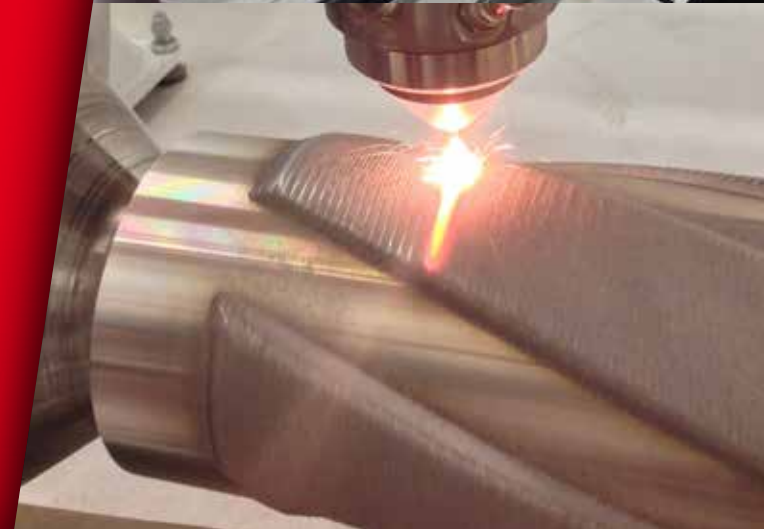




LaserClad

MAXIMUM Protection, precisely



- Coating protection
- LaserClad powders
- Fully integrated systems

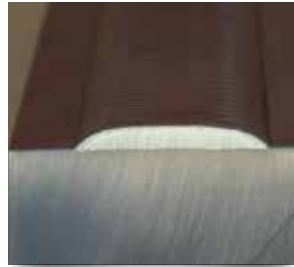
Features and Applications

The arrival of High Power Direct Diode (HPDD) laser technology a few years ago started to drastically change the landscape of hardfacing. The HPDD technology was able to maintain its high power efficiency and quality, whilst dramatically reducing the cladding time and cost.

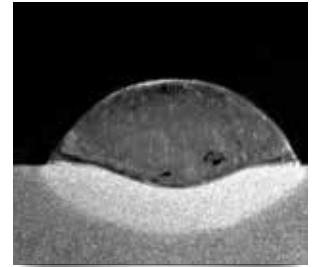
With the introduction of the first 8KW HPDD laser in Europe by Castolin, the full advantages of this breakthrough can now be exploited.

Advantages over existing technologies

- Lowest Dilution: at 2-5% it is considerably lower than PTA, weld overlay and CO2 laser cladding
- Faster: up to 13 Kg/Hour deposition rate for Tungsten Carbide containing alloys. Higher than PTA and welding
- Unique broad beam (up to 36mm wide), means no oscillation which provides coatings with a uniform thickness, sharp edges and at a faster rate
- Lowest distortion: lower heat input means the lowest distortion of large parts and plates and less machining time
- Best wear and corrosion resistance: the ultra low dilution and fast cooling rate, gives unique microstructures with exceptional properties
- Range of thicknesses from 0.3-10mm depending on alloy



