



Offer: Pipe joint welding using laser based joining processes



For 15 years the SLV Halle GmbH has been developing laser based technologies for welding of large pipes. For five years this know-how has also been used for pipe line welding.

Make use of our latest experience obtained from a two-year research project on welding of pipe joints using a fibre laser.

The following offers serve to support you in solving your welding task on the pipe:

- o Provision of an orbital laser GMA hybrid welding unit on a rental basis for performing development on your own supported by our experienced operators
- o Selection of the welding technology adapted to your type of task with regard to material, wall thickness and diametre of the pipe on the basis of the available technology of our laboratory. You will have complete access to our competence concerning technology and testing.
- o Development of a special solution concerning equipment according to your specification
- o Common planning and execution of pipeline welding

The specialised prototype for GMA hybrid welding currently available for the realisation of orbital welding has the following technical data:

0	Process speeds:	Positioning:	up to 6 m/min
		Welding:	up to 3 m/min
0	Pipe diameters to be processed:	500 - 700 mm	

- o Position dependent modification of the welding parameters (laser output, arc output, welding speed) possible
- o Seam tracking and weld scanning: Sensor for the transverse and height control of the weld head

The integrated laser working head allows for a combination of all fibre guided solid state lasers with outputs of up to 20 kW.

We can exclusively offer you the solution of your special tasks on a bilateral basis with us cooperating as your partner in development in nationally or internationally promoted research projects. This cooperation in research projects is of considerable interest for us, too.

Developments on equipment and welding technology on laser beam GMA orbital hybrid welding

## Equipment

State

Laboratory trial with equipment available on the market

2007

## Technology



3 passes in 3 orbits at t = 8 mm



Field trial with equipment available on the market

2008



2 passes in one orbit at t = 10 mm

 $v_s = 0.6 \text{ m/min}$ 



Specialised prototype

2009



2 passes in one orbit at t = 12 mm

 $v_s = 2 \text{ m/min}$ 

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