ANSI Commercial Space Industry Standardization Coordination Meeting

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American Institute of Aeronautics and Astronautics (AIAA)

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20 F Street, NW Conference Center, Washington, DC



AIAA: Standards Program

> Domestic/National Program

- ANSI and AIAA documents
- U.S. Technical Advisory Groups (TAGs)
 U.S. TAG for ISO/TC 20/SC 14
- > International Program
 - Secretariat for ISO/TC 20/SC 14 (Space Systems and Operations)



Domestic/National Program

- Consensus Bodies: AIAA Committees on Standards (CoS)
 - Examples:
 - o Aerospace Pressure Vessels, Mass Properties, Commercial Space
- ➤ Published Docs: <u>Aerospace Research Central (ARC)</u>
 - Examples:
 - Space Systems—Metallic Pressure Vessels, Pressurized Structures, and Pressure Components (ANSI/AIAA S-080A-2018)
 - o Space Systems—Composite Overwrapped Pressure Vessels (ANSI/AIAA S-081B-2018)
 - Occupant-Imparted Loads for Commercial Suborbital RLVs (AIAA/CSF S-143-2016)
- ➤U.S. TAG: ISO/TC 20/SC 14 (Space Systems & Operations)
 - Provides the U.S. position and comments on SC14 projects



International Program

- ➤ ISO/TC 20/SC 14: Space Systems and Operations
 - Working Group 1: Design Engineering and Production
 - Space systems Mass properties control (ISO 22010)
 - Space systems Explosive systems and devices (ISO 26871)
 - Working Group 2: System Requirements, Verification and Validation, Interfaces, Integration, and Test
 - Space systems General test documentation (ISO 17566)
 - Space systems Spacecraft to launch vehicle interface control document (ISO 15863)
 - Working Group 3: Operations and Support Systems
 - Space systems Disposal of orbital launch stages (ISO 16699)
 - Space systems Rendezvous and Proximity Operations (RPO) and On Orbit Servicing (OOS) — Programmatic Principles and Practices (Under Development, future ISO 24330)

International Program (Continued)

- ➤ ISO/TC 20/SC 14: Space Systems and Operations
 - Working Group 4: Space Environment (Natural and Artificial)
 - Space systems Lunar simulants (ISO 10788)
 - Space environment (natural and artificial) Earth upper atmosphere (ISO 14222)
 - Working Group 5: Space System Program Management and Quality
 - Space systems Definition of the Technology Readiness Levels (TRL) and their criteria of assessment (ISO 16290)
 - Space systems Off-the-shelf item utilization (ISO 21350)
 - Working Group 6: Materials and Processes
 - Space systems Contamination and cleanliness control (ISO 15388)
 - o Space systems Safety and compatibility of materials Method to determine the flammability thresholds of materials [Technical Specification] (ISO/TS 16697) ✓ ✓

International Program (Continued)

Working Group 7: Orbital Debris

- Space systems Space debris mitigation requirements (ISO 24113)
- Space systems Space debris mitigation design and operation guidelines for spacecraft [Technical Report] (ISO/TR 18146)
- ➤ISO/TC 20/SC 14 Work Program (Published Docs and Projects Under Development)
- ➤ Harmonization of terms (within SC14 and with SC13)
- ➤ Russia is proposing a Working Group (WG8) on the topic of "Manned Space Flights"
 - Will be discussed at the May 2020 meeting in Ukraine



Contact Information

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