WELDLOGIC
FORMING & WELDING SOLUTIONS

WELDING SOLUTIONS
FOR ADVANCED
MANUFACTURING

Plasma | Tig | Laser | Mig | Sub-Arc

High Speed Laser O.D. Bellows Weld Cell

SEE IT IN ACTION

Engineering Challenge

CHALLENGE

This bellows manufacturer had been welding both I.D. and O.D. bellows using the Plasma Arc Welding process for decades. While the process was familiar, it created significant production challenges.

Plasma arc weld speeds of 8–12 inches per minute limited productivity, and the process resulted in high scrap rates and inconsistent weld quality. In addition, the process required a high level of operator skill and extensive training, which made it difficult to maintain consistent production. These challenges ultimately led to delayed shipments and ongoing quality concerns.

To better understand the manufacturing issues, Weldlogic Engineering and Laser Welding Specialists visited the customer's facility to evaluate the existing welding process and identify opportunities for improvement.

SOLUTION

Weldlogic's Laser Welding Specialists and Engineering team developed a higher-speed, higher-quality solution designed to significantly reduce operator dependency.

The team selected the Weldlogic AWS-600 CW Fiber Laser integrated with the Advanced Welding System Controller, which enabled a 500% increase in O.D. bellows welding speeds compared to the existing plasma process.

A Weldlogic PWL-15-36 Precision Welding Lathe was integrated into the system and equipped with a load cell to ensure consistent bellows compression and precise rotation speeds using A.C. servo control.

The result was a fully optimized laser welding solution that allowed the manufacturer to produce high-quality O.D. bellows welds up to five times faster, while reducing scrap rates and lowering the operator skill level required to run the system.

Contact Weldlogic to improve your weld speed, weld quality and reduce labor costs.

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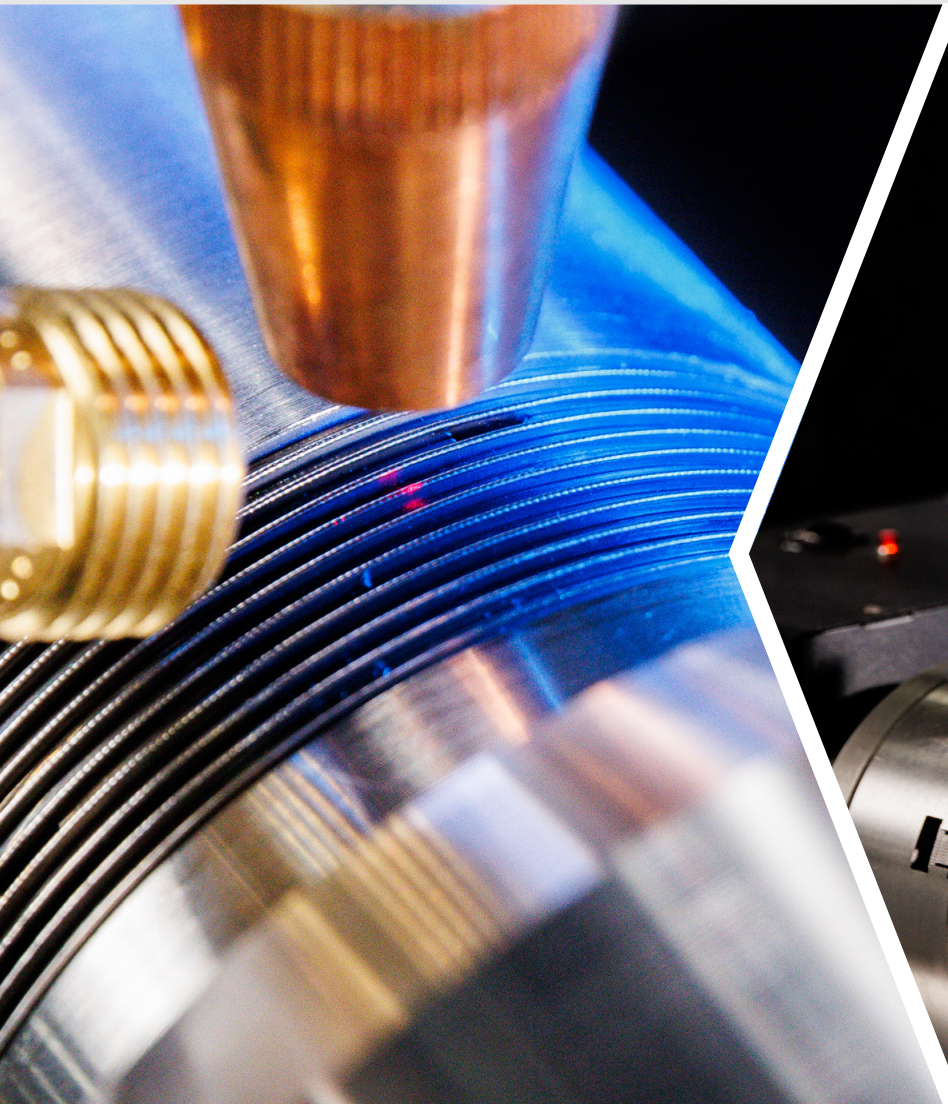

