

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
04-21	Fastener Tables of Sunset Review Interest	On Hold	Not Covered	This item is on hold, pending items 23-27, 23-28, and 23-29
08-23	Sunset Review of Table 8.1.3.2.2(c), NAS1921C	On Hold	Not Covered	This item is on hold, pending items 23-27, 23-28, and 23-29
09-13	Sunset Review of Table 8.1.3.2.3(a), MS21140	On Hold	Not Covered	This item is on hold, pending items 23-27, 23-28, and 23-29
11-05	AMS Coordination - Volume I	Status	Continue	C. Shannon gave a status update.
11-38	Sunset Review of Flush Head, Mechanical Lock Spindle Blind Rivet Table 8.1.3.2.2(e) NAS 1921 M	On Hold	Not Covered	This item is on hold, pending items 23-27, 23-28, and 23-29
12-89	Target Materials for Propulsion Applications	Status	Continue	D. Hall gave a status update. Battelle has compiled and reviewed the specs of interest. A copy of the table will be included in the minutes.
13-34	Addition of AMS 4919 Ti-6-2-4-2 Plate Properties	Status	Continue	C. Shannon gave a status update.
13-50	ASTM Coordination	Status	Continue	Not covered due to time constraints. A status update will be included in the minutes.
14-28	Sunset Review of Table 8.1.4.2(i), LGPL2SC-V Pin, 3SLC-C Collar in Clad 7075-T6	On Hold	Not Covered	This item is on hold, pending items 23-27, 23-28, and 23-29
15-13	Clarification of Shear Orientation for Legacy Alloys	Status	Continue	C. Shannon gave a status update. If you would like added to a call for this item please email shannon@battelle.org
15-38	Reevaluation of Degrees of Freedom Calculation for Regression with Effect of Temperature	On Hold	Not Covered	This item is on hold pending revision of the effect of temperature method.
16-12	Identifying Basis of Fastener Shear Strength on Remaining Tables	Agenda	Continue	The FTG discussed this item at the Virtual Session on 3/12/24. Data collection from fastener manufactures continues. Battelle to reach out to manufactures who are not currently MMPDS members.
16-13	Corrections to Table 8.1.3.2.2(c) NAS 1921C	On Hold	Not Covered	This item is on hold, pending items 23-27, 23-28, and 23-29
16-23	Re-evaluate Guidelines for Effect of Temperature Curves	On Hold	Not Covered	This item is on hold pending revision of the effect of temperature method. There may be an agenda for the Fall meeting.
17-23	Legacy Alloy Review Strategy – Near Term	Handout	Continue	9.2.2.2 - OEMs are still interested in this item. Strike the red sentence. 9.2.2.3 - Need to clarify that this is not a full data set that needs submitted every 10 years. Bruce Thomas mentioned that "proficiency test programs" are already doing testing to NADCAP, is it possible for them to rotate materials and test MMPDS materials? Needs to be a broader requirement that doesn't just impact manufacturers that are MMPDS members. J. Mantione (ATI) mentioned that AMS spec would need specific testing requirements and orientations added to the spec. This would be an extensive effort. Easier for manufactures to test in small batches than test all data at once.
17-45	Effect of Temperature Curves for 2395-T84 Extrusion	On Hold	Not Covered	This item is on hold pending revision of the effect of temperature method. There may be an agenda for the Fall meeting.
17-52	Review Section 9.6.1 - Load and Strain Control Fatigue	Handout	Continue	B. Ananthasayanam (Honda Aero) gave a presentation. A copy of the slides will be included in the minutes. There was significant discussion about maximum likelihood methods.
17-61	Revising R-curve Requirement in Table 9.2.4	Status	Continue	Not covered due to time constraints.
17-62	Revising Fatigue Requirement in Table 9.2.4	Status	Continue	Not covered due to time constraints.
17-63	Use of Box-Cox Transformation in the Fitting of Fatigue Data	Status	Continue	Not covered due to time constraints. A status update will be included in the minutes.
19-19	Consideration of a new Equivalent Stress model for Load-Controlled Fatigue	Status	Continue	Not covered due to time constraints.

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
19-25	Guidelines for Derived Properties for Legacy Alloys	On Hold	Not Covered	On hold pending resolution of Item 17-23 Legacy review. Decisions will be made on a case-by-case basis.
