

3rd MMPDS Coordination Meeting



HANDOUT

*Las Vegas, NV
April 14-17, 2003*

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SCHEDULE OF MEETINGS

Monday, 14 April

		<u>Location</u>
8:00 - 8:15 am	Registration	--
8:30 – 10:00 am	Industry Steering Group (ISG members only)	<i>Beacon</i>
10:15 am – 12:00 pm	Industry Steering Group (members only) continued	<i>Beacon</i>
10:15 am – 12:00 pm	Government Steering Group (GSG members only) <i>Director</i>	
1:15 – 3:00 pm	Industry Steering Group (Open Meeting – all welcome)	<i>Beacon</i>
3:15 – 7:00 pm	Joint Industry/Government Steering Group Meeting (Open)	<i>Beacon</i>
4:30 – 5:00 pm	Airframer Steering Group (ASG members only)	<i>Director</i>

Tuesday, 15 April

8:00 – 8:15 am	Registration	--
8:30 am – 12:00 pm	Statistics Working Group (Open)	<i>Coney</i>
1:15 – 4:30 pm	Guidelines Task Group (Open)	<i>Coney</i>

Wednesday, 16 April

8:00 – 8:15 am	Registration	--
8:30 am – 12:00 pm	Materials Task Group (Open)	<i>Coney</i>
1:15 – 3:00 pm	(MTG continued)	
8:30 – 10:00 am	Joint Fastener Task and Fastener Industry Working Groups	<i>Beacon</i>
10:15 am – 12:00 pm	Fastener Task Group (Members Only)	<i>Beacon</i>
1:15 – 3:00 pm	(FTG continued)	
10:15 am – 12:00 pm	Fastener Industry Working Group (Members Only)	<i>Director</i>
1:15 – 3:00 pm	(FIWG continued)	
3:15 – 5:00 pm	Joint Fastener Task and Fastener Industry Working Groups	<i>Beacon</i>

Thursday, 17 April

8:30 am – 12:00 pm	MMPDS General Coordination Group Meeting	<i>Coney</i>
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**Schedule of Meetings for the 3rd MMPDS, and 11th ISG Coordination Meetings
April 14 – 17, 2003 – Las Vegas, Nevada**

Time Period	Monday		Tuesday	Wednesday			Thursday
	Steering Groups		Guidelines Task Groups	Materials Task Groups			General Coordination
8:30am – 10:00	11 th ISG* (ISG 2003 members only)		SWG* (Open)	MTG* (Open)	Joint FTG/FIWG (Open)		GCC* (Open)
10:00 – 10:15	Break				Break		
10:15 – 12:00	GSG (Members only)	11 th ISG* (ISG 2003 members only)			FIWG (Members only)	FTG (Members only)	
12:00pm – 1:15	Lunch Break (individual responsibility)						
1:15 – 3:00	11 th ISG (Open)		GTG* (Open)	MTG (Open)	FIWG (Members only)	FTG (Members only)	
3:00 – 3:15	Break			Break			
3:15 – 4:30	Joint ISG/GSG (Open)			LAMWG (Open)	Joint FTG/FIWG (Open)		
4:30 – 5:00	ASG (Members only)	Joint ISG/GSG Continues Through 7:00	Continues Through 9:00	Continues through 5:00			
4:30 – 7:00				Dinner Break At 6:00 pm			
4:30 – 9:00							

* Catered break during meeting,

ISG - Industrial Steering Group

GSG - Government Steering Group

GTG - Guidelines Task Group

LAMWG - Laser Additive Manufacturing Working Group

ASG - Airframer Steering Group

SWG - Statistics Working Group

FIWG - Fastener Industry Working Group

MTG – Materials Task Group

FTG – Fastener Task Group

GCC - General Coordination Committee

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**3rd MMPDS
GENERAL COORDINATION COMMITTEE
(GCC) MEETING**

DATE: April 17, 2003
PLACE: Las Vegas, NV
TIME: 8:30 a.m.