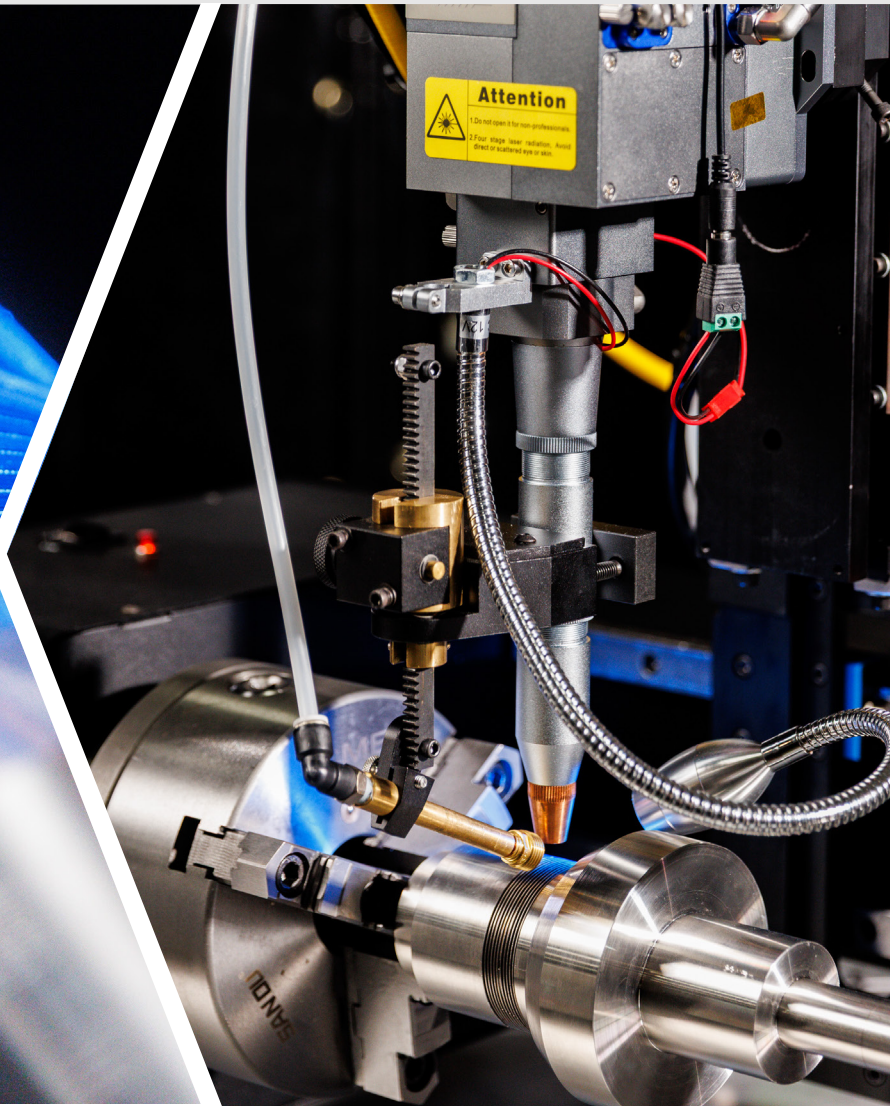

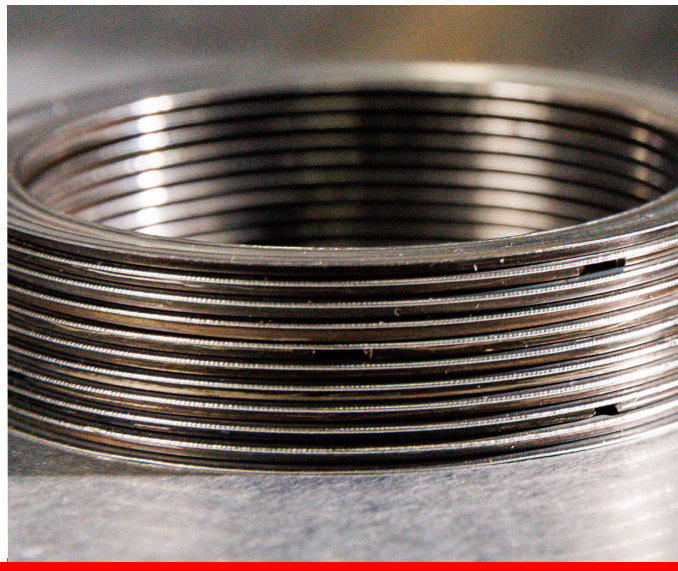

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