19-34	Waive Requirement for Bearing Properties When Appropriate	Handout	Continue	This item was discussed during the PSG. PSG to investigate when a waiver could be requested. Waiver approval would go through the MTG or ETTG. ASG should be involved to ensure ASG does not use the material. See Item 24-46.
19-37	Establish a Guideline for Reinserting Chapter 8 Tables. (Solid Fasteners)	On Hold	Not Covered	This item is on hold, pending items 23-27, 23-28, and 23-29
19-38	Process Intensive Materials & Technologies SDO Coordination	Status	Continue	D. Hall gave a status update on activities with SDO's since the last meeting as well as upcoming events. List will be provided with the minutes.
20-10	Upgrade of Secondary Properties of 7075-T76511 Aluminum Alloy Extrusions	Status	Continue	C. Shannon gave a status update. Material is currently undergoing testing. Battelle to check on new data vs. upgrade.
20-13	CMH-17/MMPDS Coordination & Collaboration	Status	Continue	D. Hall gave a brief status update on collaboration activities with CMH-17.
20-16	MMPDS & Additive Metals - Program Plan	Handout	Continue	D. Hall presented this item and gave an update on the current phase of the V2 program plan. Slides were included in the Handout.
20-30	Components of Variance Analysis of AM, Cast, & Wrought Ti 6-4	Handout	Continue	W. White gave a presentation on this item. Slides will be included in the minutes.
20-35	Alloys Requested for Analysis	Status	Continue	C. Shannon gave a status update. Please see minutes and send data if available.
20-36	Request for Secondary Property Data	Status	Continue	C. Shannon gave a status update. Please see minutes and send data if available.
21-02	Section 9.5 & 9.6 for Volume II	Status	Continue	D. Hall gave a brief status update on ongoing efforts. Battelle is working internally to update Section 9.5.
21-18	Updates from V2WG Sub-teams	Status	Continue	The Chairs of each Volume II Working Group subteam gave brief status updates on their recent activity.

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
21-20	Microstructural Submittal Requirements	Agenda	Approved w Changes and Closed	<p>D. Hall presented this item. Proposals 1, 2, 3, 4, 6, and 7 approved with changes and closed. Open NEW ITEM to continue work on proposals #5, #8, and #9 and additional content from S. Cordner.</p> <p>More detail:</p> <p>Proposal #1 - Approved.</p> <p>Proposal #2 - Approved with Changes. Change "baseline" to "nominal state". Will circle back to "flaw" and clarify for minutes. Suggestion to add quotations around "micro magnification". . . etc. Group decided to keep both scale bar and magnification factor. Need to add sentence that says what etchant used. Agreed with representation instead of sound basis. No action on bullet #8 from K. Wertz's email.</p> <p>Proposal #3 no objections.</p> <p>Proposal #4 approved with changes. "The minimum area prepared on each MES for evaluation and imaging of bulk material shall be in accordance with 9.2.1.6 (e.g., >1cm2)".</p> <p>Proposal #5 continued. See ETTG slides for corrected heats and lots. Add footnote to 18 120 and 60 that this is the number of micrograph images submitted. Put in pointer to section 9.3.5. The GTG also discussed changing this from "Micrographs" to "Micrograph Sets" and adjusting the counts accordingly. Corrections to heat and lot counts were made.</p> <p>Proposal #6 approved.</p> <p>Proposal #7 approved with changes. Agreed to remove highlighted sentence (may be the same thing, but I have a note to "take out the data submission paragraph"). Agreed with addition of red sentence. Take out "For isotropic materials" and move this sentence down to next paragraph. Will show in minutes. Take out "from each build". Keep paragraph that that beings with "It is strongly recommended that that all build cycles contain..." At the end of this paragraph add sentence "The location from which an MES is extracted should be varied from build to build throughout the volume". Combine with above sentence to make a paragraph. Make same change to other place where this paragraph was moved. S. Cordner says that there is additional content was not included. Create a NEW ITEM to add content from S. Cordner as well as continued Proposal #5.</p>
21-40	Impact of Powder Re-use on AMS7000 625 LPBF	Status	Continue	<p>W. White gave a presentation on this item. Slides will be included in the minutes.</p>