- I. Introduction of Attendees
- II. Chairman's Remarks
- III. Approval of the 2nd MMPDS Meeting Minutes
- IV. General Discussion Items
 - A. ISG Status Report
 - B. Publication Schedule for MMPDS-01 and MIL-HDBK-5J
- V. Chapter 1 General Items and GCC Special Presentations
- VI. Summary Review of MMPDS Agenda Items
- VII. MMPDS Wrap Up Discussions
 - A. Selection of Next Meeting Location & Time
 - B. Closing Comments

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**Agenda Items
for
3rd MMPDS Coordination Meeting
in Las Vegas, NV
April 14-17, 2003**

CHAPTER 1. GENERAL

- No Item No. **AMS Coordination. (GCC)** J. Jackson, Battelle will provide a status report of draft AMS specifications and current AMS specifications being revised. The spring AMS meeting will be held the week prior, April 7-11th in Reno, NV.
- No Item No. **Meetings of Potential Interest to MMPDS Coordination Members. (GCC)** R. Rice, Battelle, will review the enclosed list of meetings. Note that the current list also contains relevant technical society websites.
- No Item No. **Special Presentation. (ISG & SWG)** C. Davies, FAA Technical Center, will give a special presentation Monday afternoon during the joint GSG/ISG open session on Current and Pending MIL-HDBK-17 Statistical Analysis Methods and Data Requirements. C. Davies and R. Rice will also lead a discussion Tuesday morning in the SWG on future interaction/collaboration between the MIL-HDBK-17 and MMPDS subcommittees responsible for statistical guidelines development.
- No Item No. **Special Presentation. (ISG & GTG)** A. Quilter, ESDU, will give a special presentation on Monday afternoon during the open session of the ISG on Overview of The Metallic Materials Data Handbook (ESDU 932). A. Quilter and R. Rice will also lead a discussion on Tuesday afternoon in the GTG on whether there is a need for resolution of any of the differences in the guidelines of MMPDS and ESDU 932.
- No Item No. **Special Presentation. (MTG)** (Speaker TBA) A special presentation will be given Wednesday morning in the MTG on New Alloys, Tempers, and Product Forms of Interest to the European Aircraft and Aerospace Community.
- No Item No. **Special Presentation. (ISG & GCC)** J. Bakuckas, FAA Technical Center, will give a special presentation on Monday afternoon during the open session of the ISG on the MMPDS Management Plan. J. Bakuckas will also give an abbreviated version of this presentation on Thursday morning during the GCC.
- No Item No. **Special Presentation. (GCC)** R. Yarges, FAA Transport Airplane Directorate (TAD), will give an update on the current 25.613 rulemaking activity, which addresses revised requirements for material strength properties and design values for transport airplanes.
- No Item No. **Special Presentation. (LAMWG)** R. Rice will give a special presentation after the break Wednesday afternoon on Statistical Analysis of LAM Ti-6Al-4V Static Strength Properties. Although not currently formalized for this agenda, other LAMWG participants will also give technical presentations on recent efforts to develop design allowable properties for LAM material.

- No Item No. **Government Steering Group. (GSG)** J. Bakuckas will provide a GSG status report at the GCC meeting on Thursday morning. He will also give a brief presentation on the MMPDS management plan. A closed meeting of the GSG will be held Monday, April 14, beginning at 1:00pm.
- No Item No. **Airframer Steering Group. (ASG)** J.T. Amin, Lockheed, will provide a ASG status report at the GCC meeting on Thursday morning. A brief closed meeting of the ASG will be held at approximately 4:30pm on Monday afternoon, following adjournment of the ISG/GSG joint meeting. The ASG will review the guideline proposal included in the agenda package under Item 94-26, "Production Methods and Their Impact on Design Allowables". The ASG will also review the No Item No., "Review of Currency of Existing Database on Legacy Alloys". They will review the acceptability of both items from the standpoint of the participating aircraft manufacturers.
- 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 11th ISG meeting will be held on Monday, April 14th. The morning session will be limited to representatives of ISG 2003 member companies. However, the afternoon session will be open to other Handbook coordination-meeting attendees who would like to attend. The preliminary agenda of 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, April 15th. A copy of the GTG meeting agenda is attached.
- No Item No. **Materials Task Group. (MTG)** J. Jackson and R. Rice will lead discussion of new and continued materials items for Chapters 2 through 7 in the Materials Task Group meeting on Wednesday, April 16th. A copy of the MTG meeting agenda is attached.
- No Item No. **Statistics Working Group. (SWG)** R. Rice will lead discussion of new and continued statistics items at the Statistics Working Group meeting on Tuesday, April 15th. A copy of the SWG meeting agenda is attached.
- No Item No. **LAM Working Group. (LAMWG)** R. Rice and P. Kobryn, AFRL, will lead technical discussions at the Laser Additive Manufacturing Working Group, which will begin at 3:15pm on Wednesday, April 16th.
- No Item No. **Trademark Identification. (GTG)** J. Jackson will review the enclosed agenda item.
- No Item No. **Review of Currency of Existing Database on Legacy Alloys. (SWG & MTG)** R. Rice will review the enclosed agenda item.

