

# Additional Capabilities Include:

## Testing and Consulting Services

ATS is a material testing and consulting engineering firm with extensive testing services and inspection capabilities. We have been providing metallurgical, mechanical, chemical, and nondestructive testing services to the nuclear industry for over 40 years. Our ISO 17025 (A2LA) accredited quality assurance program meets the Nuclear Quality Requirements of 10 CFR 50 Appendix B, Part 21 and ANSI/ASME NQA-1. Nuclear Procurement Issues Committee (NUPIC) has evaluated ATS' quality program and found it effective. Additionally, ATS is a member of Nuclear Industry Assessment Committee (NIAC).

## Cost Reduction Programs

ATS provides timely, cost effective services through the application of technologically advanced equipment. Our team of mechanical/materials engineers, metallurgists, chemists, and certified weld inspectors are highly skilled and knowledgeable in their respective fields. Our NDE personnel are trained and certified to the highest level of standards including ASNT-SNT-TC-1A, NE-473, and CP-189.



# Nuclear Testing Services



## Nuclear Testing Partner

The nuclear industry is a highly progressive and regulated field requiring products to be certified. Applied Technical Services (ATS) operates a testing laboratory that complies with the requirements of nuclear quality programs, partnering with those that service the nuclear industry to ensure products comply with the stringent requirements.

## Quality Assurance

- American Association for Laboratory Accreditation (A2LA)
- Nuclear Procurement Issues Committee (NUPIC)
- Nuclear Industry Assessment Committee (NIAC)
- 10 CFR 50 Appendix B, Part 21
- ANSI/ASME NQA-1



# Commitment to Quality

Dedication to quality is a way of life at ATS. Through our in-house training program, all inspection personnel are trained and certified in accordance with ASNT-SNT-TC-1A. This, along with our quality assurance department and experienced management personnel, allows ATS to provide our clients the high level of quality they expect.



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.



1049 Triad Court - Marietta, GA 30062  
Corporate Office: 1-888-287-5227  
[www.atslab.com](http://www.atslab.com)

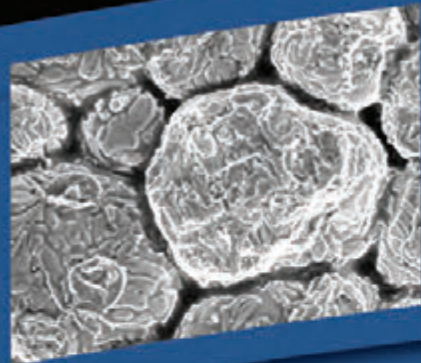
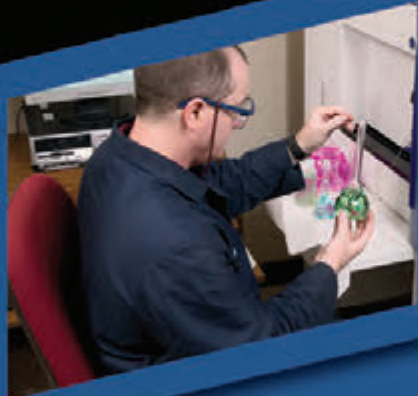


[www.atslab.com](http://www.atslab.com)  
1-888-287-5227

\*All accreditations are granted to certain disciplines operating within ATS. Each certification/affiliation or accreditation has a special defined scope. Please visit [www.atslab.com](http://www.atslab.com) or contact the ATS Quality Assurance Department at 770-423-1400 for further details.



# Nuclear Testing Services



## Chemistry Testing Services

### Material Identification of Metals/Oxides:

- XRF (PMI)
- Optical Emission Spectroscopy (OES)
- Inductively Coupled Plasma (ICP)
- Energy Dispersive Spectroscopy (SEM/EDS)
- X-Ray Diffraction (XRD)
- Wet Chemistry

### Material Identification of Polymers:

- Fourier Transform Infrared Spectroscopy (FTIR)
- Thermo-Gravimetric Analysis (TGA)
- Differential Scanning Calorimetry (DSC)
- Dynamic Mechanical Analysis (DMA)
- Thermo Mechanical Analysis (TMA)

### Material Verification (Commercial Grade Dedication) Includes:

- Metal Alloys
- Polymers
- Rubbers
- Paints & Coatings
- Markers & Ink
- Fuels & Lubricants
- Silicone RTV & Sealants
- Other Consumables

## Mechanical Testing Services

- Hardness Testing
- Elevated and Room Temperature Tensile
  - Capabilities to 400,000 lbs.
- Torque Testing
- Fatigue Testing
- Charpy Impact Testing
  - US & European Standards
- Bend Testing
- Elevated and Room Temperature Fracture Toughness/CTOD Testing
- Shear Testing
- Hydrogen Embrittlement Testing
- Stress Rupture Testing
- Fastener Testing
- Load Testing
- Unique Test Fixture/Procedure Development
- Full Machine Shop on site

## Procedure & Welder Qualification

- Tensile Testing
- Bend Testing
- Charpy Impact Testing
  - US & European Standards
- Drop Weight Testing



- PWHT of Procedure Qualifications
- Fatigue/CTOD
- Hardness Testing
- Chemistry Testing
- Macro/Micro Examinations
- Corrosion Testing

## Metallurgical & Failure Analysis

- Microstructure Evaluations
- Material Selection
- Photographic Documentation
- Manufacturing Process Evaluations
- Residue Analysis (EDS & XRD)
- Expert Witness Services
- Onsite Investigation
- Microhardness Testing
- Plating Evaluation (Thickness & Type)
  - Microscopic
  - Nondestructive – XRF
- Scanning Electron Microscope (SEM)
- Polymer Failure Analysis
- Reverse Engineering



## Environmental Simulation

- Thermal Shock
- Thermal Cycling/Aging
- Shock & Vibration
- Seismic/Earthquake Qualification Testing – Triaxial Table (IEEE 344)
- Environmental Conditioning: Variety of temperature/humidity chambers
- UV Exposures (Xenon Arc, QUV)

## Nondestructive Testing

- Radiography (Conventional and Digital)
- Ultrasonic (Thickness, Shearwave, and Phased Array)
- Magnetic Particle Inspections
- Liquid Penetrant Inspections
- Eddy Current Inspections
- Visual Examinations (Direct and Remote)
- Helium Mass Spectrometer Leak Detection (HMSLD)

Common inspections include: weld, tanks/pressure vessel, piping systems, welder/weld procedure qualification.

## Onsite Services

- Strain Gaging
- Load Testing
- Metallography
  - Replication
  - Portable Microscopy
- Alloy Verification (PMI)
- Hardness
- Nondestructive Testing
- Helium Mass Spectrometer Leak Detection (HMSLD)

## When Quality is Non-Negotiable!

Applied Technical Services  
[www.atslab.com](http://www.atslab.com)  
 1-888-287-5227

