



Phoenix National Laboratories, Inc.  
2837 E. Chambers Street, Phoenix, AZ 85040  
P: 602.431.8887 · F: 602.431.8889 · www.pnltest.com

## SERVICES SUMMARY

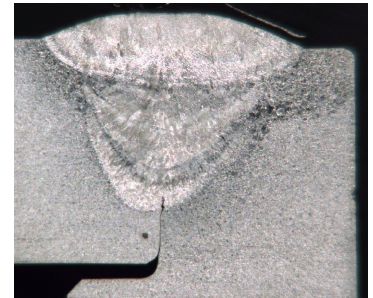


### NONDESTRUCTIVE TESTING

- Ultrasonic (UT) → Flaw Detection, Thickness Measurements, Contact/Immersion Instruments, Phased Array
- Radiography (RT) (CR) → X-ray/Gamma Ray, Field and Laboratory
- Magnetic Particle (MT) → Mag/Demag, AC/DC Yokes, Prods, Coils, Wet/Dry, Stationary Lab Unit, Mobile Units
- Liquid Penetrant (PT) → Visible, Fluorescent, Field, Laboratory Line, All Types, All Methods
- Visual (VT) → Weld Inspection, Verification Inspection
- Eddy Current (ET) → Crack Detection, Material Sorting
- Leak Testing (LT) → Vacuum Box, Hydrostatic Testing
- GPR → Ground Penetrating Radar (Structure Scan), Pachometer
- Hardness Testing → Field Portable Microhardness and Rebound Testing. Krautkramer Mic-20,
- Alloy Identification → Thermo Niton Alloy Analyzer
- ASNT Level III Consulting • Training • Engineering
- ICC Special Inspections - Structural Steel and Welding, High Strength Bolts, Fireproofing, Firestop, Epoxied Anchors

### METALLOGRAPHIC SERVICES

- Forensic Analysis / Failure Analysis
- Material Characterization
- Field Emission Scanning Electron Microscope (SEM, FeSEM)
- Energy Dispersive X-ray Spectroscopy (EDS)
- Micro-hardness Testing (Knoop, Vickers)
- Precision Cross Sectioning
- Optical Microscopy with Digital Capability
- FTIR (both bulk and micro)



### WELDING TECHNOLOGY

#### AWS • ASME • API • MIL-STD

- Welder Certifications → SMAW (Stick) • FCAW (Flux Core) • GMAW (Mig) • GTAW (Tig) • SAW (SubArc)  
Six Laboratory Test Booths Available
- Welding Procedures and Specifications (WPS's & PQR's) → Preparation and Consulting
- Full X-ray and Mechanical Testing Capabilities
- Design and Qualification • Consulting • Welder Test Booths
- Customized Welder Training Courses

### PHYSICAL - MECHANICAL TESTING

- ADOT approved ASTM Testing of Metals, Rubbers, Plastics, Composites
- ADOT approved Rebar Testing
- Tensile Testing, Bend Testing, Charpy V-notch, Macroetch and Break Testing for Welder and Procedure Qualification
- Product and Material Proof Loading and Testing to Destruction

- Multiple Universal Testing Machines with Capabilities from 120 Lb through 400,000 Lb
- 2 Million Pound Compression Machine with 300,000 Lb Simultaneous Shear Capability
- 25,000 psi Pressure Test Cart → Hydraulic, Pneumatic, Hydrostatic
- Elastomeric Bearing Pad Testing
- Engineering Consulting Services Including Failure Analysis and Expert Witness Services