



Contract manufacture

Laser welding

Precision seams at high speeds.

- pulsed for precision seams and minimal heat input / deformation
- continuously for highest productivity, big connector cross-sections
- if required with inductive preheating

Welding depths:

- in steel up to approx. 8 mm
- in Al-alloys up to approx. 3 mm
- in titanium up to approx. 8 mm

Materials:

- titanium, steels, nickel-alloys, Al-alloys, et al.

Examples of application:

- components minimal invasive surgery, sensor technology
- recuperator components
- exhaust components, transmission mechanics, coupling parts

Laser hardening

Surface hardening on completed (e.g. ground) work pieces

- almost non-deforming (due to local short-term heat treatment)
- special hardening optics

Hardening depths:

- 0.1 mm up to max. 2 mm

Hardening track width:

- up to ca. 30 mm

Materials:

- hardening steels

Examples of application:

- fixture construction parts / clamping devices
- leading edges of turbine blades
- cam discs
- forming / punching tools

Laser remelting Laser alloying

Creation of low-wear fringes due to surface remelt treatment.

Alloy depths:

- 0.1 mm up to max. 2 mm

Materials:

- SGCI, flake-graphite cast iron, titanium, et al.

Examples of application:

- treatment of running surfaces of cams

Laser cladding

Production of wear protection areas and other functional areas of all kinds of metals and alloys. Adjustments, modifications and repairs of components of tool and die making, of components of engines and turbines with filler material in powder or wire form.

Layer thicknesses (single-layer) up to more than 2 mm, several layers possible.
Track widths up to approx. 10 mm

Materials:

- nickel base, titanium-alloys, aluminium base, iron base, et al.

Examples of application

- MRO on blisks and turbine blades
- repair of high-quality components
- creation of sliding surfaces

Laser drilling, cutting, structuring

Special applications
Please request separately!

Materials:

- synthetics, technical textiles, pottery, glass, et al.

Examples of application:

- stripping of flat cables
- oil drilling

If required 100% process documentation / work piece report / measurement of tensile strength at break / Production Part Approval Process according to QS:9000 (PPAP) or initial sampling. Production of metallographical cross-section polish and hardness measurements. Dye penetrant testing (red / white, UV). Leak testing. LASERVORM is certified to DIN EN ISO 9001:2008.

