CTC Provides Laser Coatings Removal Solutions

CTC designs, integrates, evaluates, transitions, and conducts training on laser coatings removal systems to address DoD and industry needs.

Aircraft and ships undergoing maintenance are currently stripped with abrasive dry media, chemical paint removers, hand scraping, needle guns, and power sanders. These processes are costly, time consuming and generate large amounts of hazardous waste and air emissions.

Laser Coatings Removal Benefits:
- Waste Reduction
- Reduced Air Emissions
- Reduced Worker Exposure to hazardous environments
- No Damage to Substrate
- Reduce Flow Time
- Cost Effective
- Increase Facility Capacity

Aerospace Applications
Handheld – systems for small area operations and “nit-picking” in areas of complex geometry
Off-Aircraft – automated systems for removing coatings from components of the aircraft
Full-Aircraft – large automated systems for removing coatings from the outer mold line of aircraft
Other – expanded applications include non destructive inspection, paint, surface preparation, other

Ship Applications
Handheld and automated systems for removal of coatings from tanks, bilges, and hulls
Concurrent Technologies Corporation (CTC) is an independent, nonprofit, applied scientific research and development professional services organization providing innovative management and technology-based solutions to government and industry. As a nonprofit organization, CTC conducts impartial, in-depth scientific and technology-based assessments and delivers reliable, unbiased solutions that emphasize increased quality, enhanced effectiveness, and rapid technology transition and deployment.

Example DoD Solutions

Handheld Systems

CTC performed industrywide evaluation and testing of commercial off-the-shelf (COTS) handheld systems that can be used for cleanup after full aircraft coatings removal activities and for small area coatings removal requirements.

CTC evaluated commercially available, self contained, handheld laser cleaning and paint removal equipment for shipboard interior paint removal applications.

Benefits:
- Reduced coatings removal process times
- Reduced environmental impact
- Improved worker safety

Automated Systems

CTC designed, integrated, evaluated, and transitioned state-of-the-art automated laser coatings removal system for large off-aircraft components (Laser Automated Decoating Systems [LADS] II).

CTC designed, integrated, evaluated, and transitioned state-of-the-art scalable architecture Advanced Robotic Laser Coatings Removal Systems (ARLCRS) for use on full aircraft.

Benefits:
- Improved quality & preservation of aircraft substrates
- 30%-50% flow day reduction
- 70% cost savings

Awards:
- 2014 DoD Maintenance Symposium’s “Great Ideas Competition”
- 2013 Gold Edison Award for innovation in material science for the Robotic paint-stripping system developed CTC and the National Robotics Engineering Center (NREC)
- 2010 SAE Environmental Excellence in Transportation Award
- 2009 ESTCP Project of the Year – Robotic Laser Coating Removal System
- 2009 U.S. Air Force Science and Technology Award for Manufacturing Technology – Laser Automated Decoating System II
- 2005 ESTCP Project of the Year – Portable Laser Coating Removal System

Structural Integrity Testing

- Tensile
- Fatigue
- Microstructural Analysis

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Contact

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