASG will be held on Monday, October 7th, beginning at 1:15pm.
- No Item No. **Industrial Steering Group. (GCC)** R. Rice will give a status report at the GCC meeting on current ISG-supported technical activities.
- The 10th ISG meeting will be held on Monday, October 7th. The morning session, which will begin at 8:30am, will be limited to representatives of ISG 2002 member companies. However, the afternoon session, which will be scheduled to begin at 1:15pm, will be open to other Handbook coordination-meeting attendees who would like to attend. The preliminary agenda for the ISG meeting is included as an attachment.
- No Item No. **Guidelines Task Group. (GTG)** R. Rice will lead discussion of current Chapter 9 items in the Guidelines Task Group meeting, which will take place on Tuesday, October 8th. A copy of the GTG meeting agenda is attached.

- No Item No. **Materials Task Group. (MTG)** J. Jackson will lead discussion of the new and continued materials items for Chapters 2 through 7 in the Materials Task Group meeting, which will be held on Wednesday, October 9th. A copy of the MTG meeting agenda is attached.
- No Item No. **Statistics Working Group. (SWG)** H. Tsai, Battelle, will lead a discussion of new and continued statistics items at the Statistics Working Group meeting, which will be held on Tuesday, October 8th. A copy of the SWG meeting agenda is attached.
- Item 02-21 **Update of Government MIL Specifications. (MTG)** J. Jackson will present the enclosed agenda item.
- No Item No. **Trademark Identification (GCC)** J. Jackson will lead discussion on the enclosed agenda item.

CHAPTER 2. STEEL ALLOYS

- Item 02-22 **A- and B-Basis Properties for Custom 465 H950 & H1000 Bars, Wires, and Forgings (MTG)** J. Jackson will present the enclosed agenda item.

CHAPTER 3. ALUMINUM ALLOYS

- Item 00-9 **Including EXCO Ratings in MIL-HDBK-5. (MTG)** R. Rice will review a handout on this item.
- Item 00-10 **Reference for Weldability of Aluminum in Section 3.1.3.4. (MTG)** J. Jackson will review this brief agenda item.
- Item 00-6 **A and B-Basis Properties for 2297-T87 Plate. (MTG)** J. Jackson will present the enclosed agenda item. This item was put on hold at the fall meeting due to the transition from McCook to Pechiney. Additional data was supplied and analyzed.
- Item 01-09 **Derived Properties for 2297-T87. (MTG)** J. Jackson will present this item on 2297-T87, which focuses on the collection and analysis of derived property data in connection with the above Agenda Item 00-06.
- Item 01-08 **Update Test Methods for Plane-Stress Fracture Toughness Data. (MTG)** R. Rice will present a status report. R. Brazill will give a special presentation at the GCC on this subject.
- Item 01-11 **A- and B-Basis Properties for 7250-T7451 Aluminum Alloy Plate. (MTG)** J. Jackson will present the enclosed data proposal. The draft AMS specification is being prepared for ASC. This item was also held open due to the transition to Pechiney. Bearing and shear properties were only tested in the LT direction. No additional testing has been submitted.

- Item 01-15 **S-Basis Properties for 7055-T76511 Aluminum Extrusions (MTG).** J. Jackson will present the enclosed data proposal. AMS 4336 was published in March 2002. Additional data were received and analyzed.
- Item 01-16 **A- and B-Basis Tensile Properties for 7249-T76511 Aluminum Alloy Wide Extrusions. (MTG)** J. Jackson will present the enclosed agenda item from the 101st meeting. Additional testing is near completion and will be analyzed for A- and B-basis. Additional bearing and shear testing have not been completed. The draft AMS specification is being prepared for ASC.
- Item 02-02 **Reduced Beryllium Replacement for D357-T6. (MTG)** J. Jackson will present the enclosed brief data proposal.
- Item 02-03 **Reduced Beryllium Replacement for A357-T6. (MTG)** J. Jackson will present the enclosed brief data proposal.
- Item 02-10 **Design Minimum Properties for 7055-T74511 Extrusions. (MTG)** J. Jackson will present the enclosed data proposal on this new item. A draft AMS specification has been prepared and sent to Aerospace Council. (just needed 3 LT lots for derived properties)
- Item 02-14 **Design Minimum Properties for 7150-T77511 Extruded Wide Panels (MTG).** J. Jackson will present a status report of the draft AMS specification (D01-AD). This item was approved at the 101st MIL-5 meeting pending specification approval.
- Item 02-16 **A- and B-Basis Properties for 7050-T7651 Aluminum, 1.0 – 1.5 Inch Thick Plate (MTG).** R. Rice will present an agenda item of the results of the reanalysis of strength data on this alloy using the recently accepted Pearson method. This was shown as a handout at the 101st MIL-5 meeting.