21-42	Update for Haynes 230 Strength vs. Temperature curves	Handout	Continue	<p>D. Hall gave a status update during the PSG. The PSG agreed upon the analysis approach.</p> <p>D. Hall presented this handout during the MTG. No comments. An agenda will be prepared for the Fall meeting.</p>
21-46	MMPDS Vol 2, Certification & Qualification "Further Showing"	Agenda	Approved w Changes and Closed	<p>D. Hall presented this item. Any Section, Figure numbering will be corrected for minutes.</p> <p>Replace "As will be discussed in Section 10.2.1" with "In the following sections,".</p> <p>Section 10.2.3 should be: for PIM included in Volume II (e.g. AM).</p> <p>For Section 10.2.4.3: Change to "In contrast to conventional materials, where regulators do not require further showing to validate the use of A- and B-basis material allowables published in Volume I, ...Strike "acceptable ranges for KPVs". Change to "The One-Sample Acceptance Test with a Margin, discussed in Section 10.6, provides one method for an organization to show they can produce AM material with bulk material allowables that meet or exceed an established minimum standard."</p> <p>For Section 10.2.4.4. Change "only parts or articles" to "only parts". Change "reincorporation and reuse" to "recovery, reconditioning and preparation for reuse".</p> <p>Add to last paragraph of 10.2.3 "Further showing may differ between regulators".</p> <p>In 10.2.4.6 change to "Ideally, post process treatments will produce... "</p>

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
21-48	Periodic Testing Options for Specifications	Handout	Continue	See summary for 17-23.
21-52	Removal of 7075-T6xxx Material Allowables for Thick Sections	Agenda	Approved and Closed	Changed "Design" to "Material" in the title. No objections to proposals.
21-53	Analysis of 718 Laser Powder Bed Fusion per AMS 7024	Status	Continue	C. Shannon gave a brief status update. The title specification was changed from AMS 7038 to 7024. May close this item with no action if Velo3D does not proceed forward with original plan. Battelle will continue to coordinate efforts with the SAE AMS AM Metals Committee and the AMDC.
22-03	Fasteners Requested for Analysis	Status	Continue	The FTG discussed this item at the Virtual Session on 3/12/24. New Fasteners/Sheet combinations were not requested by the FTG.
22-13	V2, 10.8 Considerations for the Development of Design Values	Agenda	Approved w Changes and Closed	D. Hall presented this item. In 10.7.2 change "accounted for in further showing" to "accounted for in the development of design values". Add this sentence to end of the paragraph: "Other machine specific factors, such as gas flow direction across the bed, may also influence thermal history"
22-15	Test Plan for Fastener MS20426AD in 2024-T42	On Hold	Continue	The FTG discussed this item at the Virtual Session on 3/12/24. A. Baker (Spirit Aerosystems) to check if coupons can be provided. If not, a separate fastener/sheet combination may be pursued.
22-18	Section 9.2.1.5: Stress-Strain Properties	Handout	Closed w no Action	This item is no longer needed. See item 24-34 to align stress-strain content in both volumes.
22-33	Microstructure Information Accessibility for MMPDS, V2	Status	Continue	D. Hall gave a brief status update. Battelle will contact licensees for options to share micrographs with customers that purchase Volume II.
22-38	Guidelines for Re-Inserting Chapter 8 Tables (Blind Fasteners)	On Hold	Continue	The FTG discussed this item at the Virtual Session on 2/27/24. The FTG is investigating lot release data as a method of returning tables to the handbook that were removed due to not receiving sunset confirmation data. NEW ITEM (24-43) created to determine if sunset fastener specifications are still active.
22-46	Update Stress Corrosion Data for Tables in 3.1.2	Status	Continue	C. Shannon gave a status update. M. Niedzinski gathering additional data.
22-53	Review of Table 9.2.4.1	Agenda/ Handout	Approved and Closed	W. White presented this item. Sentences in 9.2.4.3 conflict. Agreed to remove the last two sentences in first paragraph to be consistent. V2 does not have these and does not need changed. The editorial change (in MMPDS-2024) to Section 9.3.1 was also approved.
