



**TESTING TODAY, PROTECTING TOMORROW**



# **METALLURGICAL TESTING SERVICES**



*Specializing in the analysis of the chemical composition and physical characteristics of exotic and standard metal alloys, castings and components.*

Sherry Laboratories serves the industrial community with a wide variety of high-quality, expedient and cost-competitive metallurgical evaluations and services. Our satisfied clients have been and continue

to be our largest source of new clients. Their referrals and continued patronage are the best indicators of our performance. We look forward to providing you with the same degree of performance, quality and customer service.



## OUR METALLURGICAL TESTING SERVICES INCLUDE, BUT ARE NOT LIMITED TO:



Founded in 1947, Sherry Laboratories provides a complete assortment of reliable, high quality analytical testing services committed to maintaining your precise specifications while meeting your scheduling requirements. Our dedicated engineers, scientists and technicians certify products and offer solutions to technical problems for a variety of industries including aerospace, automotive, defense, manufacturing, medical, nuclear, petrochemical and refining. Our materials testing facilities are accredited by A2LA to ISO 17025:2005, as well as Nadcap.

### FAILURE ANALYSIS

Sherry Laboratories performs failure analysis evaluations to determine the root cause of a failure or desired material evaluation criteria. Results are supported by photo documentation.

- Infrared Spectroscopy
- SEM/EDS Analysis
- Fractography
- Corrosion Evaluations

### CHEMICAL ANALYSIS

Sherry performs chemical analysis by:

- Carbon, Hydrogen, Nitrogen, Oxygen and Sulfur
- Classical Wet Chemistry
- Atomic Absorption (AA)
- Direct Current Plasma (DCP)
- Gravimetric
- Instrumental Chemistry
- Optical Emission Spectrography (OES)
- X-Ray Fluorescence Spectroscopy (XRF)

### CORROSION TESTING

American Society for Testing and Materials (ASTM) methods for:

- Crevice and Pitting Resistance
- Intergranular Attack
- Stress Corrosion Cracking
- Humidity
- Mercuric Nitrate
- Passivation
- Salt Spray Fog
- Other Client Specifications

### MECHANICAL TESTING

Sherry routinely performs a variety of mechanical tests, including:

- Bend
- Compression
- Telebrinell
- Impact
- Charpy V-Notch & Izod
- Brinell & Rockwell Hardness
- Jominy Hardenability
- Microhardness
- Knoop & Vickers
- Stress and Creep Rupture
- Elevated & Room Temperature Tensile

### MACHINING CAPABILITIES

Sherry has facilities for machining specimens:

- CNC and conventional mills, lathes, surface and Blanchard grinders, Water Jet
- Elaborate gauging equipment, including optical comparison
- Twenty-inch sawing capacity
- Machine tools are available for fabrication of special fixturing, test systems and components to meet the most elaborate testing configurations
- One-ton handling capacity

### METALLOGRAPHY

- Case Depth Measurement
- Coating and Plating Thickness
- Ferrite Content
- Grain Flow and Grain Size
- Heat Treat Condition
- Inclusion Rating
- Macrostructure
- Material Defects
- Microhardness and Microstructure
- Plasma Spray Coating
- Porosity
- Surface Chemistry
- Carburization/Decarburization
- Surface Evaluation

### WELD TESTING

Procedure, performance, and production testing performed for chemical, hardness, impact, mechanical, and metallurgical properties per:

- ASME (Amer. Society of Mech. Engineers)
- ASTM (Amer. Society for Materials Testing)
- AWS (American Welding Society)
- MIL-STD (Military Standards)
- API (Amer. Petroleum Institute)
- AASHTO (Amer. Assoc. of State Highway and Transportation Officials)

### PHYSICAL TESTING

- Conductivity
- Heat Treatment
- Normalize/Stress Relief/Temper
- Plating Adhesion
- Surface Finish





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