



**LASERVORM**  
Laser Machines – Laser Processing – Wear Protection



contact details - vCard

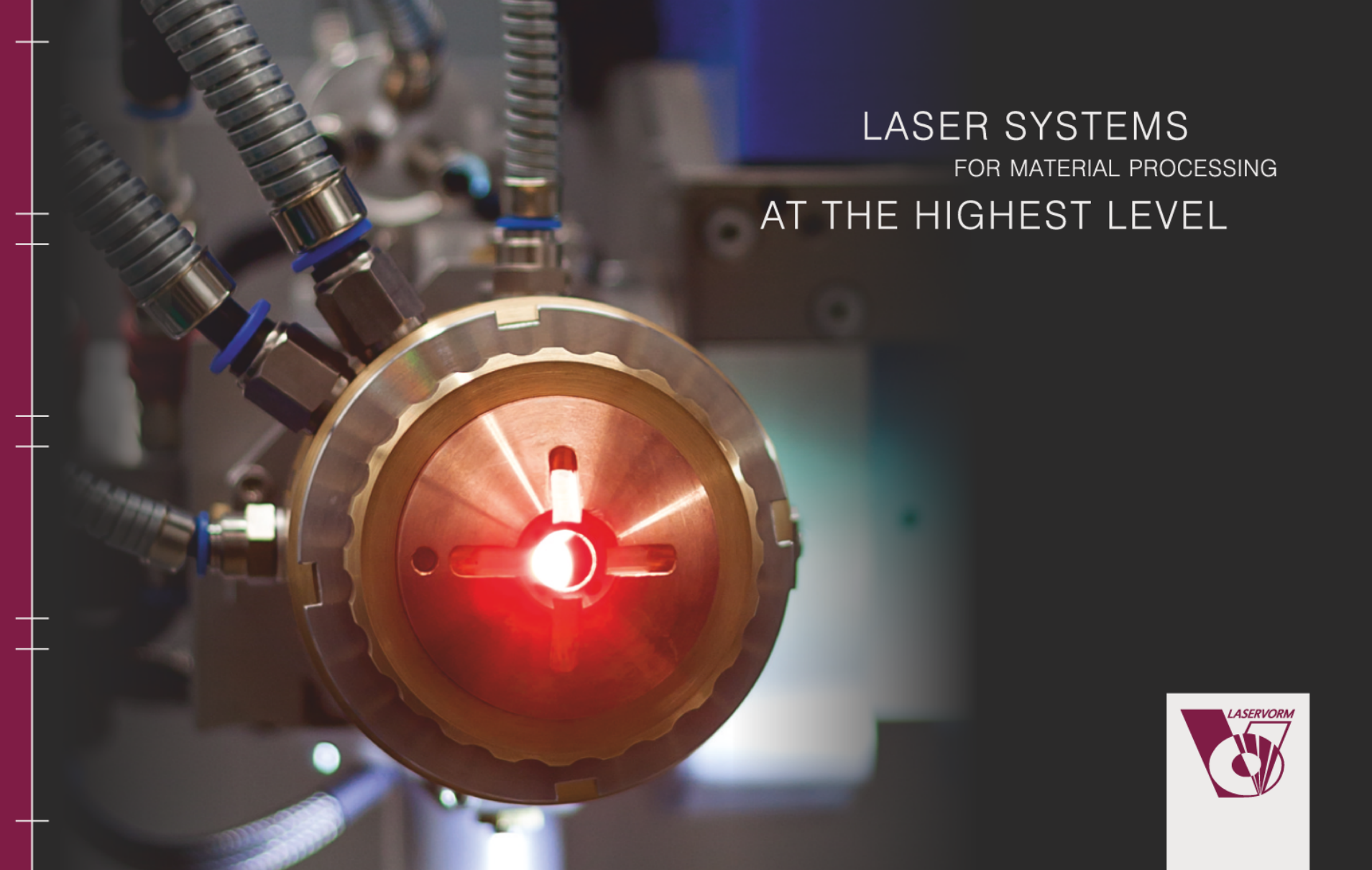
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**EFRE**  
Europäischer Fonds für  
regionale Entwicklung

**LV Midi**



LASER SYSTEMS  
FOR MATERIAL PROCESSING  
AT THE HIGHEST LEVEL



# WELDING CLADDING HARDENING

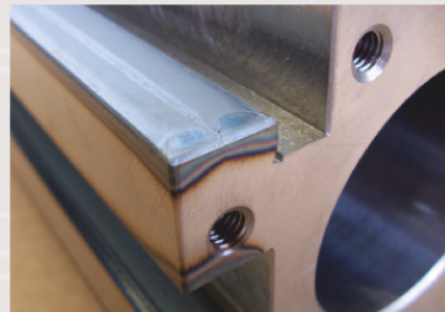
- laser material processing - from individual parts to mass production
- travelling range (X,Y,Z): 670 mm x 300 mm x 300 mm
- programmability and reproducibility of the important technological parameters
- fast and easy retrofitting
- ergonomic workspace access by means of a large doorway
- individually adjustable operating panel
- environment-friendly and economic resource management

## EQUIPMENT:

- Laser:
  - fibre-coupled solid state laser
- Optics:
  - process-specific optics
  - additional components such as LV LineScan possible
- Mechanics:
  - 3-axis, 4-axis or 5-axis design
  - extremely high stiffness due to the LV CBase machine frame
- Control/Software:
  - programmable beam shaping on the workpiece
  - adaptive processing
  - central data maintenance for easy process validation
  - simple integration into the process management
- Housing:
  - referred to laser protection class 1
  - optional: active housing
- Service:
  - maintenance, repair and spare parts
  - technology development
  - operator training
  - remote access to system parameters possible



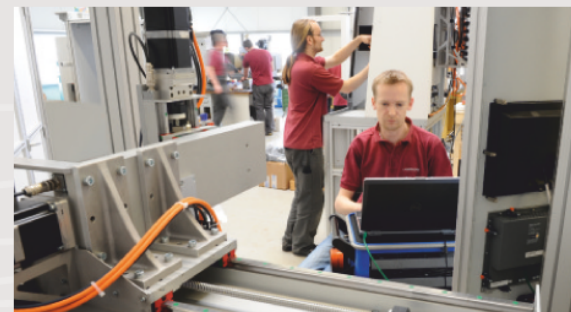
laser cladding process on turbine blades



laser-hardened component



powder nozzle in operation



engineering at LASERVORM



## APPLICATION EXAMPLES

- MRO at blisks and turbine blades
- welding of clutch, steering and gearbox components
- 3D welding of surgical instruments
- laser hardening of components and tensioning means
- 3D welding of heat exchanger components
- Helium seal welds



cw laser welding of flexible metal bellows with a connecting part made of high-alloyed CrNi-steel



detail of an aircraft turbine



programmed geometry of an laser cladbed bead

20 YEARS OF EXPERIENCE