23-04	V2, 10.3 Overview of Qualification	On Hold	Not Covered	This item is on hold pending resolution of items 21-46 and 22-13
23-11	Section 10.6 Consensus Standards	On Hold	Not Covered	This item is on hold pending resolution of items 21-46 and 22-13
23-14	Revision of Ti-6Al-4V Die Forging Property Table	Agenda	Continue	A telecon will be scheduled prior to the Fall meeting. Abram voiced concerns about Table 5, supplier F COV being much higher than the other, but min was still approximately 130 ksi. Similar question for Table 7 supplier F where more data was required. Bruce Thomas suggesting testing for combinability to verify forced pooling.
23-16	2050 SCC Test Data	Status	Continue	C. Shannon gave a status update. An agenda will be prepared for the Fall.
23-19	Review of 9.7 for Volume II	Status	Continue	C. Reakes gave a brief status update. See discussion on Item 24-25 - Friction Stir Welding.
23-20	Section 9.8 & 9.9 for Volume II	Status	Continue	D. Hall gave a brief status update on ongoing efforts.
23-22	6061-RAM2 per AMS 7054	Status	Continue	C. Johnson (Elementum3D) gave a brief status update. Currently focusing on process and specification. Will update item title to include both powder and material spec (7054/7058)
23-25	Additional Content Required to Publish Material Allowable Entries in Volume II	Status	60 Day Approval	No comments were received by the December 30, 2023 60-Day Approval Deadline. This item is now closed.
23-27	Modification of Sunset Procedures for Swaged Collar / Threaded Fasteners	On Hold	Continue	The FTG discussed this item at the Virtual Session on 2/27/24. Possibility of adding a "legacy review" that uses lot release data. See minutes for Item 23-28 for more information.
23-28	Modification of Sunset Procedures for Solid Rivets	Agenda	Continue	The FTG discussed this item at the Virtual Session on 2/27/24. Fastener manufacturers - current version of the Sunset Clause not burdensome. Possibility of adding a "legacy review" that uses lot release data.

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
23-29	Modification of Sunset Procedures for Blind Fasteners	On Hold	Continue	The FTG discussed this item at the Virtual Session on 2/27/24. C. Reakes to check old Howmet sunset data against new multiple regression method. Possibility of adding a "legacy review" that uses lot release data. See minutes for Item 23-28 for more information.
23-30	Minimum Spec Content Requirements for Fasteners (like 9.2.2)	Agenda	Continue	The FTG discussed this item at the Virtual Session on 3/12/24.
23-33	FCGR Variable Load Analysis Methods	Status	Continue	D. Hall gave a status update during the MTG. There are plans to work with NASGRO to implement their curve fitting method. K. Wertz would like Battelle to wait until she can discuss with AFGROW users. M. Gorelik mentioned that NASGRO library is becoming more accepted and should avoid duplicate efforts. Footnote tables if the curve is also in NASGRO and calculated using the NASGRO equation.
23-34	Role and Documentation of Specimen Location Used in Indirect Analysis	Status	Continue	Not covered due to time constraints. A status update will be included in the minutes.
23-36	Ch. 8 A-Basis Static Allowables Requirement for Fastener Fatigue Figures	Status	Continue	The FTG discussed this item at the Virtual Session on 3/12/24. Collection of the additional data does not present a large issue. Usefulness of static data in design of fatigued components was discussed. Static allowables would be useful, and potentially mandatory, for FAA approval process.
23-38	Mechanical Property Table Presentation of Test Orientations	Agenda	Approved and Closed	Approved as part of Consent Agenda.
23-42	Upgrade and Expansion of CP-70 Ti per AMS 4921	Agenda	Continue	AMS spec has not been balloted. Break out form from Table 5.2.1.0(c) to have Round and "Not Round"(will be appropriate shape once Battelle verifies). "Not Round" column would be S-Basis. One data point was observed to be non-conforming in RA (17.4%). Following the meeting, Battelle checked the raw data and noted that there were 4 other tests from that lot with RAs ranging from 39-42%.
23-43	Correction to 7349-T76511 Extrusion Mechanical Properties	Status	Continue	C. Shannon gave a status update. Waiting on data.
23-44	Derived Properties to Include S-Basis	Agenda/ Handout	Continue	W. White presented this item. Battelle will incorporate comments received on this item into an agenda with proposals for the Fall meeting. GCC requested an updated title.
