

## LC Powders

Eutectic Castolin Laser Cladding (LC) premium powders offer maximum wear protection to valuable equipment & components exposed to the harshest conditions.

Our ever growing product line works across a wide spectrum of industries and includes iron, nickel, cobalt-based alloys and carbide blends. Our in-house powder production uses the most advanced, high-pressure atomizing technology, providing consistent and reliable powder quality.

Additionally, an innovative XHD (Xuper High Deposition) laser powder line offers unique alloy properties that requires minimal heat input and achieves higher deposition rates.

*«When you need an affordable alternative to hard chrome plating, LaserClad® is your reliable and sustainable solution for better performing wear components. Reduce costs with LaserClad®!»*



## Your Strategic Partner

- ISO 9001 certified laser cladding service shop and powder manufacturing facility
- ID cladding capability with cylindrical and large diameter turning
- Extended service offerings: Additive Manufacturing, CMT, laser hardening
- Material testing and analysis services
- Local technical and customer support team



Global Expertise



Quality Assurance



Turnkey Offerings



Performance Assessment



Industrial Sustainability



# LaserClad®

- Best-in-class laser cladding materials and services
- Global service network, local support throughout North America
- Unique technology with highly precise deposition and minimum distortion



Eutectic Corporation:  
N94 W14355 Garwin Mace Dr.  
Menomonee Falls WI, 53051 USA  
+1 800. 558. 8524 • eutectic.com

Eutectic Canada:  
428, rue Aimé-Vincent, Vaudreuil-Dorion,  
Québec J7V 5V5 Canada  
+1 800. 361. 9439 • eutectic.ca



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## LaserClad® Technology

Laser cladding is a weld build-up process and complementing coating technology to thermal spray and, more increasingly, to PTAW (Plasma Transferred Arc Welding).

In essence, the laser beam creates a molten pool at the workpiece surface, to which the coating material molten by the laser is simultaneously added. The exposure time is short and cooling is quick, which results in a metallurgical bond to the base material.

Laser cladding is realized either as wire (laser hot wire cladding) or direct powder cladding. It is more reliable than coatings created by thermal spraying and, compared to hard chrome plating, an eco-friendly alternative as well.

Laser cladding can achieve a permanent structural repair and refurbishment with a wide range of different alloys with its key benefits, unique to the process itself.

### Turnkey Solutions | Reliability Matters

- Pump housing, impellers, shaft sleeves
- Gate and ball valves and seats
- Mining parts and drilling components
- Bearings, bearing bushes and seals
- Steel Mill and industry rollers
- Electric motor shafts & extruders
- Hydraulic cylinders and rods
- Turbine blades and vanes
- Agricultural wear parts
- HVOF Replacement

## LaserClad Benefits

- Excellent process stability and part reproducibility
- Homogeneous micro-structure through rapid surface solidification
- Minimal distortion and low dilution resulting in multi-functional cladding performance
- Minimized post-weld heat treatment through minimized component stress
- Extended weldability of sensitive materials like carbon-rich steels
- Near net-shape surface build-up requiring nominal finishing



### LASERCLAD IS YOUR PERFORMANCE

- Dimensional restoration and repair
- Wear and corrosion protection
- Surface enhancement and protection

## LaserClad Process

### Redefining Industrial Surface Protection



#### Laser Metal Deposition

- Ultimate process integrity
- Higher deposition (wire)



#### ID Cladding

- Difficult to access bore diameters
- High deposition rates



#### High Speed

- EHLA
- Direct hard-chrome replacement



#### Additive / DED

- Wire or powder
- Freeform repair

## Available Alloys

### Dimensional restoration

- Stainless Steel (300 & 400 series)
- Tool Steel Series

### Wear Resistance

- Ni-Based WC Composites
- Fe-Based Complex Carbide Composites
- Diamond Composites

### Corrosion / Oxidation Resistance

- Cobalt Alloys (Cobalt 6, 12, 21)
- Nickel Alloys (Inconel 625, 622, Hastelloy)

