

# SENFENG



[www.sfcladding.com](http://www.sfcladding.com)

# Laser Cladding Technology

## Metal Additive Manufacturing and Surface Repair



## About us

Since the establishment of SENFENG, we have been committed to the R&D and innovation of laser technology. We're a leading manufacturer specializing in the field of laser cutting, laser welding, laser cleaning, laser cladding, industrial 3D robot, bending, milling, etc.

In order to achieve global local services more efficiently, we have established 3 subsidiaries in the USA, Germany and UAE, 4 service centers in India, Pakistan, Vietnam and Jordan.

After years of persistent probe in the field of laser technology, we are equipped with a great pool of core tech to drive automation process of modern machinery industry.



# Laser Cladding Technology



## What is laser cladding technology?

Laser cladding is a process by feeding metallic power or wire into the molten pool generated by laser beam to form a coating applied onto the surface of metal components.

## What can laser cladding do?

The process is often used to create a protective coating for increased functionality, such as wear and corrosion resistance, as well as restore damaged or worn surfaces.



## Advantage

**01**

### Excellent ROI:

A real and promising gold mine to be discovered

**02**

### Enhancing wear and corrosion protection:

Enjoy a three times longer service life

**03**

### Achieving metallurgical bonding:

Low risk of separation and delamination

**04**

### Creating limited heat-affected zone:

No trauma, no deformation

**05**

### Fitting for automation and integration into:

CNC operation and CAD-based processes

**06**

### Repairing damaged parts instead of scrapping:

A great way to recycle



# Globalization



USA Subsidiary



Germany Subsidiary



UAE Subsidiary



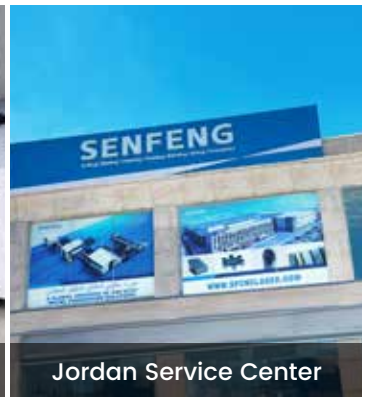
Pakistan Service Center



India Service Center



Vietnam Service Center



Jordan Service Center

# Qualification



# Ultra High Speed/Rectangular Spot Laser Cladding Equipment

Open Type

**SFH3050(L)** 



Fully Enclosed  **SFHS3050(L)**

## Technical parameter

	<b>SFH3050 SFHS3050</b>	<b>SFH3050(L) SFHS3050(L)</b>
Laser source power	6kw/12kw	6kw/12kw
Powder feeder	Double barrel pneumatic	Gravity powder feeder
Laser cladding head	High speed annular nozzle + powder separator	Copper mirror rectangular cladding head
Single layer thickness	0.1-1.5mm	0.2-2mm
Effective stroke (customizable)	X-500mm Y-300mm Z-3000mm C-360°continuous rotation	
Chuck diameter	φ500mm(Three-jaw self-centering)	φ500mm (Three-jaw self-centering)
Chuck clamping range	φ25-φ500mm	φ25-φ500mm
Headstock (customizable)	Maximum rotation diameter of workpiece φ800mm	φ800mm
	Maximum length of workpiece 3m	3m
	Maximum payload 3T	3T
	Maximum spindle speed 30r/min (Infinitely variable speed)	30r/min (Infinitely variable speed)
Adjustable angle of cladding head A axis (manual)	±30°	0°
Powder collecting device	Follow-up powder receiving tray	Follow-up powder receiving tray
Voltage	AC380V/50HZ	AC380V/50HZ
Whole machine weight	About 4.2T/5.2T	About 4.2T/5.2T

