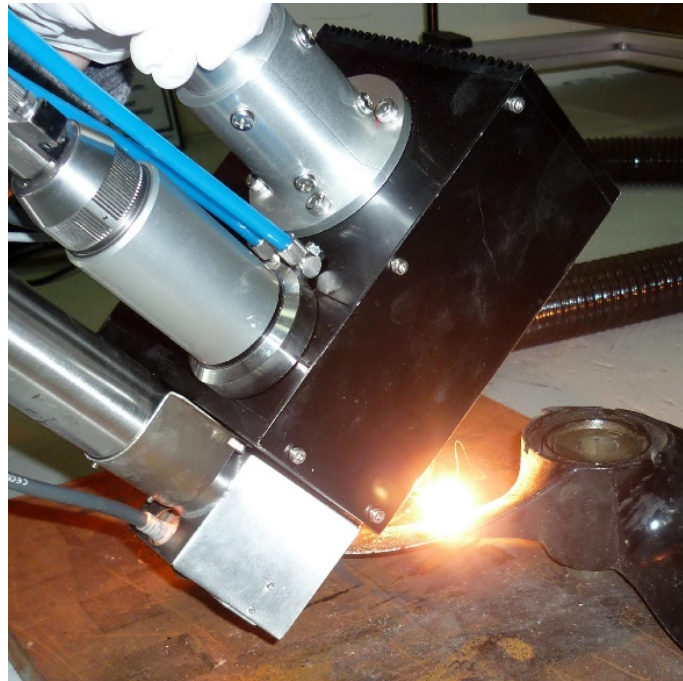
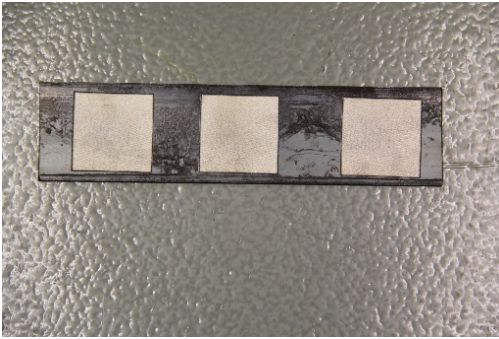


Compact Fibre Laser Cleaning System



Technology Overview

Compared to conventional cleaning solutions, the Compact Fiber Laser Cleaning System requires little preparation and profiling. Unlike chemical or mechanical means of cleaning, the laser system is compact and accurate, allowing precise control of the beam over work piece. The laser system requires little maintenance and has a lower overall operating cost. In addition, the system does not require the use of chemicals, solvents, abrasives or water for its cleaning process. Therefore, reducing the amount of waste generated by the cleaning process.

Technology Features & Specifications

Features:

- Portable/Mobile system
- Handheld laser cleaning head
- Guiding beam for laser focusing position
- Integrateable with robotics arms
- User-friendly control system

Specifications:

- Air-cooling compact fiber laser (upgradable to water-cooling for higher laser power)
- Central laser wavelength: 1064 nm
- Peak laser power: up to 1000 KW
- Pulse repetition rate: up to 7000 Hz
- Handheld laser cleaning head (upgradable to standalone cleaning workstation)
- Focal distance: 100 - 300 mm
- Laser beam scanning width: up to 100 mm

- Beam delivery fiber length: up to 100 m
- Power supply: Single phase
- Power consumption: <3 kW
- Integrated fume exhauster

Potential Applications

This technology is applicable in the following industries:

Shipbuilding

- Cleaning of paint and marine growth

Aerospace

- Removal of coatings, oil and grease

Automotive

- Surface preparation before painting and gluing
- Surface treatment before and after welding

Electronics and semiconductor

- Repair of contaminated reticles
- Wafer cleaning

Manufacturing

- Mold cleaning
- Tool cleaning

Building

- Historic restoration and conservation

Art Work

- Laser restoration of painting
- Laser conservation of artworks

Food

- Cleaning of baking tray

Customer Benefits

- Green technology to meet the requirements of sustainable processing requirements
- Easy operation system with user-friendly interface
- Non-contact operation
- Flexible operation conditions
- Low operating and maintenance costs
- Robust system with 24X7 working performance
- Extendable to be integrated in robotics system
- Precise and selective cleaning
- Reduced cleaning waste to minimal volume
- Eliminates post processing

- Controlled surface finish
- Patented technology

OVERVIEW

- Technology Category Electronics - Lasers, Optics & Photonics
Manufacturing - Surface Finishing & Modification
- Technology Status Available
- Technology Readiness Level **TRL6**



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