



STEVEN SEPVEST CORP

INDUSTRIAL LASER SOLUTIONS PROVIDER

Laser Disorder Texturing on Metallurgical Roller

- **Overview**

HGLaser R&D and manufactures first fiber-coupled laser disordered texturing equipment in the world independently. It can make the surface of roll to be random texture so that make the surface of the steel plant to be disordered. It will be used on some high-end automobile and household-elec.

This equipment worked well in Iron&Steel industry. The technology has been applied for the national patent by WISCO-HGLASER. Laser disordered texturing has advantage of good uniformity and repeatability, processing shape controllable, non-pollution, energy saving, low noise and so forth. This technology is a new Tech on roll-texturing. It can instead of shot blast texturing, Electrical discharge texturing and other sorts of ordered laser texturing.

- **Solution**

Iron & Steel, Aluminum, Titanium plate area ect.

Fiber laser disordered texturing equipment applies to manufacture the roll of temper mill ,skin-pass mill and rolling mill. It can be used to roll the steel plate of automobile, plates of household appliances, ordinary building material plates, Aluminum plates, titanium plates and so on. Deep drawing property and coating performance of the plate will be greatly improved. According to the demand of the custom we can change different configurations of the equipment on sing



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Comparisons between Laser texturing and Electrical discharge texturing.

Content	Elec-discharge texturing	Laser texturing
Installation condition	Large area occupation Complex installation	Simple installation and low price CNC machine foundation
Running cost	High power consumption High consumption of Insulating oil and electrode	Low power consumption Non quick-wear part Low consumption of energymedium
Production environment	Serious pollution of oil and air	Non-pollution
Surface roughness Ra	0.5-12	0.5-15
RPc	50-80	80-120
Morphology of tunability	Disordered texturing	Ordered/disordered texturing can be controlled
Relationship between Ra and RPc	Ra↑, RPc↓	data of RPc has small change when data Ra become small

• Customer Benefit

- The disposable investment of disordered fiber laser texturing is not high. It's as 17-30% time as investment of electrical discharge texturing according to the different configuration.
- Running cost of disordered fiber laser texturing is low. It's as 5-6% time as running cost of electrical discharge texturing according to the different configuration.
- There's few influence between Ra and Rpc of the machining surface by disordered fiber laser texturing. when data of Ra is between 2.0 to 4.5 μm the data of Rpc will stay around 110/cm. Elec-discharge texturing and shot blast texturing can not get this result.
- Fiber laser is maintenance free, and the average life of laser pumping is 100 000 hours.
- The whole processing of texturing is automatic running. Good uniformity and repeatability. Processing shape is controllable. Running is stable.
- Simple operation. Operator just Define the start point, end point, laser power and then press



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the start button, the equipment will run automatically from Measuring the diameter of roll to finishing the process and going back to zero point.

- **Related Application**



Laser disorder texturing on cold roll

ZOOM 200 times size of cold roll surface after laser disorder texturing

Steel plate surface after laser texturing on Actual size

ZOOM 50 times size of cold roll surface after laser disorder texturing



ZOOM 200 times size of cold roll surface after laser disorder texturing