Newsletter Special Edition

Fabtech 2014

Welding with Vision for 30 years

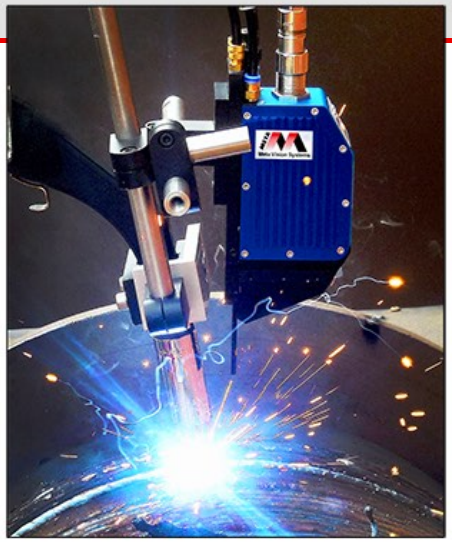
Meta Vision Systems

Meta celebrates its 30th Anniversary at Fabtech

Welcome to this special 30th anniversary edition of the Meta newsletter for Fabtech 2014.

Over the years since Meta was spun out of Oxford University in 1984, the company has grown steadily and developed our technology and product lines continuously.

The combination of thirty years' experience together with continuous product development means that we have a modern range of products and systems well matched to the requirements of the welding industry.



Meta Launches Arc at Fabtech 2014!

Meta is pleased to release a new model of its proven SLS family of laser sensors at Fabtech.

Known as SLS ARC, the new model is optimised for robotic arc welding applications. It is suitable for seam finding and real-time weld seam tracking in all of the usual welding processes, including high current GMAW and FCAW.

Steve Thacker, Meta's General Manager, commented *"Meta was spun out of Oxford University in 1984 to commercialise a research project that developed a laser vision sensor for use in robotic MIG welding in the automotive industry. The SLS ARC represents the latest development in a thirty-year sequence which started with that first Meta sensor.*

The automotive sector represents an important and still growing part of our business, and one where we have had very good recent success. We felt it was timely to build on that success with a new sensor fine-tuned for aggressive robot welding applications".

By using some of the inherent advantages of SLS technology, including fully automatic image quality optimisation, combined with new sensor optics and a mechanical design matched to the requirements of robot arc welding, the SLS ARC provides a high performance laser sensor in a rugged package as demanded by the industry.

The SLS sensor series is the cornerstone of Meta's Smart Laser Pilot (SLPi) system for robot welding, which exploits direct Ethernet connection from the sensor head directly to the robot controller to give excellent seam finding and real-time tracking performance with a simple system hardware architecture.

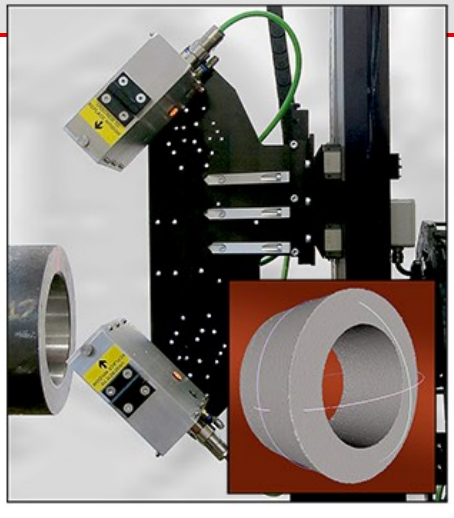
Product

Meta Adds a New Dimension to Pipe End Measurement!

There is an increasing requirement within the pipe industry for accurate dimensional measurements for the ends of pipes during production of particularly critical pipelines such as Steel Catenary Risers (SCRs).

Following an intensive development program, Meta has introduced a highly innovative Pipe End Measurement System (PEMS). By combining two Meta SLS laser sensors with various special modifications and advanced calibration techniques, the Meta PEMS generates a complete 3D model of the end of a pipe together with all required dimensional measurements in real time.

The Meta PEMS system measures the end face as well as both the ID and OD surfaces up to 100mm into the pipe. Having a complete model available provides great flexibility in making accurate measurements in a well defined way relative to the true pipe end geometry. The 3D models can themselves be stored and retained for retrospective analysis.