CHAPTER 2. STEEL ALLOYS

No Item No. **Review of Shear Ultimate Strength Data Integrity for Steel Alloys in MMPDS. (MTG)** J. Jackson will review the enclosed brief agenda item.

CHAPTER 3. ALUMINUM ALLOYS

Item 00-10 **Reference for Weldability of Aluminum in Section 3.1.3.4. (MTG)** J. Jackson will review the enclosed item.

Item 01-08 **Update Test Methods for Plane-Stress Fracture Toughness Data. (MTG)** R. Rice will give a status report on this item.

Item 01-11 **A- and B-Basis Properties for 7250-T7451 Aluminum Alloy Plate. (MTG)** J. Jackson will provide a status report on this item. The AMS specification has been re-submitted to SAE to be sent to the ASC (Aerospace Council). Bearing and shear derived property data in the L orientation are still needed on this alloy.

Item 01-16 **A- and B-Basis Tensile Properties for 7249-T76511 Aluminum Alloy Wide Extrusions. (MTG)** J. Jackson will provide a status report on this item. The AMS specification has been re-submitted to SAE to be sent to ASC. Needed LT shear and bearing data are being generated. If these data are supplied before March 24th a handout will be prepared and discussed covering the development of derived shear and bearing properties for this material.

Item 02-02 **Reduced Beryllium Replacement for D357-T6. (MTG)** J. Jackson will review the enclosed agenda item. Alcoa has data that they will be supplying from various foundries.

Item 02-03 **Reduced Beryllium Replacement for A357-T6. (MTG)** J. Jackson will review the enclosed agenda item.

Item 02-14 **Design Minimum Properties for 7150-T77511 Extruded Wide Panels. (MTG)** J. Jackson will review the enclosed agenda item. This item was approved at the 101st MIL-5 meeting pending specification approval. AMS 4325 specification for this material was published January 22, 2003.

No Item No. **Stress Strain Curves for 7055-T76511 Aluminum Extrusions. (MTG)** J. Jackson will present a handout item.

No Item No. **A- and B-Basis Properties for 7055-T76511 Aluminum Extrusions. (MTG)** J. Jackson will present the enclosed agenda item which addressed extrusions from 0.500 to 3.000 inches thick. Revision A of AMS 4336 has been approved by SAE/AMS but still must be sent to ASC and be published before this item is approved.

- No Item No **Stress Strain Curves for 2297-T87 Plate. (MTG)** J. Jackson will review the enclosed agenda item.
- No Item No **Compression Properties for 2297-T87 Plate. (MTG)** J. Jackson will give a status report.
- No Item No. **A- and B-Basis Properties for 6013-T6. (MTG)** Material is produced under AMS-WW-700/6 and AMS-T-7081. S. Fantle, Boeing has requested data from Pechiney. Assuming the required additional data are received by 3/24, a handout will be prepared and reviewed on this item.
- No Item No. **Addition of S-Basis Minimum Properties for 7075-T76 and 7075-T7651x Extruded Rod, Bar, and Shapes for 1.00- to 4.00-Inch Thickness Range. (MTG)** R. Rice will present the enclosed agenda item..

CHAPTER 4. MAGNESIUM ALLOYS

No Chapter 4 agenda items or handouts currently planned.

CHAPTER 5. TITANIUM ALLOYS

- Item 99-11 **A- and B-Basis Design Mechanical Properties for Ti-6-4 Castings. (MTG)** J. Jackson (static properties) and R. Rice (fatigue, crack growth, fracture toughness properties) will present the enclosed agenda item. AMS 4992 specification was published October, 2002.
- No Item No. **Expansion of Plane Strain Fracture Toughness Properties Included in Table 5.1.2.1.1 of MMPDS. (MTG)** R. Rice will review a handout on this item.
- No Item No. **Update Figure 5.4.1.2.7 for Ti-6Al-4V to Comply with Current Creep Property Guidelines. (MTG)** R. Rice will review a handout on this item.
- No Item No. **Mechanical Properties for Ti-6Al-4V Plate Produced by Electron Beam Melt. (MTG)** J. Jackson will review the enclosed agenda item.
- No Item No. **Review of Shear Ultimate Strength Data Integrity for Titanium Alloys in MMPDS. (MTG)** J. Jackson will review the enclosed agenda item.
- No Item No. **Consideration of Inclusion of Design Minimum Strength Properties in MMPDS for LAM Ti-6Al-4V Produced in Accordance with AMS 4999. (MTG)** R. Rice will give a special presentation based on the enclosed agenda item.

