

Axient Program Highlight: Marshall Engineering Technicians and Trades Services (METTS) III

Executive Summary

RSi-QuantiTech Joint Venture (RSi-QT JV) brings together a team led by Radial Solutions Inc. (RSi), and Axient (legacy QuantiTech) - proven industry partners. RSi-QuantiTech JV LLC is fulfilling the NASA MSFC requirements for services covering a wide range of engineering technicians and trade skills, and professional and management oversight of the technical staff at Marshall Space Flight Center. We provide direct support to the MSFC Engineering Directorate (ED), the Facilities Management Office (FMO), and other MSFC programs and projects requiring engineering technician and trade support services. Axient primarily supports the ED Materials and Processes Laboratory, Space Systems Department, and Test Laboratory. Additional support functions are provided for the ED Propulsion Systems Department and Spacecraft and Vehicle Systems Department. The MSFC technical requirements include, but are not limited to, the following areas:

- Non-Destructive Evaluation (NDE)
- Environmental Test Facility (ETF)/Experimental Fluid Dynamics Test Facility (EFDTF) Test Support
- Environmental Effects Testing Support
- Structural Strength Test Support
- Fabrication and Assembly of R&D Space Flight and Associated Hardware
- Electrical Fabrication, Test and Assembly
- Environmental Gas Laboratory Support
- Special Test Equipment (STE) Design Support
- Optics Support
- Tool Crib Operations
- Metrology and Calibration Laboratory (MCL) Management and Operation
- Contamination Control Support
- Structural Dynamics Test Support
- Valve and Component Servicing
- Propellants and Pressurants Delivery Systems (PPDS)
- Propulsion Test Laboratory (PTL) Support

Customer Support

Our customers thrive on partnership and trust developed over decades. Civilian customers rely on Axient technology & expertise to make informed decisions with confident outcomes. Axient has proudly collaborated with and delivered high-end solutions and services to MSFC for over twenty years, to include the development of the Space Launch System (SLS).

Core Capabilities

- Structural Dynamics Analysis
- Guidance, Navigation, & Control Expertise
- Avionics
- Hardware in the Loop (HWIL)
- Systems Engineering & Integration
- Universal Stage Adaptor Expertise

Recent Projects

- Engineering Services and Science Capability Augmentation
- SLS Structural Loads & Dynamics, Vibro-Acoustic
- SLS Guidance, Navigation, and Control (GN&C)
- SLS Avionics HWIL Labs and Emulators

Program Highlight: ET10-Hot Gas Facility / Materials Environmental Test Complex

The Hot Gas Facility, Hyperthermal Facility, and Materials Environmental Test Complex (METCO) are currently being used in support of SLS Artemis I In Flight Anomaly (IFA) resolution, and developmental testing of hypersonic thermal protection systems for OEMs and DoD applications.

- The Hot Gas Test Facility is a hydrogen/air combustion driven environmental test facility capable of generating flow speeds up to Mach 4, convective heating rates from 4 to 50 Btu/ft² -s, and radiant heating rates up to 30 Btu/ft² -s in a 16-in × 16-in × 40-in test section.
- The Hyperthermal Test Facility is built around a high-powered gas discharge device that produces a steady high-enthalpy flow for use in a variety of R&D testing applications. The 1.5 MW input power and multiple test sections allow for heating rates of up to 15,000 Btu/ft² -s in a variety of flow environments.
- High-pressure gas, liquid propellants and inerts are readily available and include, but are not limited to, hydrogen, methane, oxygen, nitrogen, helium, RP-1, De-Ionized water, and Triethylaluminum/ Triethylborane (TEA/TEB).