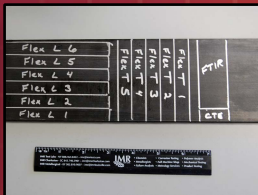


Mechanical Testing

Adhesion (Peel) Testing
Bend Testing (3 Point, 4 Point)
Bond Strength Testing
Charpy Impact Testing (-320°F to 450°F)
Coefficient of Thermal Expansion by TMA
Composite Testing (FRC, CMC)
Compressive Properties of Nonmetallics
Creep & Stress Rupture
Fatigue Testing (Axial, Low Cycle, High Cycle, Rotating Beam, Coating Shear)
Filled Hole Tension/Compression
Flexural Properties (Modulus, Strength, Stress-Strain Response)
Fracture Mechanics
Hardness (Rockwell, Brinell)
Heat Aging
Heat Deflection by TMA
Hydrogen Embrittlement (Static Load)
In-Plane Shear Response
Indentation Toughness
Interlaminar Shear
Impact Testing (Charpy, IZOD)
Lap Shear Testing
Open Hole Tension/Compression
Peel Properties (Climbing Drum, Floating Roller)
Residual Strength of Composites After Impact
Resin Penetration
Sealant & Adhesive Testing
Shear Properties
Slow Strain Rate
Static Pin Bearing Strength
Taber Abrasion/Wear Resistance
Tensile Testing - Metals (to 2000°F)
Tensile Testing - Nonmetallics (-240°F to 660°F)
- Flatwise, Cruciform, Hoop, Standard
Torsional/Axial Fatigue (200 lb)
Welder/Weld Procedure Qualification



Flex L 6	S	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	CTE	
Flex L 5																													
Flex L 4																													
Flex L 3																													
Flex L 2																													
Flex L 1																													

Not just data, *knowledge*

IMR Test Labs

131 Woodsedge Drive
Lansing, NY 14882 USA
1.607.533.7000
sales@imrtest.com

IMR Test Labs - Louisville

4510 Robards Lane
Louisville, KY 40218 USA
1.502.810.9007
sales@imrlouisville.com

IMR Test Labs - Portland

5687-A SE International Way
Portland, OR 97222 USA
1.503.653.2904
sales@imrportland.com

IMR Test Labs - Singapore

30 Loyang Way #03-16
Singapore 508769
+65 6592.5325
sales@imrsingapore.com

IMR Test Labs - Suzhou

Jiangpu Road 75, Shengpu Town
Suzhou Industrial Park
Jiangsu, China 215126
+86 0512.6295.2682
sales@imrsuzhou.com

www.imrtest.com

www.cwst.com

**CURTISS-
WRIGHT**

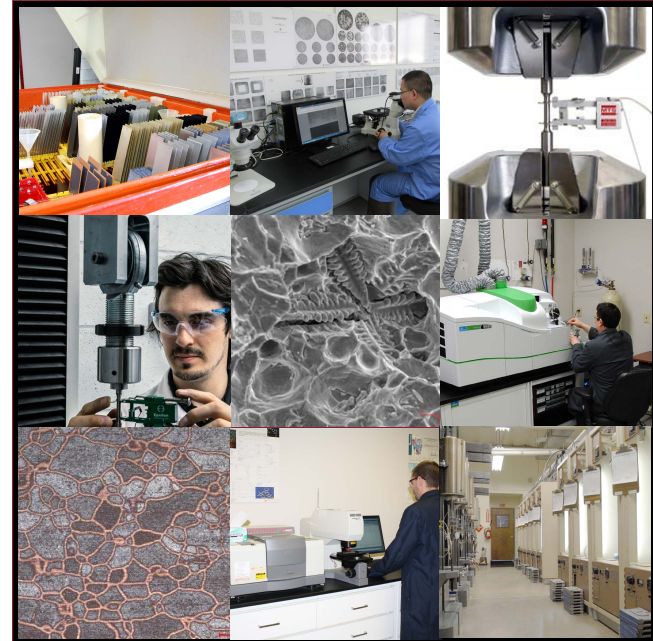
©2017 IMR Test Labs

IMR TEST LABS

A Curtiss-Wright Business

Analytical Services

Metals, Polymers, Composites, Ceramics,
Coatings, Solutions, Finished Products
& more