23-46	NIMS/NEDO Intro Presentation	Status	Continue	Not covered. D. Hall will reach out for a status update.
23-48	Ti-6Al-4V per AMS 7004/7005	Status	Continue	C. Shannon gave a brief status update. Plan was approved at previous meeting. Battelle will continue to work with Norsk as they generate data.
23-52	Clarification of Typical Yield Joint Curve	Agenda	Continue	The FTG discussed this item at the Virtual Session on 3/12/24. C. Reakes presented a list of editorial changes implemented in MMPDS-2024. C. Reakes also presented a list of proposed changes for MMPDS-2025. The FTG will review Chapter 9 to ensure the changes are accurate and suggest additional changes as needed.
23-53	Fatigue Curve for Ti-6-2-4-2	Status	Continue	C. Reakes gave a status update. An agenda will be prepared for Fall.
23-54	Review of Fracture Toughness Tables	Agenda	Continue	C. Reakes presented this item. J. Scheuring would like to correct the alloy (should be 7049-T7351 per AMS 4200) before removing so that corrected version gets published in MMPDS-2025. The table will then be removed for MMPDS-2026. Double check temper as well. Significant interest in 7175 tempers (used heavily in Europe). K. Macziewski (Arconic) has requested a copy of the report. No agreement on removing these yet. Agreed to corrections to Table 3.1.2.1.4 .
23-55	Definitions in Volume I	Status	60 Day Approval	Approved as part of Consent Agenda.
23-56	Use of Columns in Volume II	Status	Continue	D. Hall gave a brief status update. No effort at this time.

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
23-57	MMPDS Bylaws: Clarify GCC roles and responsibilities.	Agenda	Continue	D. Hall presented this item. Will incorporate comments received on this item into an agenda with proposals for the Fall meeting. More clarification needed that the GCC is entire week and that task groups approve things and GCC meeting at the end of the week is used as a summary and to resolve conflicts between task groups. Change "fastened" to "fastener". Need to change all instances of "design allowable" and "design value" to material allowable. 1.02 (2) does not include NASA. 4.02 #2 Should say minutes are approved 30 days after the minutes are released unless comments are received.
23-58	Update Subscripts in Indirect Equation	Agenda	Approved and Closed	W. White presented this item. All changes will be shown in the minutes.
23-59	Scenarios for Upgrading from S-Basis to C/D-Basis	Handout	Continue	D. Hall presented this item. Please contact Battelle if you have feedback.
23-60	Definition of S-Basis for Volume I	Agenda	Continue	D. Hall presented this item. Feedback will be incorporated into an agenda for the Fall meeting.
23-61	V2WG Coordination & Direction	Status	Continue	<p>S. Cordner and M. Gorelik gave a presentation on the V2 working groups and possible tasks for the future. Confirmed that all three sub teams still have things to work on. No reorg needed at this time.</p> <p>S. Cordner presented a list of data he has (various L-PBF and DED materials at a variety of temperature ranges). None has a public specification but there could be. NASA Marshall does not have time or interest to pursue a spec, but could give the data to someone if there is interest in sponsoring a specification. A copy of the list of data will be included in the minutes. It was suggested that these ideas be floated to the SAE AMS AM Committee.</p> <p>A new item was created to investigate options for reviving the Preliminary Material Properties (PMP) Handbook (see item 24-46) and putting data not meeting V1 or V2 requirements into this volume. A copy of the original PMP can be found at the following link: https://apps.dtic.mil/sti/tr/pdf/ADA375717.pdf</p>
24-01	7140-T7451 Plate: Review 8-10 Inch Tensile Minimums	Agenda	Continue	Discussion that the current methods used in this case do not represent the metallurgical reality. The MTG would like to actually see the final table as it will be. Battelle will provide a clearer proposal. Constellium will review the data to check for outlier.
24-02	Update to Indirect Method to Reduce the Occurrence of T99 > T90	Agenda	Approved w Changes and Closed	W. White gave a presentation on this item. Item approved with editorial corrections. Slides will be included in the minutes. A NEW ITEM will be opened for further research. "S allowable" should be "S-Basis allowable". Also a typo in caption of Figure 1. T90 and T99 reversed. Will fix in minutes.
