Agenda

DAY 1, 19/09/2023

- Welcome/Introduction
- EASA and FAA update
- Keynote Presentations
- EAAMIRG update
- Working Group Introductions/Plan for Breakout Sessions
- Technical Presentations

DAY 2, 20/09/2023

- Working Group Breakout Sessions (WG1, 2, and 3 run in parallel)
- Technical Presentations

DAY 3, 21/09/2023

- Working Group Breakout Sessions (WG1, 2, and 3 run in parallel)
- Working Group Summaries
- Regulator Panel Session

Note: The WG Breakout Sessions will build upon the previous WG outcomes, see Presentation and Materials from 2022 AM Event, supported by further WG meetings held since the 2022 AM Event.

Working Groups:

Working Group 1: Qualification of AM Parts of No, or Low, Criticality (for use in Certified products)
Co-chairs: S. Waite (EASA), O. Kastanis (EASA), D. Hedges (Hedges AM Solutions)

Description: AM offers to the aviation industry many potential opportunities, including those associated with applications of no, or low, criticality (being of no, or minimal, safety concern either at aircraft or passenger level), e.g. as may be of interest to some cabin interiors supplier organisations, design organisations supporting MROs etc. Noting the novelty of AM applications to aviation, and the need to maintain both safety and a "level playing field." from a business perspective, a ‘step by step’ approach to AM utilisation has been adopted by the regulators and industry. Building upon previous Industry-Regulator Events, WG1 continues with this theme in support of evolving guidelines development, i.e. the next revision to the EASA AM Certification Memo CM-S-008.

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Working Group 2: F&DT and NDI Considerations for Metal AM
Co-chairs: M. Gorelik (FAA), A. Fischerworring-Bunk (MTU)

Description: Fatigue and damage tolerance (F&DT) related qualification considerations and related certification requirements have historically presented more significant challenges for structural components produced using process-intensive manufacturing technologies (PIM), and additive manufacturing (AM) is no exception. The intent of this breakout session is to discuss the most recent developments in these technical areas, while building on the outcomes of the F&DT and NDI breakout sessions from the 2022 AM Workshop, and to further develop considerations for aviation application of AM. The desired outcomes of this working group and the corresponding breakout sessions during the 2023 AM Workshop include continued discussion regarding the exchange of best practices and lessons learned, recommendations for standards development organizations (SDOs) / industry working groups, and development of recommendations for supporting R&D work.

Working Group 3: Developing a Five-Year Plan to Allow EASA / FAA acceptance – Machine Monitoring
Co-chairs: F. Lartategui (ITP AERO), D. Godfrey (SLM Solutions)

Description: Inspections after build, as well as qualification testing are both expensive and time consuming. Today, FAA / EASA regulations require that the suitability and durability of materials used for parts, the failure of which could adversely affect safety must be established on the basis of experience or tests. (14 CFR Part 25 Regulations – Materials - 25.603 Materials) and the methods of fabrication used must produce a consistently safe structure. Each new aircraft fabrication method must be substantiated by a test program (14 CFR Part 25 Regulations – Material – 25.605 Fabrication Methods)

While the industry mostly agrees that today's machine monitoring technologies are not robust enough to be used in qualification of flight worthy components, the experts also generally agree that there is a need for this technology to mature so that it can be used as one of the tools in perform this task.

The intent of this breakout session is to discuss the most recent relevant technological developments in this field of AM science and then chart a development plan to mature the technology or the monitoring process so that components qualification can be supported via in-situ AM machine monitoring technology.

The desired outcomes of this working group and the corresponding breakout sessions during the 2023 AM Workshop include continued discussion regarding the exchange of best practices and lessons learned, recommendations for standards development organizations (SDOs) / industry working groups, and development of general recommendations for industry and regulators.

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