

# EFFICIENT WELDING OF OVERSIZED PARTS WITH THE S-SPEEDPULSE XT

## WELD SEAMS IN CONSTRAINED POSITIONS, SUCH AS VERTICAL AND TRANSVERSE WELDS, ARE EASILY CONTROLLED AS WELL

Messer Group from Eastern Hesse has been established in industrial assembly and apparatus engineering for seven decades. Messer's know-how comes in for the production of huge parts such as evaporators for desalination plants and highest-quality weld seams. The large parts require welding of two thirds of all weld seams as vertical or transverse weld (PF/PC) in constrained position. Extreme reliability and best weld performance are prerequisites when using the welding units. The company was looking at a wide range of solutions and subjecting all systems to practical tests for four weeks when looking to replace its welding technology. The decision was clearly in Lorch's favour: The S-SpeedPulse XT stood out with high reliability, a stable arc, and first and foremost its high deposition rate both in the test run and in daily use later.

### OVERVIEW

#### MESSER INDUSTRIEMONTAGEN & APPARATEBAU GMBH

- Heringen (Werra), Germany
- 260 employees
- Vessel construction
- [www.karl-messer.de](http://www.karl-messer.de)



Far more than 1000 hours are required for welding an evaporator for the desalination plant. Weld seams must live up to the highest demands, and every single T-joint will be x-rayed individually.



Multi-layer seams: Precise and clean welding with the S-SpeedPulse XT.

High stability and weld performance thanks to SpeedPulse XT process

## ARC LENGTH CONTROL AND DYNAMIC ARC CONTROL SIMPLIFY WELDING IMMENSELY

The SpeedPulse XT process leads to high stability and weld performance. The variable arc length control gives the welder better control of the pulsed arc, permitting much easier reaction to the present boundary conditions such as different gap sizes by adjusting the torch distance from the workpiece. Difficult welding situations, e.g. in corners, are also easier to handle. Additionally, it is possible to set the arc length separately for the start, welding, and end phases at identical current and wire feed. This not only improves weld performance, but also makes the welding process much easier while reducing

spatter. "Dynamic control" also allows flexible arc adjustment to the different work tasks and welding positions as well as to the individual welder preferences. This is a great advantage in particular when the parts cannot be moved or rotated due to weight and component size. The dynamic control allows the welders to change the arc characteristics quickly and easily from hard to soft in direct access, adapting them to their individual welding habits.



*"The machines were working without any issues at all throughout their runtime. We were able to increase the 25-30% higher deposition rate with the same parameters."*

*– Peter Dzwonek, production manager*

## FACTS

- Stepless welding inverter for MIG-MAG pulsed arc welding
- Dynamic control for XT processes and standard processes
- Individually adjustable arc for start, welding and end phase
- Intuitive operating concept with optimised control panel
- Variable arc length control for error-free welding in all positions
- Optimised cooling system with up to 35% more cooling capacity
- Fully automatable (via LorchNet connection, fixture interface or bus coupling)
- Patented new SpeedPulse XT process for fast and relaxed welding
- Patented, combined current-voltage control for easy arc control