# Multi-functional Inner & Outer Wall Laser Cladding Machine

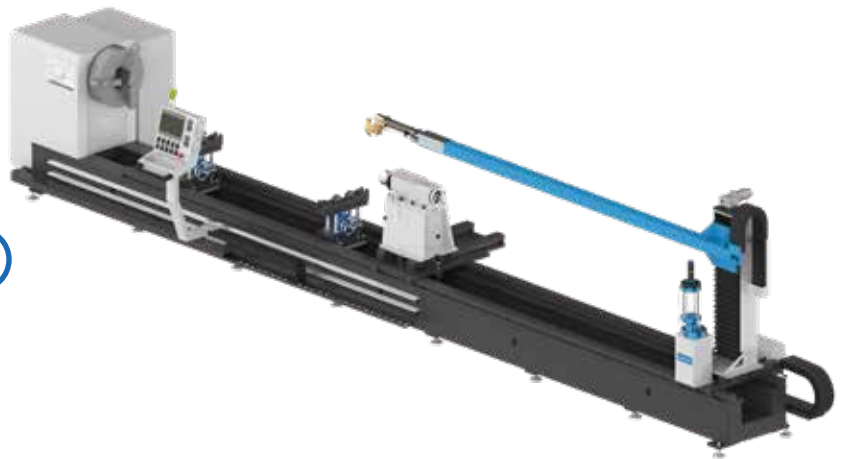
Fully Enclosed

**SFCS3050** 



Open Type

**SFC3050** 



## Technical parameter

Laser source power	6kw/12kw	
Powder feeder	Double barrel pneumatic	
Laser cladding head	Inner hole laser cladding head	
Single layer thickness	0.1-1.5mm	
Effective stroke (customizable)	X-500mm Y-500mm Z-3000mm C-360°continuous rotation	
Headstock (customizable)	Chuck diameter	φ500mm (three claw self centering)
	Chuck clamping range	φ25-φ500mm
	Maximum rotation diameter of workpiece	Φ1200mm
	Maximum length of workpiece	3m
	Maximum payload	2T
	Maximum spindle speed	30r/min (Infinitely variable speed)
Powder collecting device	Follow up powder tray	
Voltage	AC380V/50Hz	
Whole machine weight	About 6.5T/7.5T	

# Robot Laser Cladding Workstation

Robot-assisted

## SFR6063



## Technical parameter

Laser source power	6kw/12kw	
Robot	Model	M-20iD/25
	Arm span	1831mm
	Load	25kgs
	Repeat positioning precision	±0.02mm
	Travel of robot walking axis	6000mm (customizable)
Horizontal rotary table	Max bearing capacity (with rollers)	15T
	Max diameter of workpiece	1500mm
	Max weight of clamping workpiece (without roller)	3T
	Spindle speed	110 RPM
	Max workpiece length	6000mm (customizable)
Double axis positioner (optional)	Load	500kg
	A-axis max rotating speed	24RPM
	C-axis max rotating speed	37RPM
	Displacement angle	≤±120°
	Four-jaw single action chuck	φ500mm
Powder feeder	Double barrel pneumatic powder feeder	
Laser cladding head	High speed annular nozzle + powder separator	

# Mobile Robot Laser Cladding Equipment

Mobile Robot

**SFMR01** 



Mobile Robot  
**SFMR02** 

## Technical parameter

Laser source power	6kw/12kw
Powder feeder	Double barrel pneumatic powder feeder
Laser cladding head	High speed laser cladding head
Robot	Model M-20iD/25
	Arm Span 1831mm
	Max Loading 25kgs
	Repeat Positioning Accuracy $\pm 0.02\text{mm}$



# Industry

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Oil & Gas



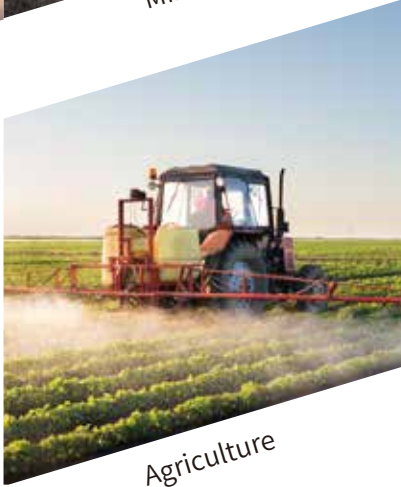
Mining



Power Generation



Steel



Agriculture



Transport




Rail Transit

# Sample

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Note: The pictures and parameters in the album are for reference only, and the actual product shall prevail. Printed in Apr. 2024