



Fraunhofer USA

Center for Coatings and Laser Applications



Fraunhofer USA, Plymouth, MI

Who We Are

The Fraunhofer Society is one of the world's leading research organizations for development of new technologies. The Fraunhofer CCL Laser Division, based in Plymouth MI, provides services to help customers develop materials processing solutions with laser technology. With our extensive expertise and state-of-the-art laser lab, Fraunhofer is your ideal partner for laser applications!

Advantages of Laser Processing

The focused energy of a laser beam makes it possible to precisely weld and cut at high speeds. Lasers also offer the characteristics of low heat input and low distortion, making them suitable for welding or surface treatment of precision components and finish-machined assemblies.

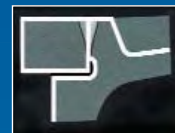
What We Offer

Fraunhofer CCL offers contract research and testing services to support projects from the initial concept phase all the way to production implementation. We offer consulting, lab process testing and development, prototype processing, and on-site production support. We also offer design and integration of custom laser processing systems.

Our Services – from Concept to Implementation

Feasibility Evaluation

- Part Design
- Materials Selection
- Business Case Evaluation



Process Development

- Process Parameter Development
- Mechanical Testing of Samples



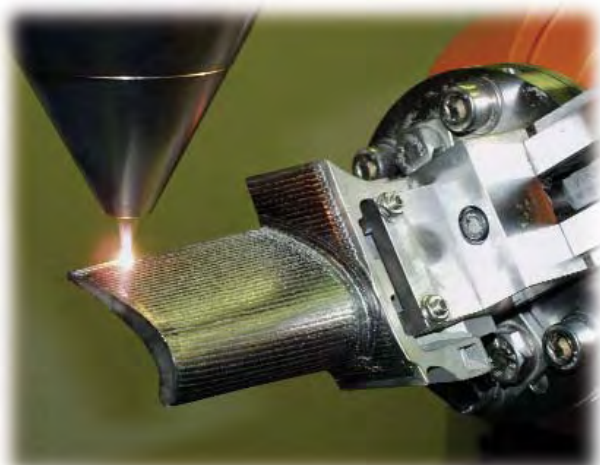
Production Intent

- Prototype Processing
- Testing of Production Intent Equipment



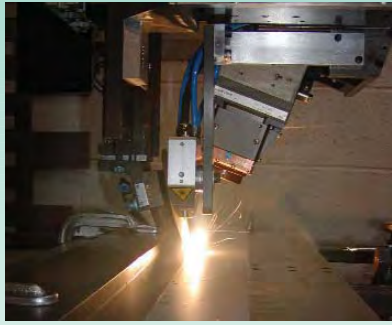
Production Start

- Process Start-Up Assistance
- Production Troubleshooting



Making innovation a reality

Areas of Expertise

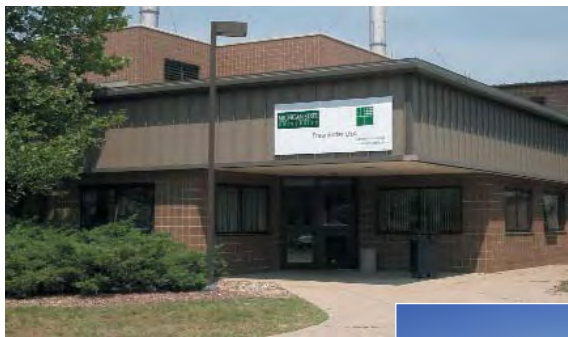


High Power Laser Applications:

- Automotive Laser Welding (Body-in-White, Components, Powertrain)
- Aerospace welding (aluminum & titanium alloys)
- Laser cladding for wear & corrosion protection
- Laser hardening of steel & cast iron
- Laser cutting

Lab Capabilities

Fraunhofer CCL offers the latest in laser technology at its Plymouth MI facility, including high power fiber, disk and CO2 lasers. Robot and CNC handling systems are available for a wide range of part sizes. Fraunhofer also has its own metallographic lab in the facility for sample analysis, as well as a machine shop for quick fabrication of fixtures and part modification.



CCL Coatings Division,
East Lansing, MI

Partnerships & Contact Information

Fraunhofer CCL has a partnership with Michigan State University for development of thin-film coatings technologies, using CVD, PVD and microwave plasma. The CCL Coatings Division is based in East Lansing, MI. The CCL parent organization is the Fraunhofer Institute for Material and Beam Technology (IWS) in Dresden Germany, one of Europe's leading institutes for coatings and laser material processing.



Fraunhofer IWS,
Dresden, Germany

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