Field Testing
ATS offers many of the Mechanical Testing Services performed in our lab at the client's job locations as needed. Our on-site capabilities include:

- Pressure Testing
- Load Testing
- Dead Weight Testing
- Proof Load Testing of Railings
- Anchor Testing
- Hardness Testing
- Metallography/Replication
- Certified Weld Inspections (CWI)

Quality Programs & Accreditations

- ANSI/ASME NQA-1
- 10 CFR 50 Appendix B
- 10 CFR 21
- ISO/IEC 17025*
- ISO 9001
- ANSI/NCSL Z540-1

Mechanical & Special Testing

Mechanical Testing Services
ATS offers a complete range of mechanical testing services. A well-equipped in-house machine shop provides timely preparation of test specimens or any special fixtureing. Our experienced test engineers can also help you design custom special testing programs to test your products.

Common Capabilities:
- Weld Procedure Qualification (ASME, AWS, PED/EN, API)
- Welder Performance Qualification
- Impact Testing (Charpy, Drop Weight)
- Tensile, Compression, Shear, Torsion and Bend Testing
- Stress Rupture
- Hydrogen Embrittlement Testing
- Fastener Testing
- Hardness Testing (On-site and Lab Testing)
- Strain Gaging
- Pressure Testing
- Helium Leak Testing
- Customized Product Testing
- In-house Machining, Specialty Fabrication

ATS, founded in 1967 and headquartered in Marietta, GA is one of North America's leading consulting engineering firms with extensive testing and inspection capabilities delivering a combination of experience, professionalism and decisive responsiveness for our clients.

*Slightly edited due to content constraints.
Mechanical & Special Testing

Weld Testing and Weld Qualifications
Applied Technical Services, Inc. welding engineers ensure industry standards are maintained by assisting in preparing welding procedure specifications and weld procedure and performance qualifications.

Applied Technical Services, Inc. uses a wide variety of techniques and standards such as ASME, AWS, API and PED/EN to serve our clients’ vast welding needs. Many companies require their welders be qualified, and at ATS we are able to test all aspects of weld procedure and performance qualifications by conducting destructive and nondestructive tests to ensure conformance to code requirements. Our testing capabilities include:

- Bend Testing
- Macro Etching
- Tensile Testing
- Hardness Testing
- Corrosion (ASTM A262) Testing
- Impact Testing (Charpy, Drop Weight)
- Weld Failure Analysis
- PMI

Special Testing
Applied Technical Services is equipped to handle customized Load Tests, Pressure Tests, Accelerated Life Cycle Tests and Wear/Fatigue Tests. Our Special Testing Group has the equipment and knowledge to satisfy a wide variety of testing requirements.

Load Testing
Applied Technical Services has performed numerous load tests on a variety of items ranging from space shuttle parts to hand railings. We can perform this testing in-house or on-site using customer supplied fixtures or fixtures designed by ATS specifically for our clients. Our engineers work closely with our clients to simulate life-like scenarios to achieve the most accurate test results.

Pressure Testing
Applied Technical Services has the capability to perform pressure tests, both in-house and in the field. Our pressure capabilities range from vacuum to 20,000 psig. With these capabilities, we are able to test a large variety of items from proof pressure testing nuclear plant components to burst testing copper tubes.

Accelerated Life Cycle & Wear/Fatigue Testing
Applied Technical Services has the resources to simulate real world wear and tear testing; our Engineers have performed many Accelerated Life Cycle tests as well as fatigue testing on numerous parts. Our range of parts tested includes prototype parts for small business ventures to production components from large industrial and manufacturing corporations.

Strain Gage Testing & Strain Measurements
Strain gages are used to determine material stress due to static and dynamic loads coming from internal and external sources such as mechanical, thermal and pressure. ATS offers:

- In-house and Field Strain Gage Applications
- Load Monitoring
- Mechanical Stress Analysis

ATS can apply the appropriate strain gage type to the test surface, perform data acquisition and provide results to assist in identifying the stress levels to avoid mechanical failure or fatigue. The data can also assist you in verifying your design criteria and/or validate your finite element analysis results.

CTOD Testing
Fracture Toughness determines the amount of stress required to propagate an existing flaw or defect in specific materials. Since traditional methods of destructive testing cannot always predict how a material will behave with a defect, fracture toughness is very important in the design stage.

Crack-Tip Opening Displacement (CTOD) is used as a type of fracture toughness testing to determine if a material is appropriate for strenuous working conditions. CTOD testing is the measure of plastic deformation prior to failure in a pre-cracked sample. This type of test is a variation of fatigue testing that has load rates more representative of in-service conditions.