Weld Seam Tracking saves time, reduces scrap

A complete system includes:

- 3D Laser Scanner in 10 different ranges for gaps between 0.1 mm up to 500 mm
- Software for Tracking includes features:
  - gap tracking
  - edge tracking (left or right)
  - lowest point tracking
  - interface to PLC (ethernet) data storage
  - system adaption interface
  - no calibration required
- Optional: PC/Controller, Water Coolers, Protective Windows, Cabling, Ethernet to analog converter

Improved in productivity and quality for most welding processes

With this Gap and Seam Tracking System from QuellTech a weld system can be improved in productivity and quality for most welding processes.

The QuellTech 3D Laser Gap Tracker supplies real-time tracking just ahead of where the weld is being deposited. This allows for robot or sliders trajectory shifts to be corrected. Related to the optimized welding position the parameters for voltage, wire feed, or travel speed can be optimized in order to change the weld bead formation.

The QuellTech 3D Laser Gap Tracker can be easily retrofitted onto any existing welding automation machine that either has no gap tracking capability or is using a mechanical probe.

The QuellTech 3D Laser Gap Tracker includes Laser Scanners which can precisely follow any weld joint in combination with all welding processes and robots. In addition adaptive control is available to help compensate warping or path deviations and maintain the desired welding speed and quality.

The QuellTech Laser Scanners are very robust against ambient light and supply a consolidated and stable output even on the combination of glossy materials with rusty surfaces.

The QuellTech 3D Laser Gap Tracker can be also used for adaptive control for robotic welding. It will compensate for changes in the pre-programmed path. Also the time consuming teaching of travel paths with robots can be drastically accelerated.
Weld Seam Tracking for all shapes

Improve weld quality and reduce scrap and cost

The QuellTech 3D Laser Gap Tracker is a tracking system that searches for, finds and tracks gaps using Laser Line Triangulation. It provides a robust method for controlling the position of welding torches and ultrasonic test probes for weld inspection. Benefits of the QuellTech 3D Laser Gap Tracker:

1. Decreased scrap rates
2. Improved weld quality
3. Increased productivity
4. Reduced skill requirements of staff
5. Reduced set-up time
6. Reduced maintenance times

Typical Applications for the QuellTech 3D Laser Gap Tracker:

- Longitudinal and spiral pipe production and Pipeline welding
- Wind turbine columns with multi layer beads
- Heavy wall-thickness
- Automotive parts welding
- Tank welding
- Ship welding
- Very small parts laser welding

The QuellTech 3D Laser Gap Tracker continuously updates the monitor screen. The display area show a single windows, which shows the following information:

- The profile the crosshair in the middle of the gap
- The current position in mm in x and z of the gap center
- The current system status

The information on the screen allows the operator to see at a glance what the system is doing. The operator uses the setting in the software to interact with the Gap Tracker as necessary, for example, when changing the system tracking sensitivity. Normal system operation is through the PLC or Robot controller.

In addition to the basic features described above, the Gap Tracker system can be supplied with various additional options offering more productivity and quality benefits. These include:

- Remote control client
- Advanced data logging
- Double Laser Scanner mode
- Tack Weld compensation mode
- Time delay buffer function