



Facility Factsheet

Aerospace Structures Test Complex

Advanced Instrumentation Lab

Purpose: The Advanced Instrumentation Lab provides in-house research and development of instrumentation application techniques for structural testing. The primary goals include the crafting of unique instrumentation solutions, maturing emergent technology sensors and hardware to meet the challenging requirements involved with aerospace structures testing. Progress in these areas has yielded capabilities in the following areas:

- Thermal Requirements: Point measurements up to 3,500°F
- Mechanical Requirements: Static measurements up to 2% elongation and dynamic loading at 160 dB OASPL ~128 μ e RMS
- Substrate Requirements: Attachments to various high temperature applicable metallic, composite, and ceramic structures

Capabilities:

- Static strain measurements at elevated temperatures up to 1,600°F
- Dynamic strain measurements at elevated temperature up to 1,800°F
- Thermal ceramic spray free filament sensor installation for high temperature sensors
- High temperature thermocouple attachment for discrete measurement up to 3,500°F on composite structures
- Unique modification of ceramic and graphite adhesive to extend adhesive performance to achieve test requirements

Contact: Structural Validation Branch at 937-656-8827

