

Solutions to Unique Challenges

The Imperia Engineering Partners' Materials Engineering Laboratory offers high end analysis and laboratory-based testing services focused on performing customized investigations and solving problems for our clients. The unique combination of engineering and analytical capability associated with a materials/component testing laboratory has proven to be a valuable resource to our clients.

We understand the importance of providing real-world solutions to our customers. Imperia's integrated team of over 100 engineers, scientists, and technical specialists tackles challenging problems by integrating engineering, materials, and failure analysis services.

Failure Analysis and Accident Investigations

Failures may be the result of a number of complex factors and a specific sequence of events. Failure analysis requires the integration of broad-based engineering skills, fundamental materials knowledge, forensic experience, an objective mindset, and a proven process.

We recognize that a unique need exists for a quick response by experienced personnel in most investigations. We are experienced in managing investigations from initial field inspections to laboratory analysis and final recommendation support.

Our experience includes:

- Nuclear and Fossil Power Plant Components
- Power Transmission and Distribution Equipment
- Structures and Industrial Facilities
- Aerospace
- Biomedical Systems and Components
- Consumer and Manufactured Products/Packaging
- Manufactured Equipment

Testing and Simulation

Tests and mock-up simulations are often used to solve complex engineering problems or to assess a material, system, structure, or component on-site or in the laboratory.

Our 5,000 square foot testing and analysis laboratory allow us to perform a wide range of laboratory testing including:

- Corrosion
- Mechanical testing and finite element stress analysis
- Laboratory investigations on:
 - Metals
 - Polymers
 - Composites
 - Coatings



Automated Life Cycle Testing

Simulated Operation Testing



Our test and simulation capabilities include:

- Standard and Non-Standard Samples (Fully Customized Fixtures)
- Evaluation of materials, components and systems at controlled temperature
- Tensile, Compression, Bending, Peel, Burst, Stress Relaxation, Fatigue, Hardness, and more
- Electrical simulations, testing, and investigations
- Corrosion testing and assessments

Engineering Tomorrow's Solutions

Embracing the future of energy, industrial, and material sciences today

Product Development

Whether the product is a critical spacecraft component, a nuclear safety related component, or a toaster oven, safety, reliability, function, and cost containment are critical issues designers and manufacturers must face. Our engineering and laboratory-based analytical tools allow us to effectively investigate these issues, provide independent assessments, and develop focused recommendations. We provide:

- Material Selection
- Simulations
- Qualifications

Equipment

In addition to standard laboratory tools (hardness, micro-hardness, ovens, hoods, LabView data acquisition, multimeters, function generators, microscopes, etc.), the laboratory is equipped with:

- Scanning Electron Microscope
- Fourier Transform Infrared Spectrometer
- Differential Scanning Calorimeter
- Mechanical Test Frames
- Corrosion Test Equipment

Mechanical Testing



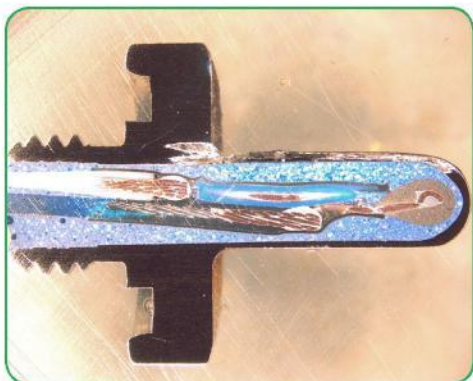
Scanning Electron Microscope



Failure Analysis



Material Selection & Qualification



Simulations and Test Loops



About Imperia

Imperia Engineering Partners (formerly Altran US Corp.) has been a trusted, high-tech engineering and consulting partner of businesses focused in the Energy industry for over 30 years. Our areas of expertise include fossil and renewable power generation; power delivery; nuclear consulting; and industrial and facilities engineering.

Contact us at sales@imperiaep.com for more information.



Contact: sales@imperiaep.com

© 2019 Imperia Engineering Partners

All rights reserved

1 Advantage Court, Suite A, Bordentown, NJ 08505 USA
Tel.: (855) 425-8726

Visit www.imperiaep.com to learn more about our services.