Not just data, *knowledge*

Metallurgical Analysis

Aggressive Machining Evaluations

Braze Analysis

Case Depth

Certified Weld

Inspections

Coatings Analysis

Decarburization

Failure Analysis

Fluorescent

Impregnation of

Porous Coatings

Fractography/Fracture Mechanics

Grain Size

Image Analysis

Inclusion Rating

Intergranular Attack

Intergranular Oxidation

Macroetch/Microetch

Metallography/

Materialography

Microhardness (Knoop,
Vickers, MacroVickers)

Microstructure

Orientation in Microstructure

Particle Analysis (Distribution, ID, Size)

Phase Volume Determination

Plating & Coating Analysis

Plating Thickness

Porosity of Metals, Ceramics & Composites

Prior Austenitic Grain Boundary Determination

Replication (E1351)

Quantitative Image Analysis

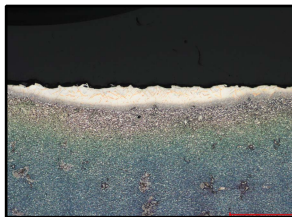
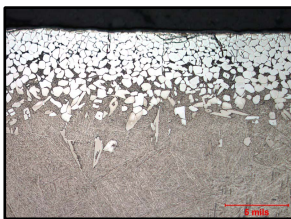
Root Cause Evaluation

SEM Analysis

Thermal Spray Coating Evaluations

Titanium Beta Transus Determination

Welder Qualification



Chemical Analysis



Alloy Chemistry

Ash Content

C, H, O, N, S

Chemical Resistance

Cleanliness Testing

Coating Weight

Conductivity/Resistivity (D1125)

Contaminant/Corrodent Analysis

Contaminant/Corrodent Identification

Density

DSC Analysis (Melting Point, Glass Transition, %

Crystallinity, Degree of Cure, Purity)

Dynamic Mechanical Analyzer (DMA) Testing

Filler Content Analysis

FTIR Analysis

GC/MS Analysis

Halogen Analysis (IC)

Heavy Metal Impurities

Hexavalent Chromium

ICP-AES Analysis

ICP-MS Trace Element Analysis

Ion Chromatography (IC)

Material Certification

Mercury Analysis

Metallic Material Verification/ID

OES Analysis

Particle Size Analysis

Percent Crystallinity

Phase Identification

Positive Material ID (On-site PMI available)

Powder Diffraction

Precious Metal Assay

RoHS Testing

SEM/EDX

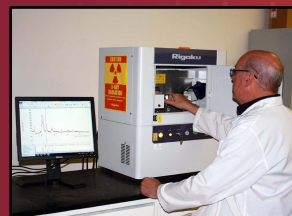
Sieve Analysis

Trace Element Analysis

Unknown Material ID

X-Ray Diffraction (XRD)

XRF Chemistry



Accelerated Weathering



Cyclic Corrosion

Electrical Resistivity Testing

Passivation

QUV Exposure

Salt Spray Testing

SO₂ and SO₂/CO₂ Exposure

Taber Abrasion / Wear Resistance

Temperature & Humidity Testing

Why IMR?

You know your products better than anyone.

The good name and reputation of your company goes out with every piece you ship. Your needs, your priorities and your deadlines drive everything we do at IMR.

We are your one-stop laboratory for high quality materials testing services on metals, polymers and composites. Whether you are verifying raw materials, checking finished parts from your suppliers or require a failure analysis, we have the experience, tools and training to help you get the answers you need.

We carry all of the requisite accreditations and approvals, including ISO 17025, Nadcap, A2LA, SAC, GE S-400, Pratt & Whitney MCL, and many other major manufacturers. We serve clients in a variety of industries including medical, power generation, aerospace, automotive and more.

Contact us today for more information on how we can help you with your materials testing and failure analysis needs.

Corrosion Testing

Corrosion Cracking Testing of Metals (SCC) and Plastics (ESC)

Corrosion Failure Analysis

Determining Corrosion Rates of Metals and Corrosiveness of Fluids Using Electrochemical and Immersion Test Techniques

Dezincification Testing of Brasses

Electrochemical Corrosion Simulation

Evaluation of Duplex Stainless Steels

Formicary (Ant's Nest) Corrosion of Copper Tubing

General and Pitting Corrosion Testing

Heat & Fluid Aging

Passivation Testing of Medical Components

Residual and Assembly Stress Testing of Copper Alloys

Sensitization Testing of Austenitic and Ferritic Stainless Steels