

FOCUS ON...

# LASER METAL DEPOSITION

## What is LMD?

LMD is a laser cladding and an Additive Manufacturing (AM) process that uses a focused LASER beam to melt a coaxially-blown metal powder stream onto a substrate



- ✓ Fast
- ✓ Accurate
- ✓ Low heat input
- ✓ Minimal distortion
- ✓ Metallurgical bond



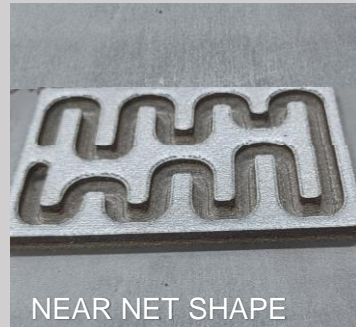
**LISTEMANN**  
perfecting materials

- Heat treating
- Brazing
- Electron beam welding
- Debinding & Sintering
- Additive Manufacturing
- Material engineering



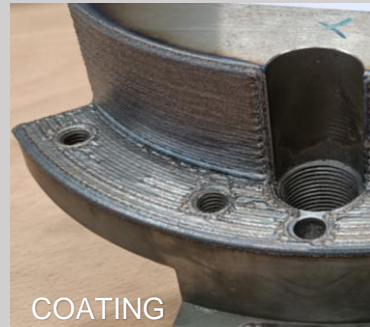
REPAIR

Don't throw them away anymore ! We can repair or rework your broken and scrap parts



NEAR NET SHAPE

Reduce your lead time, innovate and customize your products with LMD Additive Manufacturing



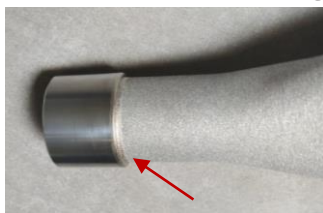
COATING

Extend the lifetime of your components owing to the application of protective coatings

# Near net shape

Listemann helps industrials achieving:

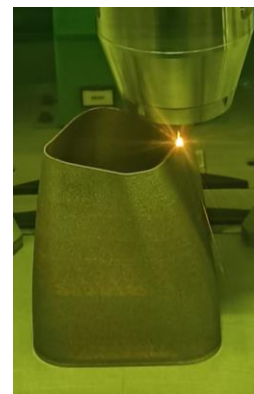
- Weight or lead time reduction
- Reduction of material waste
- Innovation in designs and customization



vacuum brazed joint

Advantages:

- 5-axis CNC LMD machine
- Low to no post processing
- Hybrid process



## Repair



Manufacturing process chain can be improved by integrating repair into the life cycle of components

- Local addition of material to attain the tolerance
- Rework of machining errors
- Extension of its lifetime at lower cost
- Reduce the volume of scrap parts and lead time
- Ecological sustainability



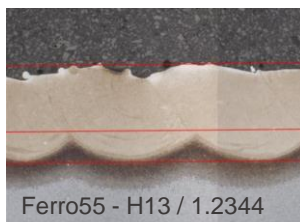
## Coating



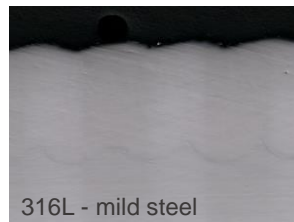
Ferro55 - Hovadur K220



Ferro55 - mild steel



Ferro55 - H13 / 1.2344



316L - mild steel

With LMD, we can apply a layer of high-performance material onto a low-cost substrate, and only in the critical areas, thus drastically reducing the total cost of the part

- Corrosion or wear resistance alloy
- Novel designs now possible
- Reduce the cost of the part
- Increase part lifetime

## Materials



This service is provided by



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