

ASTM INTERNATIONAL CONFERENCE ON ADVANCED MANUFACTURING

Research to Application through Standardization

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Industrial Sector: Space

Spaceflight is a unique industry that utilizes several forms of advanced manufacturing (AM) to its fullest potential, often resulting in geometrically complex and integrated designs that can only be fulfilled by these processes that include additive manufacturing. Structural integrity, new materials, and novel designs are key enablers for AM; however, there is a need to revise current standards, qualifications, and certification practices before they can be fully Leveraged for AM parts used in spaceflight applications.

Topics of interest include but are not limited to:

- Qualification strategies for AM Space Flight hardware
- Certification strategies for Suppliers of AM Space Flight hardware
- In-situ inspection or automated process control
- Quality Assurance including testing for the cleanliness of AM Space Flight hardware
- Application of computational approaches to accelerate AM across the full lifecycle
- Material development, post-processing, and mechanical testing
- Novel design approaches for AM Space hardware
- Innovation for in-space manufacturing
- Cost factors and business case analysis for printed spaceflight hardware
- Sustainability, waste, and environmental concerns in the production of AM parts for space exploration
- AM for extreme environment materials
- Applications and development of multi-material assemblies to meet diverse requirements
- Functional integration and part count reduction opportunities for AM space hardware



Symposium Organizers

- Tim Berry, JetZero, USA
- Christo Dordlofva, GKN Aerospace, Sweden
- Andrew Norman, European Space Agency, Netherlands
- Rick Russell, Northrop Grumman, USA
- John Vickers, NASA, USA