techno
cladding
europe

WHO ARE WE?

Sustainable and environmentally responsible business is and will become more and more important in the future. The current surface techniques on the market do not (yet) meet this requirement and their right to exist is uncertain. With this in mind, Technocladding Europe was founded.

Founded in 2022, Technocladding Europe has become a specialist in laser cladding of various metal parts. Technocladding Europe works closely with the Technoplating Group. Within this group there is a lot of experience about surface techniques and is quality always a primary goal. And Technocladding Europe has the same goal as well.

CONTACT

Do you have questions or are you curious about the possibilities? Feel free to contact us.

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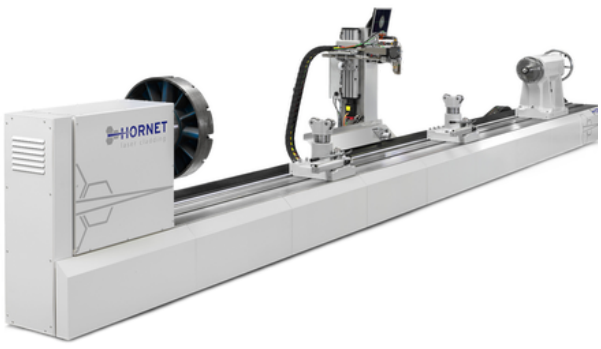

Min. Ø50 | Max. Ø1000 | Max. 20.000 kg | Max. 15.000 mm

OUR LAYERS

TCE625+

TCE625+ - Has extremely high wear and corrosion resistance. In addition, this layer also has strong adhesion properties and has a relatively high hardness (HV) compared to other laserclad layers. This layer is specially designed for the EHLA laserclad machine and is extremely suitable for: **harsh- corrosive environments**.

TCE625

TCE625 - Provides excellent resistance to corrosion and oxidation. In fact, it is designed to withstand high temperatures. This layer can also function under high tensile stresses and temperature variations, both in and out of water. This makes the layer suitable for: **offshore applications.**

TCE316L

TCE316L - Provides high resistance to corrosion and oxidation. Although this layer scores slightly lower on wear and corrosion resistance, laser cladding the layer is more financially attractive. In addition, TCE316L is weldable to almost all steel alloys and is therefore ideally suited for **repair** and/or as an **underlayer**.

EHLA LASERCLADMACHINE

EHLA stands for; **Extreme**, **Highspeed**, **Lasercladding**, **Application**. As one of the newest technologies on the market, this machine offers significantly higher machining speeds than other laserclad machines. This is made possible because the material powder already melts in the laser, making it easier to apply.

Are you curious about all the other advantages? Then feel free to contact us.

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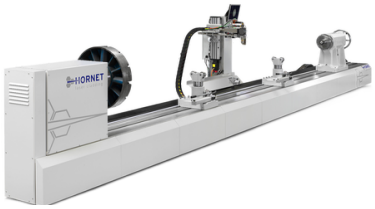
WHAT IS LASER CLADDING?

Lasercladding is a new type of surface treatment. Using a high-power laser, a thin layer of the base surface is melted. At the same time, material powder is fed into the laser. This material powder melts and bonds with the base material resulting in a metallurgical bonding of these two materials.

Technocladding Europe uses the EHLA laserclad machine. **EHLA** stands for **E**xtreme, **H**ighspeed, **L**asercladding, **A**pplication and is one of the newest surface techniques on the market. Compared to conevntional laserclad machines, EHLA is much faster and more accurate.

- **min. Ø50**
- **max. Ø1000**
- **max. 25.000 kg**
- **max. 15.000 mm**



INDUSTRIES

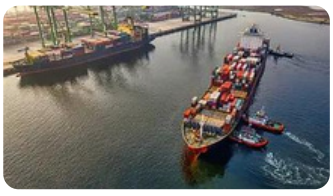
Due to the wear and corrosion resistant properties of laserclad layers, it is already widely used as a coating for various applications and industries. Here are some examples.

Mining and earthmoving

Oil and gas

Paper industry

Steel and manufacturing



Offshore

Agriculture

Do you have questions or are you curious about lasercladding options? Then feel free to contact us.

BENEFITS OF LASER CLADDING:

High processing speed

Because EHLA is fully computer-controlled, it increases laser throughput from 0.5 to 2 meters per minute to 50 to 500 meters per minute, coating a part 100 to 250 times faster than before.

Low heat input

A major advantage of laser cladding is the minimal heat input. This results in low mixing with the base material and little to no distortion. This makes the finishing of our laserclad layer easier and can we guarantee quality.

Corrosion resistance

Lasercladding, unlike many other surface treatments, is corrosion resistant. This is because the microstructure of the deposited material powder is extremely dense, crack-free and non-porous. The rapid solidification of carbide-containing layers also significantly increases wear resistance.

Metallurgical connection

The EHLA laser melts a thin layer of the base surface. At the same time, in the laser, the material powder is already melted and applied to the base surface. The molten material powder bonds with the base material, creating a metallurgical bond of these two materials.

Accurate layer thickness

The EHLA laser is 1.5 mm wide and is fully computer-controlled. The combination of the minimum laser width and advanced system features allows us to determine the layer thickness to a few thousandths. This allows us to ensure the desired layer thickness.

Sustainable

Because the material powder is already melted in the laser itself, we use much less material powder than other laserclad machines. We use as much as 90% of our material powder, allowing us to clad both sustainably and environmentally.

New and repair work

We can perform both new and repair work for you without having to replace the laser or material powder. This saves a lot of time and makes the laserclad process more efficient.

Wide variety of coatings

We work with a wide variety of material powders. Each powder has its own properties suitable for each application. The machine is set up so that it does not take extra time to switch between material powders. This allows us to guarantee a short lead time.

Our layer	Industries and applications	Available on (EHLA)	Temprature (°C)	Hardness (HV)	Lateral load	Corrosion resistance (Salt spray test ISO 9227 NSS)	Wear resistance (ASTM G65-A)	Ductility
TCE625+	**These layers are used for:** • Hydraulic • Offshore • Chemical industry • Power generation • Mining industry • Aerospace industry • Petrochemical industry • Nuclear industry • Oil and gas industry • Marine industry Both the properties of the layer and the application determine which layer is most suitable. Technocladding Europe is ready to help you make an appropriate choice.	✓	950 °C	350-400 HV	★★★★☆	★★★★★	★★★☆☆	★★★★☆
TCE625		✓	950 °C	250-300 HV	★★★☆☆	★★★★☆	★★☆☆☆	★★★★★
TCE316L		✓	950 °C	150-200 HV	★☆☆☆☆	★★★☆☆	★☆☆☆☆	★★★★★
Hardchrome		-	325 °C	900-1100 HV	★★★★★	★★☆☆☆	★★★★★	★★☆☆☆
Nickel		-	325 °C	150-200 HV	★☆☆☆☆	★★★☆☆	★☆☆☆☆	★★★☆☆
Nickel-hardchrome		-	325 °C	900-1100 HV	★★★★☆	★★★★☆	★★★★★	★★★☆☆