CHAPTER 4. MAGNESIUM ALLOYS

No items for review.

CHAPTER 5. TITANIUM ALLOYS

- Item 99-11 **A- and B-Basis Design Mechanical Properties for Ti-6-4 Castings. (MTG)** J. Jackson and R. Rice will review the enclosed agenda item. The draft AMS specification is waiting for approval by ASC.
- No Item No. **Shear Modulus Correction of Ti-6-4. (MTG)** J. Jackson will review this brief handout.

CHAPTER 6. HEAT RESISTANT ALLOYS

No Item No. **Additional Stress-Strain Curves for Haynes 230. (MTG)** J. Jackson will review the enclosed agenda item.

CHAPTER 7. MISCELLANEOUS ALLOYS AND HYBRID MATERIALS

No items for review.

CHAPTER 8. STRUCTURAL JOINTS

No Item No. **Fastener Task Group. (FTG)** As the acting chair of the Fastener Task Group, N. Ontko, AFRL, will lead discussions at the Fastener Task Group meeting, which will be held on Wednesday, October 9th. The primary focus of discussion will be on Items 99-27 and 00-13.

No Item No. **Fastener Industry Working Group. (FIWG)** The Fastener Industry Working Group will meet jointly with the Fastener Task Group on Wednesday, October 9th.

CHAPTER 9. GUIDELINES FOR THE PRESENTATION OF DATA

Item 94-26 **Production Methods and Their Impact on Design Allowables. (GTG)**
R. Rice will provide a status report on this long-standing agenda item.

No Item No. **Update and Expansion of Table 9.6.4.7 (Table 9.10.6 in revised Chapter 9). (GTG)** R. Rice will present this agenda item, which resulted from Agenda Item 94-26.

Item 98-3 **Procedure for Analyzing Lower Tail Censoring. (SWG)** H. Tsai will present a status report.

Item 98-7 **Complete Restructuring of Chapter 9 Guidelines to Improve Usability. (GTG)** R. Rice will review the enclosed agenda item, which covers the proposed new structure for Chapter 9.

Item 99-27 **Revised Analytical Techniques for Analysis of Fastened Joints. (FIWG)**
H.C. Tsai, Battelle, will review an agenda item covering the latest enhancements to the proposed new statistical procedure for analyzing fastened joints.

Item 00-13 **Rewrite of Section 9.4 Properties of Joints and Structures. (FTG)** R. Yano will present the enclosed agenda item.

- Item 01-01 **Regression for Skewed Data. (SWG)** H.C. Tsai will present a status report. This item includes the basic elements of a proposed procedure for statistically analyzing skewed data. It also details the plans for refining, validating and implementing the new procedure.
- Item 01-02 **Proposal to Change Backoff Limit to Percentage of Standard Deviation in the Sequential Weibull and Sequential Pearson Procedures. (SWG)** H.C. Tsai will present a handout.
- Item 01-04 **Reevaluation of Statistical Procedures for Calculations of S-Basis Design Values. (SWG)** R. Rice and H.C. Tsai will review this agenda item.
- Item 01-05 **Revise Section 9.1.6.8 in Coordination with SAE/AMS. (GTG) J.** Jackson will provide a status report on this new item, which will cover the modification of Section 9.1.6.8 of MIL-HDBK-5, "Guideline Requirements for Specification Minimum Design Mechanical Properties". Development of the proposed new procedure will be done under Item 01-04 in close coordination with the SAE/AMS committee. A formal proposal for revision of Section 9.1.6.8 of the Handbook will await approval of the Item 01-04 statistical procedures by the SAE/AMS committee.
- Item 01-06 **Historical Review of MIL-HDBK-5 Round-off Procedures. (GTG) J.** Jackson will present the enclosed agenda item.
- No Item No. **Define Lower Bound Properties for Elongation. (SWG)** R. Rice will lead discussion on this item.
- No Item No. **Removal of the Word "Precision" in Reference to Modulus. (GTG) J.** Jackson will present this brief agenda item.
- No Item No. **Review of Off-Axis Mechanical Property Testing Requirements. (GTG)** R. Rice will lead in a discussion on this topic.
- No Item No. **Derived Property Requirements for 45° Orientation. (GTG) J.** Jackson will present this brief agenda item.
- No Item No. **Clarification of Required Test Direction for Derived Properties. (GTG)** J. Jackson will present this brief agenda item and lead in discussion.
- No Item No. **Addition of References for the Pearson type III Distribution. (SWG) R.** Rice will present this brief agenda item.
- No Item No. **Corrections to Table 9.6.4.4 (GTG) R.** Rice will present this brief agenda item.
- No Item No. **Determination of A- and B-Basis Allowables for Cases Where the Calculated T₉₉ Value is Greater Than the Specification Minimum Value (GTG) S.** Fantle, Boeing, will present the enclosed agenda item.

