SENFENG

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 9 service centers in USA, Germany, UAE, Japan, 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

SENFENG USA (Los Angeles)

SENFENG USA (Chicago)

SENFENG Germany

SENFENG UAE

SENFENG Pakistan

SENFENG Japan

SENFENG Jordan

SENFENG India

SENFENG Vietnam

Qualification

Ultra High Speed/Rectangular Spot Laser Cladding Equipment

Open Type

SFH3050(L)

Fully Enclosed

SFHS3050(L)

Technical parameter

		SFH3050 SFHS3050	SFH3050(L) SFHS3050(L)
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	
Headstock (customizable)	Chuck diameter	ϕ500mm(Three-jaw self-centering)	ϕ500mm (Three-jaw self-centering)
	Chuck clamping range	ϕ25-ϕ500mm	Φ25-ϕ500mm
	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

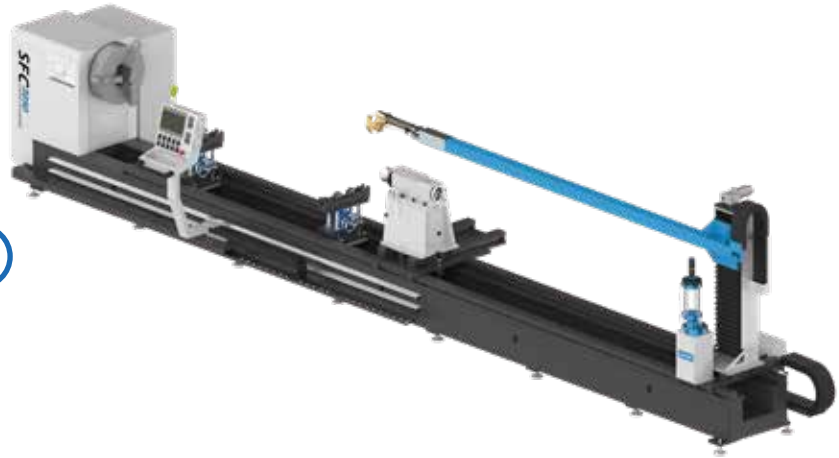
Multi-functional Inner & Outer Wall Laser Cladding Machine

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	KR 20 R1810-2
	Arm span	1813mm
	Load	20kgs
	Repeat positioning precision	±0.04mm
	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/30RPM
	Max workpiece length	6000mm (customizable)
Double axis positioner (optional)	Load	500kgs
	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	KR 20 R1810-2
	Arm Span	1813mm
	Rated load	20kgs
	Repeat Positioning Accuracy	±0.04mm

Industry

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. 2025