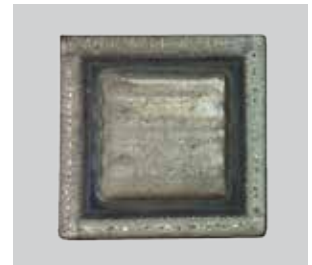
Laser - Low dilution



Welding - high dilution



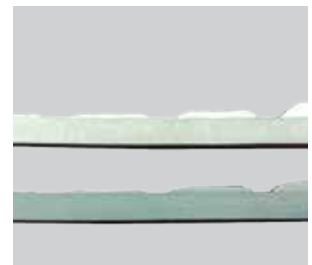
23mm wide bead



Small precision parts



Clean, sharp profiles



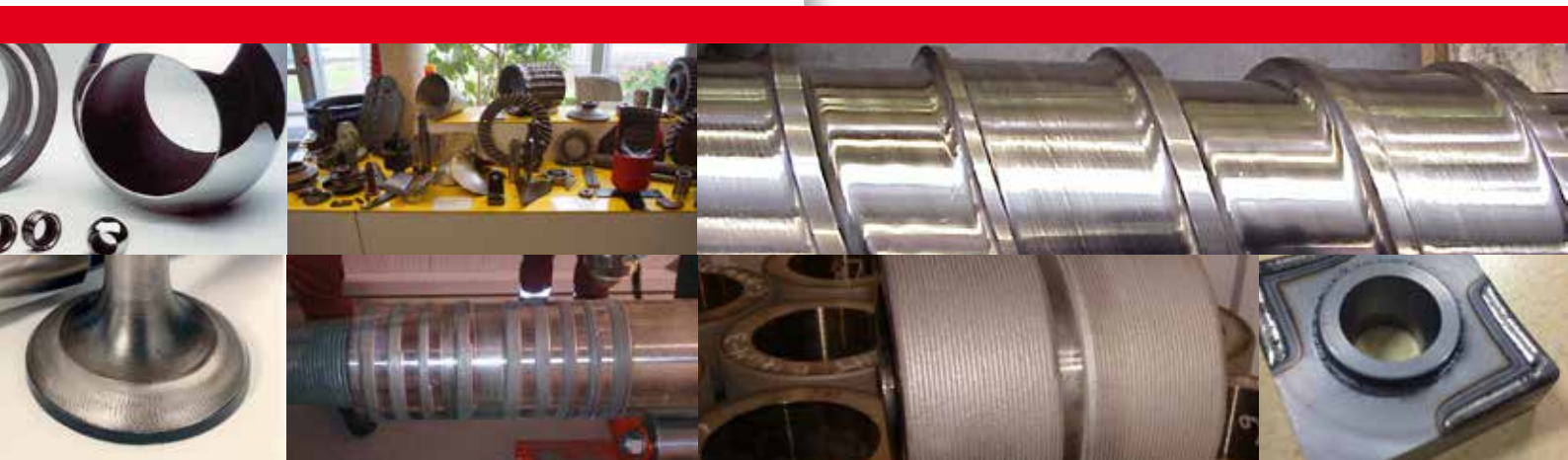
Range of thicknesses from 0.5-3mm single pass



Thick, precision coating



Thin wall section



Advantages working with Castolin

- 100 years of wear and corrosion understanding
- Long experience with laser cladding: selling laser powders for 10 years
- Design and manufacture all powders for laser cladding
- To date, 3 diode LaserClad units installed within Castolin Eutectic globally
- OEM Laser cladding experience in the Oil Industry
- Deep understanding of the process: developed through research projects with the Fraunhofer Institute and AC2T
- Investment in the largest HPDD laser cladding facility in Europe and in Asia

Our offer

1. Coating Service

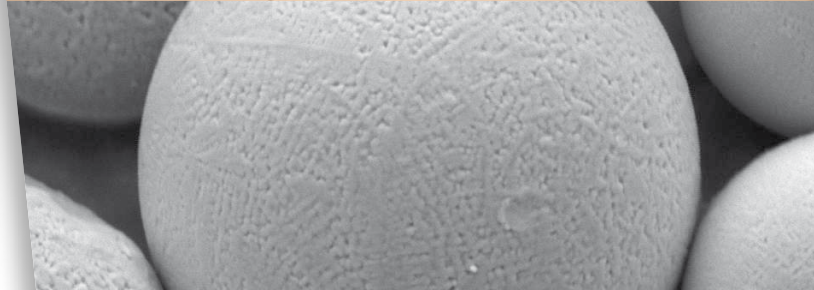
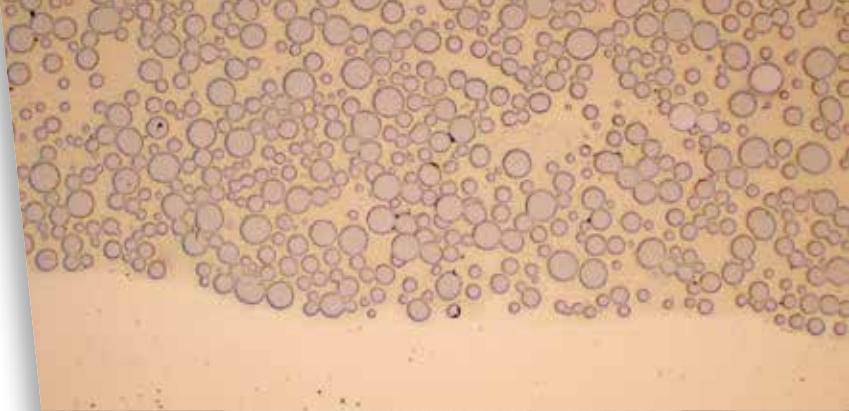
- Deposition of thick coatings, on large parts
- Precision cladding with thin coatings on small parts
- Repair and maintenance of industrial parts (rollers, blades etc.)
- R&D support for novel materials
- Cost effective OEM coating service for thousands of parts

2. Laser Cladding powder

- Full range of alloys available and optimised for laser cladding
- Novel alloys can be designed/manufactured in our state-of-the-art powder production plant

3. Fully automated and integrated laser cladding facility

- Complete laser cladding system





Norway

Austria

Korea

Castolin Eutectic Laser Facility



Castolin Eutectic Laser Powder Production



Our facility

- Located in the Castolin Austria Service workshop - Vienna
- Fully automated 7 axis 8kW HPDD laser cladding
- Fully overhead crane allows coating of parts up to 3 tonnes, 1000mm diameter and 5m length



R&D Laser Facility

Stronger, with Castolin Eutectic



www.castolin.com