24-03	Equations for Normal Distribution k-factors	Agenda	Continue	D. Hall presented this item. The content of this item will be included in the ongoing reorganization of Section 9.5. If you are interested the Mathcad spreadsheet tool for normal distribution, please let Battelle know. Other estimating equations were provided after the meeting. References will be included in the Minutes.
24-04	Ti-6Al-4V JMADD Test Plan	Handout	Continue	NIAR gave a presentation that included an overview of the JMADD program. A copy of the slides will be included in the minutes. NIAR presented plan for S-Basis and plan C/D-Basis. NIAR requested a waiver for the 5-machine requirement (C/D -Basis plan), which was put in place after NCAMP began planning the JMADD program which occurred in early 2020. Currently, the JMADD dataset meets all other MMPDS requirements (heats, lots, builds, etc.) except for the 5 machine requirement. NIAR will be adding a 4th machine through the FAA JMADD expansion program using a different machine make and model through an equivalency program. ETTG did not find an issue with the test plan for S-Basis but will continue to review. Waiver for C/D-Basis 5 machine requirement will continue to be considered.

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
24-05	Ti-6Al 4V GAMAT Test Plan	Present.	60 Day Approval	A. Steevens (Boeing) gave a presentation. A copy of the slides will be included in the minutes. Purpose of the presentation was to show the GAMAT program test matrix and show how MMPDS data generation requirements are being met. ETTG agreed to a 60 day approval for test plan. There was a note that heat treatment will be finalized for the public spec.
24-06	Update to Section 9.3 Data Submission Guidelines	Status	Continue	Not covered due to time constraints. Battelle is updating their internal database which will influence data submission templates that will be provided upon request.
24-07	Review Appendix A.3 Definitions - Format	Handout	Continue	D. Hall presented this item. Will incorporate feedback and prepare an agenda for the fall meeting. GTG voted to use (Volume I only) or (Volume II only) instead of stars and put after the term since alphabetical. Suggestions to reference specs that we pulled definitions from. Also suggested to put in definition of flaw here. S. Cordner (NASA) recommended ASTM E1316-23 as a source for the definition of flaw. Suggested to add terms used from other sources but point to the source for the definition.
24-08	Update Table 2.6.4.0(b) per AMS 5578	Agenda	Approved and Closed	C. Shannon presented this item. No Comments
24-09	Update Sections 9.1-9.3 in Volume I to be consistent with the reorganized content in Volume II.	Handout	Continue	D. Hall presented this item. Please review and send comments to Battelle. An agenda will be prepared for the Fall meeting.
24-10	Bearing Edgewise Clarifications in Ch. 3 & 5	Agenda	Approved and Closed	C. Shannon presented this item that was reviewed in both the ASG and MATSSG. Neither group had objections to approving the suggested clarifications. Officially approved and closed in the GTG.
24-11	Section 1.4.6 Corrections	Agenda	Continue	C. Shannon and D. Tummons (Boeing) presented this item. This item was also reviewed in both the ASG and MATSSG. An agenda with the proposed replacement figure will be prepared for the Fall meeting.
24-12	2124 Aluminum Alloy FCGR Corrections	Agenda	Approved w Changes and Closed	C. Reakes presented this item. No comments. Editorially revised figure axis to Fatigue Crack Growth Rate. Based on discussions during the meeting, curves have been truncated to the data range where applicable.
24-13	Definition of Bulk Material	Agenda	Continue	D. Hall presented this item. Working definition as a result of this meeting is "Bulk Material- the portion of a material product having properties unaffected by local effects of surface, contour, notch geometry, part feature, etc. Bulk material properties may display anisotropy. Some Handbook entries may include specific conditions tested." Feedback will be incorporated and an agenda will be prepared for the Fall meeting.
24-14	Correction to 718 AMS 5664 Minimums	Agenda	Approved and Closed	C. Shannon presented this Item. No Comments
24-15	Correction to 718 Alloy Bar and Forging Tables	Agenda	Continue	B. Thomas (Bombardier) noted that the difference in specifications is a difference in solution heat treatment temperature. MTG does not think it is clear what data ties to which specification and product form. AMS5663 has different specification minimums for forgings and bars.
24-16	Section 9.2.3.5 for Volume II	Status	Continue	Not covered due to time constraints.
