Image processing
VisionLine

Keeping track
of everything
while welding

01

High process
reliability

02

Intuitive
operation

03

Easy
retrofitting

04

Tailor-made
solutions

TRUMPF

01

High process reliability

VisionLine visualizes the processes and makes sure that they are always done at the right position. Attributes like edges, holes, or gaps are automatically recognized and directly transferred to the control. The welding is adjusted accordingly. You reduce the requirements on your part holders and produce less waste.

02

Intuitive operation

Thanks to the intuitive user interface and predefined attribute library, it is easy to integrate VisionLine in the production process. After selecting the feature to be detected and setting a few parameters, the operator can immediately start working with the program. When the identification of attributes is done, an automatic search of the working distance is also possible.

03

Easy retrofitting

The VisionLine retrofit does not need any change of your laser programs or any connections to external control systems. A software upgrade to higher functionality levels is possible just like that, and can always be done at a later point in time.

04

Tailor-made solutions

VisionLine can also be easily enhanced for complex image processing tasks. Experienced image processing services develop the perfectly combined algorithms for your components and jobs.

Everything in view with the TRUMPF image processing solution VisionLine

The camera-based image processing product VisionLine reliably finds the position of the component and aligns the welding job accordingly. Typical applications are the welding of copper pins in electronic components or the joining of tube bundles in heat exchangers.
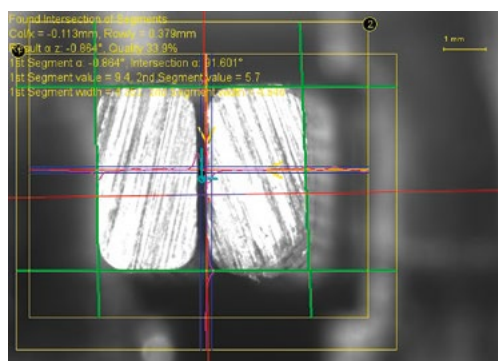
VisionLine, the TRUMPF image processing solution		
Available systems	TruLaser Station 5005, TruLaser Cell 3000	
Available lasers	TruPulse, TruFiber, TruDiode, TruDisk	
Available optics and focal lengths	FocusLine Professional	f = 150 mm, f = 200 mm
	WeldLine Modular	f = 150 mm, f = 200 mm, f = 250 mm
	BEO D70	f = 200 mm, f = 300 mm
	PFO 20-2	f = 90 mm, f = 135 mm, f = 160 mm, f = 264 mm
	PFO 33-2	f = 255 mm, f = 345 mm, f = 450 mm
	PFO 3D-2	f = 255 mm, f = 450 mm
Vertical light illumination for the recognition of attributes	LED diodes, λ = 625 nm	
Typical image processing time	100 – 150 ms (depending on the camera chip, objective type and lighting)	
Typical precision of the working distance search	100 µm with f = 150 mm, available for the TruLaser Cell 3000	
Typical precision of the position recognition	< 50 µm at image center (depending on the camera chip, objective type and lighting)	

Subject to alteration. Only specifications in our offer and order confirmation are binding.

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