

Communication – February 2021

Weld Seam Tracking and Follower System

THE Machines Yvonand SA – Switzerland presents its new Weld Seam Tracking and Follower System which brings higher process safety, with time and cost savings during maintenance.

Weld Seam Tracking System - Innovations at a glance

Growing market demand for thicker wall pipes lead THE Machines to further extend our thin metal tape welding knowhow to larger dimensions.

Increases in production speed as well as the increase in the strip thickness of metal casings and the various varieties of alloys used for tube manufacturing, require us to amplify the power of laser sources.

The reduction in the cost of laser sources over the last few years is now no longer an obstacle and now allows the acquisition of power sources in excess of 2 kW. This has led to new technology and process constraints which *T.H.E.* have addressed and adapted.

Depending on the type of alloys, thicknesses and production speeds, the conduction laser welding mode is no longer appropriate or adapted and the "Keyhole" welding mode becomes necessary.

This process generates such a high light intensity that many conventional seam tracking vision systems become blind and can no longer function properly.

Fig. 1 Laser-induced metals vaporization plume

Thanks to the combination of new lighting and the optimization of our image processing system, the influence of the intense flame generated by the keyhole welding process has no impact on our seam tracking system

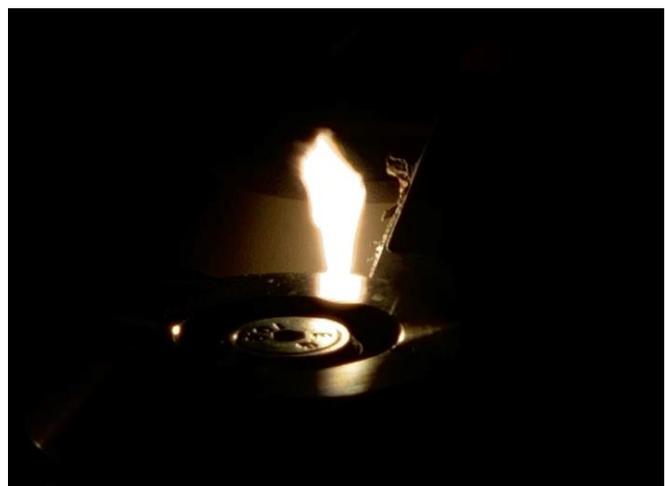


Fig 2. Visualization of Seam-Tracking

The image is clear and free of any disturbing elements that may influence the proper functioning of the tracker system.

This new Weld Seam Tracker System can be retrofitted and is available as upgrade kits to all existing THE forming and welding lines

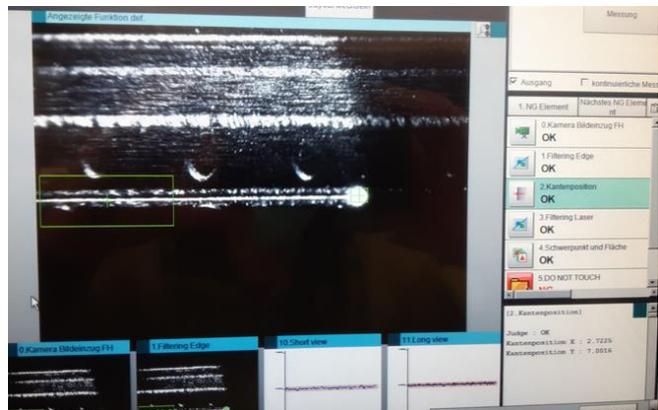
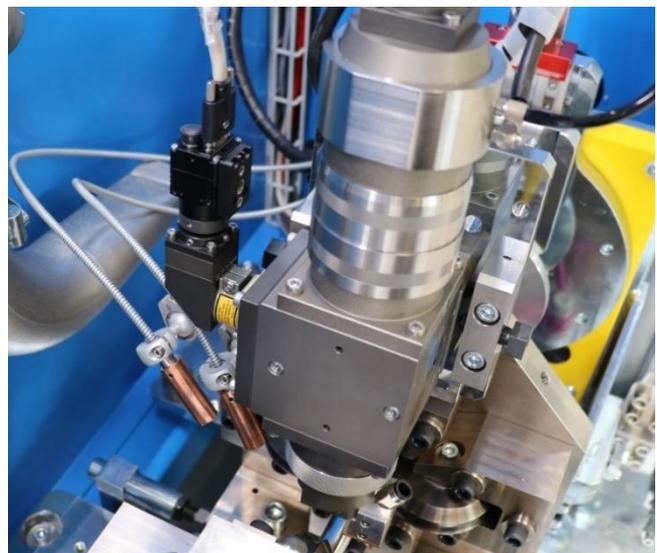


Fig 3. Optimization of weld seam tracking New lighting illumination system

The new illumination system no longer requires adjustment. Its position is fixed and on-board the welding optics this guarantees an optimum lighting, whatever the product to be manufactured.

This is possible thanks to the reduced size of the components, therefore lighter, weight saving, higher flexibility and allowing a vision with increased working power.



New Tracking and Lighting System is available as upgrade, standard or option for :

ModelTypes	LSL	TCSL	OPGW / FIST	FWM	MFWL
LSL 012 to 063	√	√	√		
TCSL 012 to 063	√	√			
OPGW / FIST 012			√		
FWM / MFWL 012 to 063				√	√

For further more detailed information, please don't hesitate to contact us.