CHAPTER 6. HEAT RESISTANT ALLOYS

- No Item No. **Reevaluation of Stress Rupture Analysis Displayed in Figures 6.3.10.1.7(a) and (b) of MMPDS-01. (MTG)** R. Rice will review a handout on this item.
- No Item No. **Update Figure 6.3.7.1.7 for Rene 41 to Comply with Current Creep Property Guidelines. (MTG)** R. Rice will review a handout on this item.
- No Item No. **Update Figure 6.4.1.1.7 for L-605 to Comply with Current Creep Property Guidelines. (MTG)** R. Rice will review a handout on this item.
- No Item No. **Review of Shear Ultimate Strength Data Integrity for A-286 Alloy in MMPDS. (MTG)** J. Jackson will present this brief agenda item.

CHAPTER 7. MISCELLANEOUS ALLOYS AND HYBRID MATERIALS

No Chapter 7 agenda items or handouts currently planned.

CHAPTER 8. STRUCTURAL JOINTS

- No Item No. **Fastener Task Group. (FTG)** N. Ontko, AFRL/MLSC will lead the FTG meeting, which will be held beginning at 8:30am on Wednesday, April 16th. The FTG meeting will be closed from 10:15am until at least 12:00 noon, possibly extending until the afternoon break. FIWG members will meet on their own during the FTG closed session, as noted below.
- No Item No. **Fastener Industry Working Group. (FIWG)** The FIWG will meet with the FTG on Wednesday, April 16th, with the exception of the closed FTG session noted above. The FIWG will meet separately during the closed FTG session, when they will independently discuss current and proposed new Chapter 8 items. The FIWG and FTG will meet concurrently at the close of the day to resolve any outstanding issues and to identify key FTG and FIWG action items for the next 6 months.
- No Item No. **Clarification of Note Usage in Table 8.1.2.1(c). (FTG)** R. Goode will review the enclosed agenda item.
- No Item No. **Possible Removal of Footnote in Table 8.1.3.1.2(n). (FTG)** R. Goode will review the enclosed agenda item.
- No Item No. **Collection and Analysis of New Fastener Data to Refine and Validate New Fastener Analysis Guidelines. (FTG)** R. Goode will lead the discussion on the enclosed agenda item.
- No Item No. **Incorporation and Implementation of a Sunset Clause for Mechanical Fasteners in MMPDS. (FTG)** R. Goode and N. Ontko will lead the discussion on this handout item.

CHAPTER 9. GUIDELINES FOR THE PRESENTATION OF DATA

- Item 94-26 **Production Methods and Their Impact on Design Allowables. (GTG) R.**
Rice will review the enclosed agenda item.
- Item 98-3 **Procedure for Analyzing Lower Tail Censoring. (SWG) R.** Rice will give a
status report on this item.
- Item 01-01 **Regression for Skewed Data. (SWG) R.** Rice will review a handout on this
item.
- Item 01-02 **Proposal to Change Backoff Limit to Percentage of Standard Deviation in
the Sequential Weibull and Sequential Pearson Procedures. (SWG) R.** Rice
will review this agenda item.
- Item 01-04 **Reevaluation of Statistical Procedures for Calculations of S-Basis Design
Values. (SWG) R.** Rice will review a handout on this 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 item.
- No Item No. **Define Lower Bound Properties for Elongation. (SWG) R.** Rice will provide
a status report on this item.
- No Item No. **Determination of A- and B-Basis Allowables for Cases Where the
Calculated T_{99} Value is Greater Than the Specification Minimum Value.
(GTG) R.** Rice and S. Fantle will review a handout on this item.
- No Item No. **Analysis and Presentation of Fatigue Crack Growth Data. (SWG)**
R. Rice will present a handout on this item.
- No Item No. **Modification of Guidelines Regarding Electronic Submission of
Certification Data for Definition or Verification of Design Allowables.
(GTG) R.** Rice will present a status report on this item.
- No Item No. **Update and Addition of Example Problems in Chapter 9 Guidelines.
(GTG) R.** Rice will review a handout on this item.
- No Item No. **Calculation of Indirect Minimums. (GTG) J.** Jackson will present the
enclosed agenda item.