



OCT scanner

OCT

Optical Coherence Tomography for laser welding

Seam tracking – Process monitoring – Quality control

Lessmüller Lasertechnik is one of the leading providers of real-time quality control systems for laser welding. The innovative OCT system is finally breaking ground, providing tailor-made solutions for real-time seam tracking, μm -accurate process monitoring and quality assurance for different processing applications, primarily for laser welding.

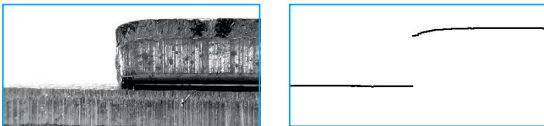
Your Advantages:

- Fast, precise seam tracking in any processing direction, at any focusing length and working angle
- Real-time measurement of weld penetration depth and weld bead profile
- Insensitivity to process light, production line velocity, and interfering fixtures
- Compact and lightweight design
- Coaxial integration into laser processing optics
- Real-time recording, evaluation and documentation of measured data and process parameters
- Complete system for laser welding including software and quality control algorithms
- Tailor-made adaption for various applications

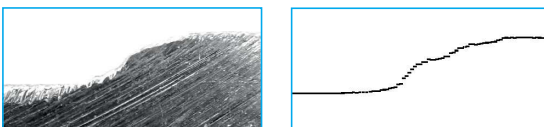
Features:

- Easy integration into conventional laser processing heads through the camera port
- Robust industrial design adapted for cable track
- Standardised mechanical and electrical interfaces

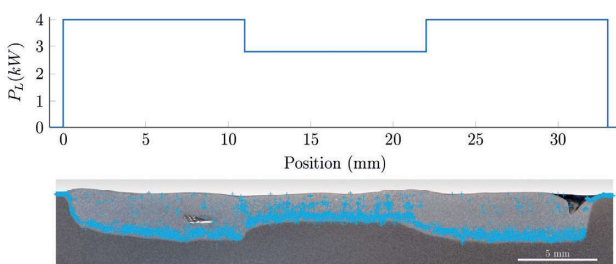
Real-time joint detection:



Real-time quality monitoring:



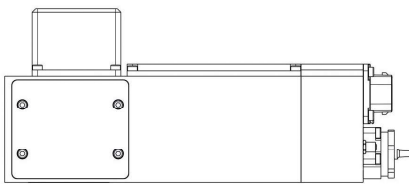
Keyhole depth measurement and control:



OCT sensor



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Technical data:

Light source	Laser class 3B
Axial measurement range	max. 12 mm
Axial working range	390 mm
Axial resolution	12 µm
Scanning frequency	max. 98 400 measurement points per second
Trigger	24 V pulse per measurement
Fiber	Cable track adapted
Scanner dimension / weight	98.5 mm × 67 mm × 267 mm / 1.6 kg
Sensor dimension / weight	226 mm × 162 mm × 312 mm / 10.26 kg
Control unit dimension / weight	262 mm × 250 mm × 138 mm / 5.16 kg
External power supply	230 V / 115 V
External interfaces	Profinet, Profibus, Ethercat, Devicenet, Ethernet, Ethernet/IP, 0–10 V analog
Internal Interfaces	CameraLink
Construction	Dustproof IP64

Our team supports you during and after the integration on- and off-site.



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