



Materials Testing

We Take A Closer Look

Materials Testing

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 fixturing. Our experienced test engineers can also help you design custom special testing programs to test your products.

Our common testing capabilities include Weld Testing and Weld Qualification, Special Testing, Load Testing, Pressure Testing, Hardness Testing, and Helium Leak Testing.

Applied Technical Services has the resources to simulate real world conditions and perform accelerated wear and tear testing to assess product life cycles. ATS serves various industries such as automotive, aerospace, nuclear, construction, manufacturing, power generation, retail and insurance.

Among the many industries with which ATS enjoys an excellent reputation are military, aerospace, maritime, railroad, automotive, construction, consumer products, industrial, manufacturing, nuclear, chemical, commercial, pharmaceuticals, power generation and telecommunications.

- Welder Performance Qualification
- Impact Testing
- Fastener Testing
- Pressure Testing
- Helium Leak Testing
- Customized Product Testing

Applied Technical Services

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Purpose and Benefits of Charpy Impact Testing

For over 50 years, ATS has been providing many industries with testing and inspection services including charpy impact testing. Charpy Impact Testing, also known as the Charpy V-notch testing, helps determine a material's toughness. In our comprehensive materials testing labs our experts perform this test in accordance with multiple standards including but not limited to the ASTM, ISO and EN. Following the applicable standard to spec will determine your metal's ductility or brittleness, which is an indicator of how much energy your specimen will absorb during fracture. Measuring the energy or observing the surface of the fracture, will reveal your material's brittleness or ductility.

What Does the Fracture Surface Reveal?

- Brittleness
- Bright and Crystalline Surface; Absorbs Less Energy
- Ductility
- Dull and Fibrous; Absorbs More Energy

Popular Industry Standards Include:

- ASTM E23
- ASTM A370
- ISO 148-1
- EN 10045-1









Helium Leak Testing

ATS can perform leak testing either in our fully accredited laboratories or at our client's facilities. Our Helium Leak team is certified by the American Society of Non-Destructive Testing (ASNT) in multiple leak rate methods. It is our guiding principle to deliver the highest quality of services to our clients, including clear and accurate assessment results in accordance with our client's and the applicable standard specifications. Our engineers and technicians are well trained, experienced, qualified, driven for excellence, and are service time attentive.

Although ATS' mechanical testing group performs services for clients of many other industries, it is companies from these sectors that tend to request our helium leak detection services most often:

- Nuclear
- · Power Generation
- · Chemical
- Automotive

INDUSTRIES SERVICED

ADDITIVE MANUFACTURING - AEROSPACE - AUTOMOTIVE - CHEMICAL COMMERCIAL PROPERTIES - CONSTRUCTION - DEFENSE/MILITARY INSURANCE/LEGAL - MANUFACTURING - MEDICAL - NUCLEAR OIL & GAS - POWER GENERATION - PULP & PAPER - MANY MORE









Types of Materials Tested:

Metals

Polymers/Plastics

Rubber

Composites

· Wood

· Ceramic

Glass

Paper

· Leather

Textiles

· Coatings/Paint

· Stone/Sand/Clay

List of ATS' Accredited Material Testing Labs

- Mechanical Testing Labs ISO/IEC 17025:2017
- Environmental Testing Labs ISO/IEC 17025:2017
- · Metallurgy Labs ISO/IEC 17025:2017
- · Chemical Analysis Labs ISO/IEC 17025:2017
- Nondestructive Testing ISO/IEC 17025:2017