STRESS ENGINEERING SERVICES INC.®

AEROSPACE & DEFENSE

DESIGN • TESTING • ANALYSIS

Aerospace Testing Capabilities

The aerospace industry employs advanced equipment and cutting-edge technology. It is vital that devices and structures in these demanding applications can be relied upon to perform as expected, when needed. Since 1972, Stress Engineering Services has been helping clients in highly technical industries to achieve new levels of specialized, in-depth knowledge in areas such as testing, materials engineering, metallurgy, mechanical design, instrumentation, finite element analysis, and fluid mechanics.

Stress Engineering Services is a leader in both standardized and custom-designed full-scale testing in force, load, fatigue, temperature, pressure, torque, noise and vibration. With more than 130,000 square feet of laboratory space and a large inventory of advanced testing equipment, we can simulate a wide range of operational conditions relevant to the aerospace industry.

With more than 40 years of testing experience, we have the expertise to design custom tests to your specifications, or work with you to develop those specifications. We utilize our in-house design, analysis and metallurgy capabilities to help you discover and solve potential problems. We can also perform or monitor tests at a location of your choice, or we can help you design, build and calibrate test equipment of your own.

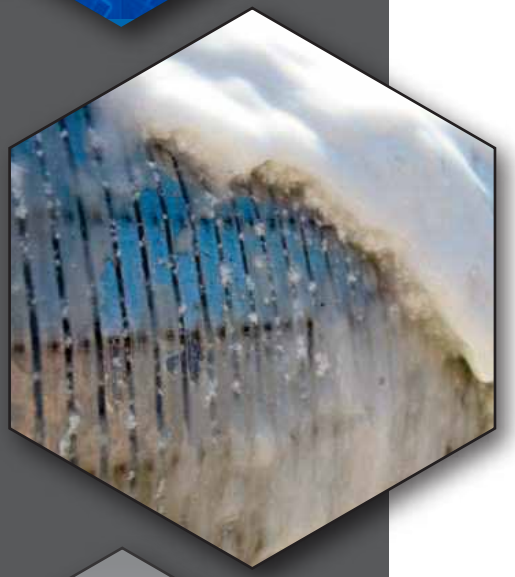
Always at technology's leading edge, Stress Engineering Services sets the standard in technical excellence by providing aerospace industry clients with the right answers - on time.

HOUSTON | CINCINNATI | WALLER | CALGARY

Custom Load Frame Design and Build

Controls and Data Acquisition Systems

In-house or On-site Testing Available



Composite Testing

Battery Testing

Electronics Reliability Testing

Electromagnetic Interference (EMI) Testing

Test and Structural Monitoring

- Strain Gages
  - Installation at Our Facility or On-site
  - Wired or Wireless Monitoring
  - Analysis
- Digital Image Correlation System
  - Optical Measurement of Surface Strains and Displacements
- Acoustic Emissions Monitoring
- Metallurgical Laboratory with Optical Microscopy and SEM

Structural Testing

- Tension, Compression, Bending and Shear Loading
  - Combined and Multi-Axial Load Conditions
  - Static and Dynamic
- Axial and Multi-Axial Fatigue
- Vibration, Impact and Shock
- Bolt and Fastener Testing
- Custom Test Setups and Hardware
- Bearing Wear and Friction Testing

Environmental Testing

- Cryogenic and Elevated Temperatures
- Harsh Environments
  - Humidity, Salt Fog, Flammability, and Corrosive Fluids
- Thermal Cycling
- Fluid Susceptibility and Icing
- Sand and Dust Testing
- Standard Tests: DO-160, MIL STD 810, etc.

Pressure Testing

- Gas and Fluid Pressure Testing
- Rapid Decompression
- Internal Pressures up to 60,000 psi
- External Pressure from Below Atmospheric (vacuum) to 30,000 psi
- Cyclic and Burst Testing
- Pressure Vessel Design and Testing

Sensor Calibration

- NIST Traceable Load Cell Calibrations
- Pressure and Displacement Transducers
- Electronic and Specialty Test Equipment

STRESS ENGINEERING SERVICES INC.®

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