Our laboratory personnel bring process testing and validation experience to material joining, failure analysis, parts processing methodology and improving manufacturing processes.

Innovator of World-Class Material Joining Machines & Systems

Taylor-Winfield Technologies is dedicated to bringing advanced manufacturing technologies and processes to our customers to enable them to compete in today's ever changing markets.

You can count on Taylor-Winfield Technologies for experience, quality craftsmanship and innovative engineering solutions that produce the most sought-after material joining machines and systems in the capital equipment manufacturing industry. By providing simple to complex material joining machines, part production and assembly systems with on-going field service and replacement parts support, Taylor-Winfield remains the company customers can trust into the future.

Our Commitment to Quality

Taylor-Winfield can save time and costs involved in developing new manufacturing processes. We take the guess-work out of determining which methods to consider for new material joining processes or existing process improvement and validation.

Contact Taylor-Winfield today to discuss your application and our standard lab rates for development services.

• Research & development
• Improvements to existing machinery
• Purchase of new machines
• Identify cost-reduction strategies
• Processing of samples
• Small production runs
• Experimental work
• Troubleshooting
• Improve processes to increase part quality
• Reduce production costs

Our Research & Development Laboratory Can Help:

• Improve Part Quality
• Quantify Existing Welding and/or Heat Treatment Processes
• Develop New Welding and Heat Treatment Processes
• Create Reliable Parts Production Expectations
• Test and Qualify Material Joining and Process Results
• Establish Machine Performance Criterion

Equipped with state-of-the-art resistance, arc, plasma, and robotic welding systems, as well as induction heating power supplies and testing/qualifying equipment, Taylor-Winfield’s experienced staff of professionals are dedicated to achieving your production goals.
Welcome to Our Laboratory

As the world demands stronger, lighter, more reliable and more efficient materials; the role of independent testing, inspection, and analytical laboratory validation is increasingly crucial to every industry.

Material Joining & Testing:

Taylor-Winfield has one of the few full-service laboratories in the world. With a database of over 30,000 reports, customers can contract our lab services for refinement of current processes, suggestions for tooling improvements and selection of new equipment.

Taylor-Winfield offers welding, metallurgical testing and validation for welding processes including, but not limited to:

Resistance:  
- Spot 
- Seam 
- Projection 
- Flash

ARC:  
- MIG 
- TIG 
- Plasma 
- Sub-ARC

New process verification and validation is available for establishing new joining processes, changing current joining methods, improving existing process quality/reliability and cost reduction. Below are a few examples:

✔ Changing from single spot welds or arc welding to projection welding.
✔ Multiple spot welding to roll spot seam welding.
✔ Flash Butt welding for continuous processes such as angle, strut bar and tubing/pipe lines.
✔ Part redesign to change from MIG to projection welding.

The above services helped customers reduce cycle times and labor costs, while improving weld quality and realizing a significant ROI. Dedicated fixture tooling and/or a six axis Motoman robot is also available for process development and validation.

Industries We Serve:
- Aerospace
- Automotive
- Appliance
- Electronic & Electrical Equipment
- Fabricated Metal Products
- Industrial Machinery
- Oil & Gas
- Power Generation
- Primary Metals & Metal Processing
- Sporting Goods & Armaments
- Transportation
- Many More
Induction Heating:
The Induction Heating area of the Laboratory is capable of developing testing and validating the following processes for continuous, batch or intermittent use:

- Hot Forming
- Melting
- Heat Treating
  (Hardening & Annealing)
- Forging
- Brazing & Soldering
- Process Heating

Induction Heating Equipment:
- Power Range: 1 KW to 100 KW
- Frequency Range: 3 KHz to 5MHz
- Vacuum Heating Capability
- Work Coil Design

Services and Capabilities:
- Weld failure analysis
- New process verification
- Testing: Push-out, tensile, bend, bulge, hardness, photo micrographs, abrasive cut off
- Buehler Compression Mounting Press

Let’s Get Started...
Wonder if your parts can be spot, projection, flash, seam or arc welded? Find out at Taylor-Winfield’s Laboratory. We can make your idea work. We offer accurate and reliable testing results in a timely manner. Average sample turn-around time is 7-14 business days. We can also complete small production runs for customers who only need limited quantities of parts.
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