Welding with Vision

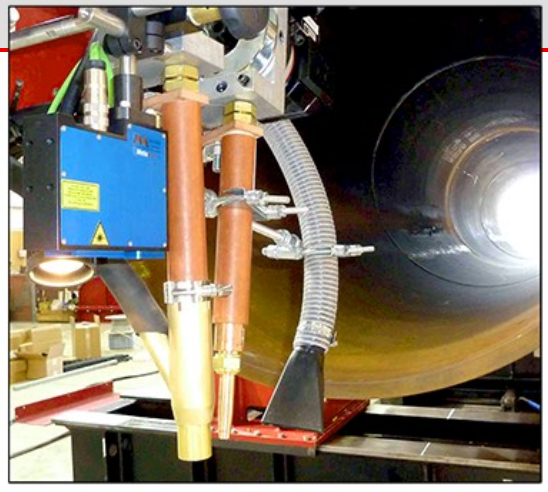
Meta Introduces Digital MetaView at Fabtech 2014

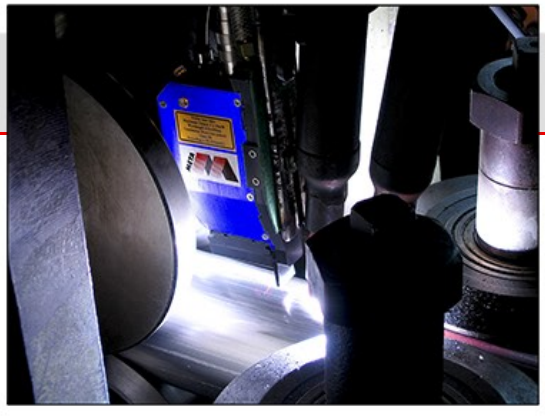
Meta is pleased to announce a new generation of its patented MetaView manual guidance system. MetaView is unique in allowing SAW machine operators to control the standoff as well as the horizontal position of the welding head remotely from an image on an operator screen.

The new MetaView sensor head incorporates a laser cross projector and a high resolution color GigE camera within a compact sensor head. The control unit includes a color touchscreen which shows the live image from the sensor camera.

A standoff reference is provided by a video crosshair, and so the operator can adjust the height of the weld head to maintain the correct electrical stickout. Overall, the system provides great benefits by enabling accurate manual control of electrode position.

The digital version of the system has many advantages over the previous analog version, including digital zoom, pan and tilt of the image, higher image quality and better noise immunity.





Product
Smart Laser Probe for Tube Mills

Meta's Smart Laser Probe has proven to be a reliable and cost effective solution for tracking on TIG welded tube mills.

Meta has expanded its range of Smart Laser Sensors to include sensors with fields of view down to only 12mm.

These provide extremely high resolution for tracking the tight butt joints common on small diameter tube mills.

PowerWave Control Fully Interfaced with Seam Tracking for Multipass Welding

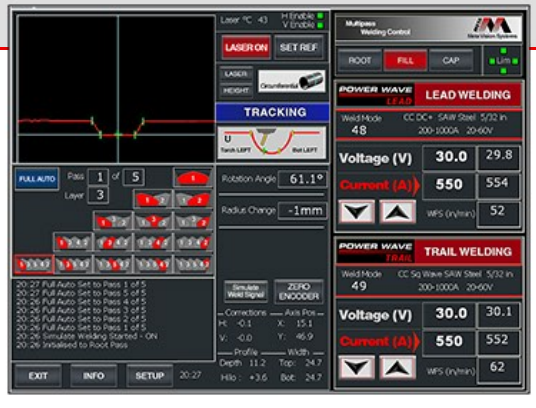
Meta has been supplying tracking and control systems for multipass welding since 1985.

Meta's Digital Laser Scanner is the only scanning spot laser sensor on the market and provides unique advantages for automated welding of deep narrow and semi narrow gap weld joints.

The latest version of Meta's multipass SAW system incorporates fully integrated control of tandem Lincoln PowerWave welding power sources.

This means that all control of the weld head slides, welding equipment and laser guidance is from a single user friendly system.

The integrated control makes for high quality welding with excellent productivity.



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