New Agenda Item Numbers Assigned in 2002

- Item 02-01 Design Properties for Custom 465 in the H950 & H1000 Conditions (Ch. 2)
- Item 02-02 Reduced Beryllium Replacement for D357-T6 (Ch. 3)
- Item 02-03 Reduced Beryllium Replacement for A357-T6 (Ch. 3)
- Item 02-04 A- and B-Basis Properties for 2026-T3511 Aluminum Alloy Extrusions (Ch. 3)
- Item 02-05 T99 Values for 7075-T73 & T7352 (Ch. 3)
- Item 02-06 Effect of Exposure at Elevated Temperature curves (Ch. 3)
- Item 02-07 Correlative Information Correction for Figure 3.7.8.1.8(c), 7175-T73511 Extrusion (Ch. 3)
- Item 02-08 Mechanical Properties for Ti-6.5Al-3V-2Fe-2Mo Titanium Bar (Ch. 5)
- Item 02-09 Derived Properties for Ti-6.5Al-3V-2Fe-2Mo Titanium Sheet (Ch. 5)
- Item 02-10 Design Minimum Properties for 7055-T74511 Aluminum Extrusions (Ch. 3)
- Item 02-11 Full Range Stress Strain Curves for 2024-T3/Aramid Fiber Laminate (Ch. 7)
- Item 02-12 Update of Fastener Index and Editorial Correction of Fastener Summary Tables (Ch. 8)
- Item 02-13 Correction to Yield Strength Value in Table 8.1.3.2.1(f) Covering Design Allowables for MS20601AD Rivets (Ch. 8)
- Item 02-14 Design Minimum Properties for 7150-T77511 Extruded Wide Panels (Ch. 3)
- Item 02-15 A- and B-Basis Design Minimums for Ti-6Al-4V Plate (Ch. 5)
- Item 02-16 A- and B-Basis Properties for 7050-T7651 Aluminum, 1.0-1.5 Inch Thick Plate (Ch. 3)
- Item 02-17 Addition of Stress-Strain Curves for Haynes 230 Plate (Ch. 6)
- Item 02-18 Testing Direction for Die Forging (Ch. 9)
- Item 02-19 Commonly Used Formulas (Ch.1)
- Item 02-20 Reconsideration of Item 97-9. Static Joint Strength of HC3214 Blind Flush Head Rivets in Clad 2024 Sheet (Ch. 8)

- Item 02-21 Update of Government MIL Specifications (Ch. 2, 3, 4, & 5)
- Item 02-22 A- and B-Basis Properties for Custom 465 H950 & H1000 Bars, Wires, and Forgings (Ch.2)
- Item 02-23 Stress Strain Curves for Haynes 230 alloy (Ch. 6)
- Item 02-24 _____
- Item 02-25 _____
- Item 02-26 _____
- Item 02-27 _____
- Item 02-28 _____
- Item 02-29 _____
- Item 02-30 _____
- Item 02-31 _____
- Item 02-32 _____
- Item 02-33 _____
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- Item 02-35 _____
- Item 02-36 _____
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- Item 02-38 _____
- Item 02-39 _____
- Item 02-40 _____