

ASTM INTERNATIONAL CONFERENCE ON ADVANCED MANUFACTURING

Research to Application through Standardization

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Industrial Sector: Aviation

The aerospace industry is one of the primary sectors which leverages additive manufacturing (AM) to its fullest extent. Cost savings, weight reduction, functional improvements, and schedule optimization are key drivers which can be achieved through the redesigning of existing components, on-demand production of replacement parts, new design concepts, and through part consolidation. New materials with superior or similar properties, capable process controls, process stability, and novel design methodologies are the key enablers. However, related standards, as well as qualification and certification (Q&C) practices, may need to be re-evaluated/updated for additively manufactured products and the digital manufacturing process.

Topics of interest include but are not limited to:

- General discussions on topics such as airworthiness of AM parts, specific AM applications in aviation, MRO, etc.
- Testing and quality assurance of AM parts, processes, and feedstock materials, including in-situ techniques
- Acceleration of AM adoption across the lifecycle through the application of computational approaches
- Recognized regulatory requirements and Q&C strategies
- Qualification of non-fixed parameter processing
- Introducing new materials (alloy modifications, novel materials, functional grading)
- Role of public standards in Q&C framework
- Aerospace business cases
- AM supply chain for Aviation
- Industrialization of AM in Aviation
- The role of AM in aviation to meet the UN Sustainable Development Goals



Symposium Organizers

- Cindy Ashforth, Federal Aviation Administration, USA
- Stephane Bianco, Airbus, France
- Jim Dobbs, Boeing, USA
- Bradley Hughes, GKN Aerospace, UK
- Ruaridh Mitchinson, The MTC, United Kingdom



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Research to Standards

ADDITIVE MANUFACTURING