24-17	Updates to the OSAT method	Status	Continue	Not covered due to time constraints.
24-18	Use of the Term "Allowable" for Fatigue and "Allowables" from Various Sources	Status	Continue	M. Gorelik (FAA) gave a presentation. Slides will be included in the minutes.
24-19	718 FCGR Corrections	Agenda	Approved and Closed	C. Reakes presented this item. No comments. It was noted that temperature only included in legend if not room temperature or if there are multiple curves not all at room temperature.
24-20	Update Use of Proportional Limit and Ftp in V1 and V2	Handout	Continue	D. Hall presented this item. Will continue working on this for the Fall meeting. There was a comment that FTP may imply a "statistically derived limit". Might need to replace all instances of this with "proportional limit".

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
24-21	Update High Strength Steel Tables per AMS 2759/3	Agenda	Approved w Changes and Closed	C. Shannon presented this item. The title was corrected from AMS 2700 to AMS 2759/3. Delete Condition line- in Table 2.5.3.0(b). Change "Ageing Temperature" and "Condition". Change "Temper" in other tables to "Condition".
24-22	Correction to 7050 FCGR Tables and Figures	Agenda	Approved w Changes and Closed	C. Reakes presented this item. Orientation missing on Figure 3.7.5.2.9. Will be corrected for the minutes.
24-23	Correction to 7075 FCGR Tables and Figures	Agenda	Approved w Changes and Closed	C. Reakes presented this item. Figure 3.7.10.2.9(a1) needs truncated for blue data points. Will be corrected for the minutes. Correct "Ratio" to "Rate" where applicable.
24-24	AMS 4413 Thickness Range Expansion	Status	Continue	C. Shannon gave a status update. An agenda will be prepared for the Fall.
24-25	Friction Stir Welding	Handout	Continue	D. Hall presented this item. Purpose of this item is to remind the group what was done in the past. Effort stopped because they could not get a spec published. Asked the group if this is the next thing the ETTG should be working on? J. Bennett offered to draft a material for minimum viable product with the intention of taking to AMS Process Committee B. M. Niedzinski will provide old friction stir welding material specifications.
24-26	Corrections to 2024 Property Tables	Agenda	Approved w Changes and Closed	Do not adjust table values for Clad 2024 T361 and T861. Keep 0.5. Committee believes they were purposefully reduced for the clad.
24-27	V1 Table Format Revision	Agenda	Approved w Changes and Closed	D. Hall presented this item. New format approved. S basis will be shown after A and B-basis columns. NEW ITEM 24-47 opened to address additional concerns and provide more guidance.
24-28	Purpose of A/B vs C/D Material Allowables	Agenda/Handout	Approved w Changes and Closed	D. Hall presented this item. New text approved with changes. Final version will be shown in the minutes. Will add "A/B basis and C/D basis are statistically the same. The C/D basis serves as a reminder..." at the beginning of each instance.
24-29	Update Figure 9.4.2(a)	Agenda	Approved and Closed	Approved as part of Consent Agenda
24-30	Consent Agenda - 43rd MMPDS GCC	Agenda	Approved and Closed	D. Hall presented this item.
24-31	Section 9.7 Restructure and Clean-Up	Handout	Continue	The FTG discussed this item at the Virtual Session on 3/12/24. The FTG will review Section 9.7 and recommend changes. C. Reakes will use those recommendations to improve the readability of Section 9.7.
24-32	AMS Coordination - Volume II	Status	Continue	D. Hall gave a status update. He will be attending the SAE AMS AM Committee Meeting in Tokyo, Japan in April. Multiple specs are in progress. Summary will be provided with the minutes.
24-33	Correction to 7475 FCGR Tables and Figures	Agenda	Approved w Changes and Closed	C. Reakes presented this item. Will use Figure 5 for saltwater. Figure 3.7.23.2.9(a) needs truncated. Make sure axis labels are correct for minutes. Should be propagation rate not ratio for all y axis labels. Also check Figure 9 to see if truncation is needed.
24-34	Consolidation of Stress-Strain Analysis Information	Status	Continue	Not covered due to time constraints. A status update will be included in the minutes. Please let Battelle know if you are interested in participating in a working group to reorganize stress-strain content in both volumes.
