

# **Faster weld-speeds with less energy!**

Three groundbreaking new technologies for the tubing and profile industry

## **Induction welding of high strength steel profiles**



Increasing safety standards and an obligation to reduce weight and material content have increased the importance of high strength steels for many uses. Because of their structural rigidity more and more profiles will be designed as welded "hollow" shapes. For these applications inductions welding offers some very interesting alternatives, with very decisive arguments such as high production speeds and economics.

At Tube 2008 Dreistern will introduce a new weld-table offering significant advantages when working with these materials. The design provides up to 100 kN of press-force, plenty of reserves for practically all profiling demands. Due to its quick-change design all product related components are changed over in a very short time. Individual reproducible settings of all rolls and lateral adjustment guarantee exact alignment of strip edges and profile, consequently increasing the accuracy of the welded shape.

## **Fast and energy efficient laser-technology for composite tubes**



Composite tubes combine both, the corrosion resistance properties of plastic tubes and the bursting pressure of metal pipes. System technology has evolved rapidly since shipment of the first line in 1984, especially due to the collaboration of Dreistern with the extruder manufacturer Maillefer.

Another milestone was the integration of the disc-laser, a new generation laser, supporting weld-speeds of up to 60 m/min. This Trumpf disc-laser equipped with a highly dynamic seam-tracking system, and combined with a refined tube forming process, are the guarantor for this success.

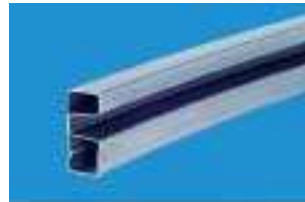
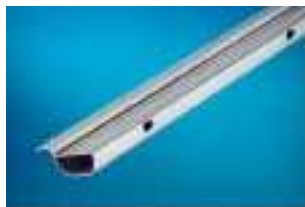
Another benefit, in spite of higher welding speeds, this new technology reduces energy consumption and operating costs tremendously.

## High-speed laser-welding of welded shapes

Welding physics limit the maximum possible weld speed for all welding techniques. This is also valid for Laser welding. Laser experts know the "Humping" as term used to refer to a dynamic process in the weld pool that occurs particularly at high welding speeds, causing unwanted hump and deficiencies to form at periodic intervals along the weld.

By varying the parameters it is possible to push the humping threshold to higher speeds. Exactly this was done successfully by Trumpf in Ditzingen/Germany.

The result can be looked at the Trumpf booth No F 29 / D30 in Hall 08a. In cooperation Trumpf and Dreistern developed a new production system for manufacturing tube sections. This installation is capable to produce tubes at high speeds.



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