



LASER FINE WELDING

contact person
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FEATURES OF PERFORMANCE

- contact-free, efficient laser beam welding
- no tool wastage
- fast programming
- very precise weldseam guidance by exactly CNC technique
- optical high-class weldseams by usage of shielding gas
- quality control and metallographical evaluation of the weldseams
- generation of microsections to detected weldseam imperfections

TOLERANCES

- positioning tolerance of CNC: $\pm 50 \mu\text{m}$
 - > by alignment of components and contours higher tolerances is possible
 - > camera assisted processing
 - > general tolerances: $\pm 50 \mu\text{m}$, higher accuracy on request and depends on application

POSSIBILITIES OF PROCESSING

- materials:
 - > 1.4301, 1.4310, 1.4542
 - > hard metal
 - > copper and copper alloy (nickel silver, bronze, brass)
 - > phosphorus bronze
 - > titan and aluminum on request
- material thickness:
 - > 0.05 - 1.0 mm by overlap
 - > up to 2.0 mm by fillet weld or tacking by impact
 - > thicker / thinner materials on request
 - > cladding (thin foils welded on thicker solids)
- welding regimes: pulsed (pw) and continuous (cw) possible
- shadow-welding-seams are possible by wobble-device
- typical width of weldseam: between 0.05 and 1.0 mm
- welding forms:
 - > lap joint, butt joint, fillet weld, corner weld and flange impact

VARIOUS INDUSTRY AND APPLICATIONS

- medical industry
 - > medical cannulas
 - > hypodermic needles
 - > medical device
- aerospace industry
 - > positioning systems
 - > drive technology
- precision machinery
 - > casing and cover
 - > downholder and holding bracket
 - > springs
- sensor and systemse
 - > temprature- and pressure-sensors
 - > strain gauge
- automation industry
 - > e-mobility (for example rotor- and stator-packet)
 - > fiber plug
 - > conveyor beltTransportbänder

diversity of materials and applications

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