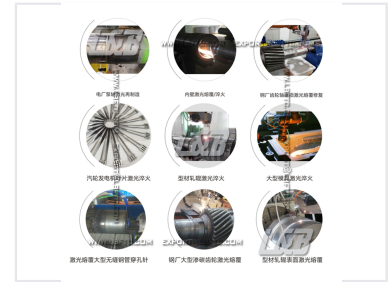


Laser Hardening System

This laser hardening system is engineered for surface treatment, specifically of cylindrical workpieces. It utilizes a robotic arm with a laser head and a rotating mechanism to ensure uniform hardening, enhancing the surface hardness and wear resistance of metal parts.



ADDITIONAL IMAGES



Overview

High-Efficiency Laser Surface Treatment

This laser hardening and cladding system utilizes a high-energy-density laser beam to perform rapid solid phase transitions and fusion cladding. Designed for industrial durability, it significantly enhances the wear, corrosion, and oxidation resistance of metal surfaces. The system is ideal for both surface hardening and the precision repair of worn components, offering a versatile solution for industrial maintenance and manufacturing.

Technical Capabilities

Performance Advantages

- High energy density for rapid heating
- Minimal workpiece deformation
- Precise control over heating depth and position
- Increases service life by up to 3 times
- Supports single or multi-layer cladding

Core Functions

Surface Hardening, Laser Cladding, Component Repair, Wear Resistance Improvement, Corrosion Resistance Enhancement

Equipment Features

System Components

- Imported laser source
- High-efficiency composite cladding actuators
- Precision servo drive system
- Automated powder feeder

Optical System Protection

Lens Water Cooling • Positive Pressure Protection • Anti-Interference Design

Applications

Typical Applications

Application Area	Process Type
Electric Pump Shafts	Remanufacturing
Internal Wall Surfaces	Cladding / Quenching
Steel Mill Gear Shafts	Repair / Cladding
Turbine Generator Blades	Quenching
Profile Rolls	Quenching / Cladding
Large Molds	Quenching
Seamless Steel Pipe Needles	Cladding