

## REPAIR AND RESTORATION



- Restoration of Dimensions
- Improved Wear Resistance
- Strong Metallurgical Bond
- Minimal Heat-Affected Zone
- Cost-Effective Repair
- Enhanced Surface Properties

## APPLICATIONS



### INDUSTRIAL MACHINERY

Heavy Equipment Bearings: Restoring and enhancing the bearing journals of heavy machinery used in industries such as mining, construction, and manufacturing.



### AUTOMOTIVE INDUSTRY

Engine Components: Repairing and improving the bearing surfaces of crankshafts, camshafts, and other engine components subject to wear.



### AEROSPACE

Aircraft Bearings: Extending the service life of critical bearing journals in aircraft engines and other aerospace components.



### POWER GENERATION

Turbine Bearings: Rebuilding and enhancing the bearing journals of steam and gas turbines used in power plants.



### MARINE INDUSTRY

Propulsion System Bearings: Restoring bearing journals in marine propulsion systems to ensure reliable operation.



Exceptional,  
setting new  
benchmarks



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# LASER CLADDING FOR ROT (ROLL-ON TABLE) ROLLS IN A STEEL MILL



### ENHANCED DURABILITY:

- Increases the wear resistance of ROT rolls, extending their lifespan.
- Reduces downtime and maintenance frequency.

### IMPROVED PERFORMANCE:

- Maintains consistent quality and performance under high-stress conditions.
- Provides superior resistance to abrasion, corrosion, and thermal fatigue.

### PRECISION AND QUALITY:

- Achieves precise, uniform coatings with minimal dilution and defects.
- Enhances surface properties, resulting in better product quality.

### VERSATILITY:

- Suitable for various roll materials and sizes.
- Customization cladding materials to meet specific operational requirements.

### COST EFFICIENCY:

- Lowers long-term operational costs by reducing the need for frequent replacements. Minimizes production losses due to fewer roll changes and repairs.

# LASER CLADDING MATERIALS



## 1. Nickel-Based Alloys:

Inconel, Hastelloy, Stellite, NiCrBSi

## 2. Cobalt-Based Alloys:

Stellite

## 3. Iron-Based Alloys:

Stainless steels (309L, 316L, 410), tool steels, cast iron.

## 4. Tungsten Carbides

## 5. Chromium Carbides

## 6. Vanadium Carbides

## Benefits of Laser Cladding Process

- Metallurgical Bonding
- Minimal Heat Affected Zone (HAZ)
- Reduced Dilution
- High Hardness
- Improved Wear Resistance
- Enhanced Corrosion Resistance
- Thermal Stability
- Improved Surface Properties

# A SLURRY PUMP SHAFT SLEEVE



## advantages

- Protection from Wear
- Corrosion Resistance
- Ease of Maintenance
- Seal Compatibility

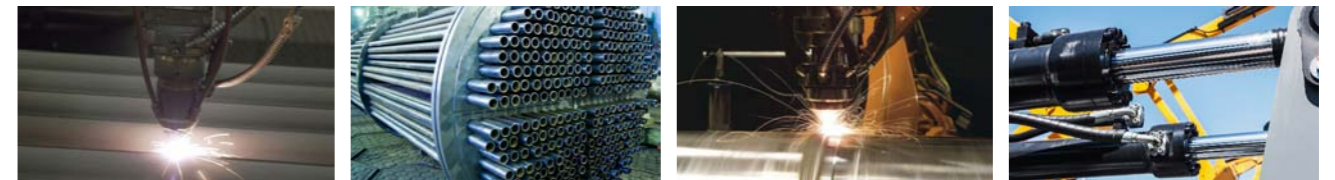
A Slurry Pump Shaft Sleeve is a protective component used in slurry pumps to cover the pump shaft. The primary purpose of the shaft sleeve is to protect the shaft from wear and corrosion caused by the abrasive nature of slurry, which typically consists of a mixture of solid particles suspended in liquid.



## application

### INDUSTRIES / APPLICATIONS

Gear box bearing journals / Blades / Marine shafts / Boiler tubes Mining industry / Brake discs from automotive Industry / Cladding for agricultural knives and specialized parts for agro machinery industry / Barrel screws for injection moulding



## material

Aluminum alloys (Al-Mg-Si)	Cobalt alloys (Co, C, Cr, W)	Copper alloys	Titanium alloys	Tool steels (Fe, C, Cr, V)
MMC including carbides (WC, TiC, CBN)	Nickel self-fluxing alloys (Ni-Cr-B-Si)	Super alloys (Ni, Co, Mo, Cr, Si)	Stainless steels (Fe, Cr, Ni)	Nano additive alloys (oxide dispersion strengthened alloys)