24-35	Correction to Table 9.6.1.12(b)	Agenda	Approved and Closed	Approved as part of Consent Agenda.
24-36	Correction to Strain Offset in Table 9.2.4	Agenda	Approved and Closed	Approved as part of Consent Agenda. Changed title to "Correction to Strain Offset in Table 9.2.4"
24-37	Corrections to Titanium FCG Figures and Tables	Handout	Continue	C. Reakes asked the MTG to review this item. There will be a proposal at the Fall meeting.
24-38	Bearing Edgewise Requirements	Agenda	Continue	C. Shannon and D. Tummons (Boeing) presented this item. Feedback will be incorporated and an agenda with proposals will be prepared for Fall meeting.
24-39	Corrections to FCG in Chapter 2	Handout	Continue	C. Reakes asked the MTG to review this item. There will be a proposal at the Fall meeting.

43rd MMPDS Coordination Meeting Preliminary Minutes

SORTED BY ITEM NUMBER

Item No	Title	Type	Action	Meeting Description
24-40	Ti 6-4 AM Test Plan per xxx	Present.	Continue	J.Y. Park (Korea Aerospace) gave a brief status update. They are continuing to develop their test plan. Comment from L. Crisler (Textron) to make sure they work with the SAE AMS AM Metals Committee before they start printing specimens to make sure they have interested users. A. Steevens (Boeing) and L. Crisler offered to provide guidance and help them get in touch with the right people.
24-41	Stabilization of AMS 6900 for Ti-5Al-2.5Sn Bar	Handout	Approved and Closed	C. Shannon presented this item. Typo of 5.3.1.0(b) will be corrected to 5.3.1.0(c).
24-42	Addition of Strip Product Form to Tables 5.4.1.0(b1) and (b3)	Handout	Continue	C. Shannon presented this item. Suggestion to editorially remove "strip" from the table. There was disagreement and the MTG would like to look into this item further to determine if strip is applicable. Battelle will contact SMEs on strip production for various metals.
24-43	Fastener Specification Review (Active/Cancelled)	Status	New	New Item from Item 22-38 to determine if sunset fastener specifications are still active.
24-44	Combinability Flowchart for Section 9.5.3	Handout	Continue	W. White presented this item. There were no objections. An agenda will be prepared for the Fall meeting.
24-45	Update Section 9.9.5 Mechanically Fastened Joints	Status	New	New Item from Item 23-52 to update the fastener examples in Chapter 9. The examples currently use the old method.
24-46	Preliminary Material Properties Handbook		New	Battelle will scope out options for resurrecting the PMP Handbook. This additional volume might be used to publish statistically valid material allowables for materials and properties not meeting all requirements for admission to either MMPDS, Volume I or Volume II.
24-47	V1 Table Format Revision Guidelines		New	From Item 24-27. Update Section 9.8.3 and add guidance and clarifications.
24-48	Feedstock Reuse in AM Processes		New	T. LeBrun (Sandia National Labs) gave a presentation on published paper (Standardization Gaps in Powder Feedstock Characterization and Establishing Acceptability for Reuse in Additive Manufacturing- will be included in minutes). "Reuse" should be used instead of "recycle". Will open NEW ITEM to address instances of these terms in V2. There were concerns powder specs in ongoing development that there is no test to confirm that reuse will give the same properties as original materials. Main message of presentation is that better test methods are needed. Link to published paper: https://link.springer.com/article/10.1007/s11837-024-06385-w
24-49	Additions to Microstructure Requirements for Volume II		New	This item was spun off from 21-20. Users would like a table summarizing submittal requirements for microstructure information. Proposals to modify Sections 9.3.5.1 and 9.5.3 were missed when the proposals were prepared for the 43rd meeting. An agenda item will be prepared for the fall
24-50	Remote Observer Options		Closed w no Action	The GCC discussed virtual participation at future meetings. Remote observers will be able to see presentations, listen to discussion in the room, and participate in Chat. Unless a fellow employee is attending the on-site meeting, observers will be charge the full price for the day or day(s) attended.
24-NIN	Discuss NASGRO/MMDPS collaboration	Status		D. Hall and S. Corder (NASA) gave a status update. Will discuss the possibility of sharing models and data between MMPDS and NASA organizations. See minutes for 23-33.