



AWS-AC/DC Aluminum Automatic Welding System



Plasma | Tig | Laser | Mig | Sub-Arc

▶ SEE IT IN ACTION 

Engineering Challenge

CHALLENGE ▼

A defense contractor needed to produce X-ray clear welds joining a 6061-T6 machined flange to a specially shaped reducer.

The original process relied on manual GTAW welding with AC/DC and 4047 filler wire, which proved difficult due to:

- Tight tolerances and complex geometry
- Inconsistent weld quality
- A growing shortage of skilled manual welders

With over 450,000 manual welder vacancies in the U.S., hiring and retaining talent for critical welds has become a major hurdle for manufacturers.

SOLUTION ▼

With over 40 years of experience in high-reliability aluminum welding, the Weldlogic engineering team evaluated the specifications and inspection criteria, then selected our Advanced Welding System (AWS) Controller to manage the entire process.

The AWS Controller allowed our software engineers to program precise weld parameters, delivering repeatable, X-ray quality welds with $\pm 1\%$ consistency.

The system build included:

- AC/DC Miller power supply
- Automated wire feeder
- Safety workstation with light curtain
- Weldlogic Arc Voltage Control
- Precision welding lathe

The result? A fully automatic Variable Polarity (V.P.) welding system that eliminated manual variability and freed up skilled welders for other tasks — reducing scrap and rework while increasing throughput.

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Contact us Today for your Welding Solutions!

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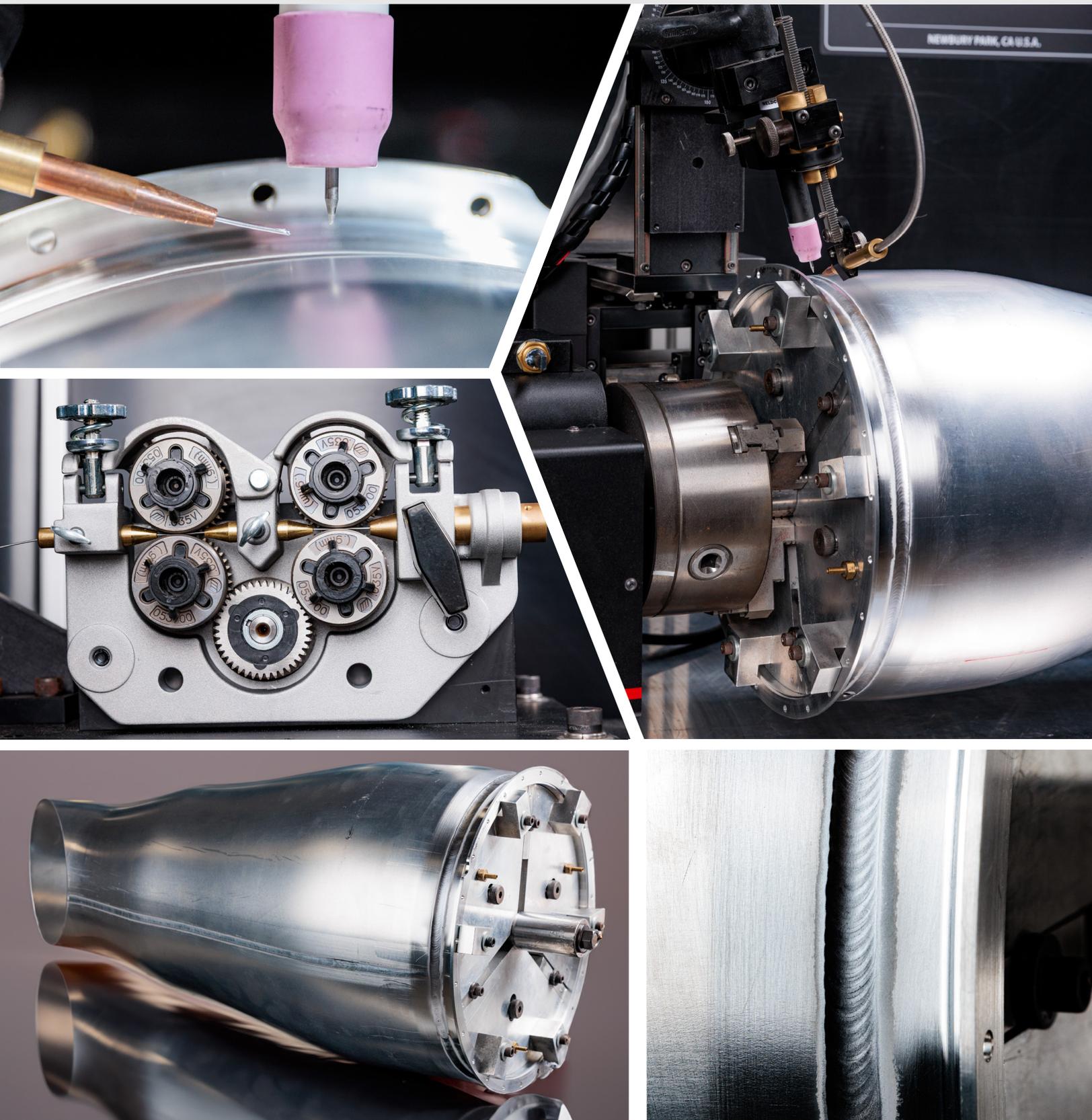
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