

Welding, Machining and Metrology Services

Background

We provide specialty welding, machining and metrology skills tailored to the needs of the energy and industrial sectors. As a single-source provider, we are capable of creating the optimal solution for your situation.

Experience

We have extensive experience in the power generation industry. Understanding that the majority of fossil-powered generating plants today are more than 25 years old, we provide support for improvements that are needed for plants to remain compliant with evolving regulations and reliability requirements.

Our portfolio of welding project successes includes new construction, plant modifications, emergency service and planned outage maintenance. We serve the oil and gas industry, particularly the petrochemical and production/midstream segments. We also have experience serving engineering, procurement and construction (EPC) entities and end users in food and beverage processing.



Piping and component replacement at a power plant

Capabilities

ASME Section IX Welding Programs.

National Board Inspection Code accreditations:

- S – Power boilers
- U – Pressure vessels
- R – Repair, power boilers, pressure vessels
- PP – Fabrication and assembly of code piping

Welding Processes

- Gas tungsten arc welding (GTAW)
- Shielded metal arc welding (SMAW)
- Flux core arc welding (FCAW)
- Gas metal arc welding (GMAW)
- Autogenous welding (GTAW Fusion)
- Temperbead welding
- Hot wire laser welding (HVLW)

Machining and Cutting Technologies

- Turning machines (to 72-inch) boring machines (to 60 inch), milling (up to 10-foot table)
- Electric discharge machining (EDM) metal disintegration machining (MDM)
- Plasma arc and abrasive water jet

Repair Services

- Boiler circulation pump casing repair
- Divider plate machining
- Gasket surface machining
- Nozzle welding
- Replacement tube welding
- Spool removal and replacement
- Tube plugging/rolling
- Valve and Vessel-thinning repair
- Vessel head removal/reconfiguration
- Main steam piping repair

Services

Our specialized services include:

Hot wire laser welding (HWLW) system – This is a revolutionary and powerful solution for the welding of complex piping systems and storage/reactor vessels. This automated, high-speed system is a breakthrough in modern welding, employing the first, non-arc welding technology at high speeds. Without the great heat inputs inherent to arc welding, pipe properties and welds are improved dramatically while successful welds can be easily performed even when pipe fitups are at highest tolerances.

Construction and field service execution – Our world-class expertise encompasses shop fabrication capabilities, specialized field machining and welding, mobile field machining and welding centers, and full metrology services

High-energy piping – We have decades of experience with heavy wall, high-energy pipe – now improved via patented narrow groove orbital welding for large-diameter, heavy-wall projects.

Feedwater heater solutions – We provide project management, rigging, machining and welding crafts.

Field machining – Our services include milling, drilling, boring, reaming, grinding, cutting and flange re-facing.

Field welding – We have expertise in weld overlays, cladding welds, seal welds, butt welds and fillet welds; manual and machine/orbital, with processes in accordance with the American Society of Mechanical Engineers (ASME) Section IX, Boiler and Pressure Vessel Code.

Pressure parts – We use the Eclipse II™ Vision System for small bore boiler drums through a handhole, which allows low-heat-input fillet welds to tube, withstanding conditions of boiler startup operations.

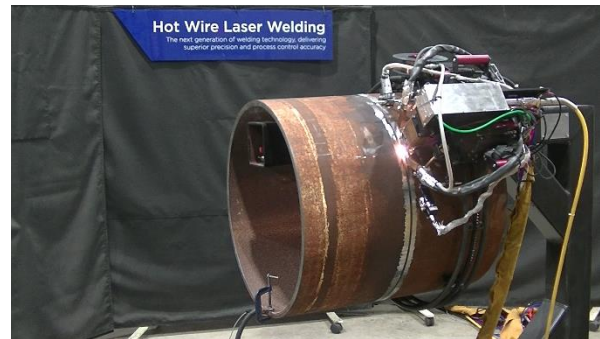
Stuck stud removal – We remove studs from valves, pumps and other equipment by drilling or metal disintegration machining.

Metrology – We provide precise installation of components and mechanized systems with all measurements taken electronically, eliminating human errors.

Engineered solutions – We provide expertise for cost-effective solutions to highly complex, specialty machining and welding projects.

Benefits

We offer a complete package including project management, project services and extensive in-house design engineering capabilities. Whether you are generating energy at a power plant, helping to produce it in the oil & gas sector, or are focused in another industry, our welding, machining and metrology solutions can help to you enhance the return on your assets.



Hot Wire Laser Welding System

Eclipse II is a trademark or registered trademark of its owner.