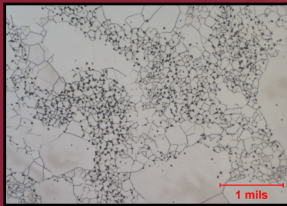
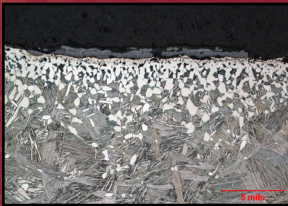


## Coatings Evaluations at IMR Singapore

IMR Test Labs - Singapore is a GE S-400 approved coatings laboratory. We have GE CCL certified coatings technicians who can provide approved coatings evaluations and reports that satisfy GE requirements.

IMR Singapore carries GE S-400 Code AJ approval on our cert T9325, which includes the following coatings: F50TF13 CL-A/B50TF72 CL-A, F50TF15 CLA, F50TF18 CLB, F50TF22 CLA, F50TF25 CLA, F50TF45 CLB, F50TF50 CLB, F50TF69 CLB, F50TF71 CLA & CLC, F50TF75 CLB, F50TF102 CLA

Contact us today at [sales@imrsingapore.com](mailto:sales@imrsingapore.com)



## Specialty Services

- Aggressive Machining Evaluations
- Analysis to support Additive Manufacturing
- Coatings Evaluations
- Metallography/Materialography
- Preparation of speciality materials including: Inconel 625, Haynes 25, Haynes 188, L605, stellites, ceramics, fiber-reinforced composites and more.
  - 2 and 3 part Chemical Etching
  - AC Electrolytic Etching
  - Non-routine DC Electrolytic Etching
  - Vibratory Polishing
- Thermal Spray Evaluation Training

## Not just data, *knowledge*

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[www.imrtest.com](http://www.imrtest.com)

[www.cwst.com](http://www.cwst.com)

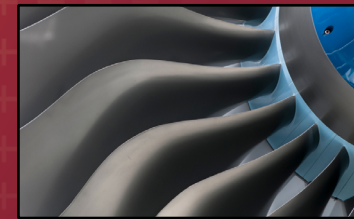
**CURTISS -  
WRIGHT**

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# IMR TEST LABS

*A Curtiss-Wright Business*

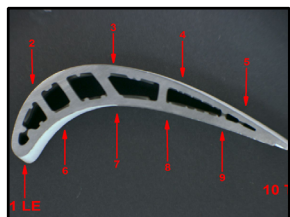
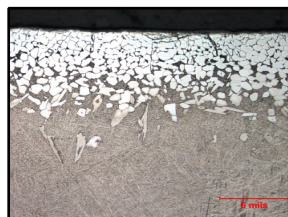
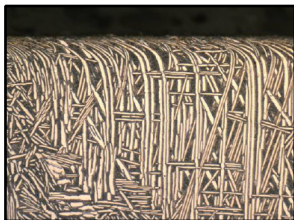
## Analytical Services for the Aerospace Industry



Not just data, *knowledge*

## Metallurgical & Failure Analysis

Aggressive Machining Evaluations  
Alpha Case  
Case Depth  
Decarburization  
Effective Case Depth  
Grain Size  
Inclusion Content  
Intergranular Attack  
Macro-etching/Micro-etching Metallography  
Microhardness (Knoop, Vickers)  
Microstructure  
Particle Analysis  
Plating & Coating Analysis  
Porosity  
Root Cause Analysis  
Specialty Material Preparation  
Thermal Spray Coating Analysis  
Weld, Braze & Joining Evaluations



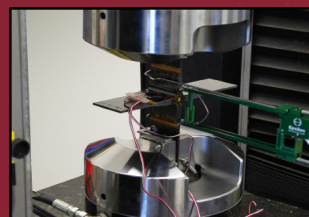
## Accelerated Weathering & Corrosion

Cyclic Corrosion  
Electrical Resistivity  
Monthly Panel Testing  
QUV Exposure  
Salt Spray Testing  
SO<sub>2</sub> and SO<sub>2</sub>/CO<sub>2</sub> Exposure  
Taber Abrasion/Wear Resistance  
Temperature & Humidity Testing



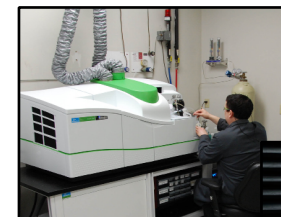
## Polymers, Composites & Contaminants

Additive Analysis to Trace Level  
Bond Strength  
Chemical Exposure Testing  
Chemical Resistance  
Coefficient of Friction  
Compression Set  
Compressive Properties  
Contaminant Identification  
Density & Specific Gravity  
DSC Analysis: Melting Point, Glass Transition, % Crystallinity  
Dynamic Mechanical Analyzer (DMA) Testing  
Extractables  
Failure Analysis  
Fatigue Testing  
Flammability  
Flexural Properties  
Fluid Exposure  
FTIR Analysis  
GC/MS: Additives  
Hardness: Rockwell, Durometer, Barcol  
Heat Aging  
Impact Strength  
Lap Shear Testing  
Material Identification  
Melt Flow Rate/Index  
Oil Content  
SEFA Testing  
SEM/EDS Analysis: Fillers  
Tensile Testing: Flatwise, Cruciform, Hoop, Standard, -240F to 660F  
TGA: Polymer, Glass and Ash Content  
TMA: Glass Transition, Coefficient of Thermal Expansion, Heat Deflection  
Viscosity  
XRD: Phase Identification, Material Confirmation



## Chemical Analysis

Alloy Identification/Verification  
Cleanliness  
Contaminant Analysis  
ICP-AES Analysis  
ICP-MS Analysis  
OES Analysis  
Particle Size Analysis  
PMI (Positive Material Identification)  
SEM/EDS  
XRF Analysis  
XRD Analysis



## Mechanical Testing

Coating Adhesion/Bond Strength  
Creep/Stress Rupture  
Erosion Testing of Coatings  
Fatigue Testing  
Flexural  
Fracture Mechanics  
Hardness (Brinell, Rockwell)  
High Cycle Fatigue  
Hydrogen Embrittlement  
Impact Testing  
Low Cycle Fatigue  
Rotating Beam Fatigue  
Tensile, Yield, Elongation  
Weld Qualification

