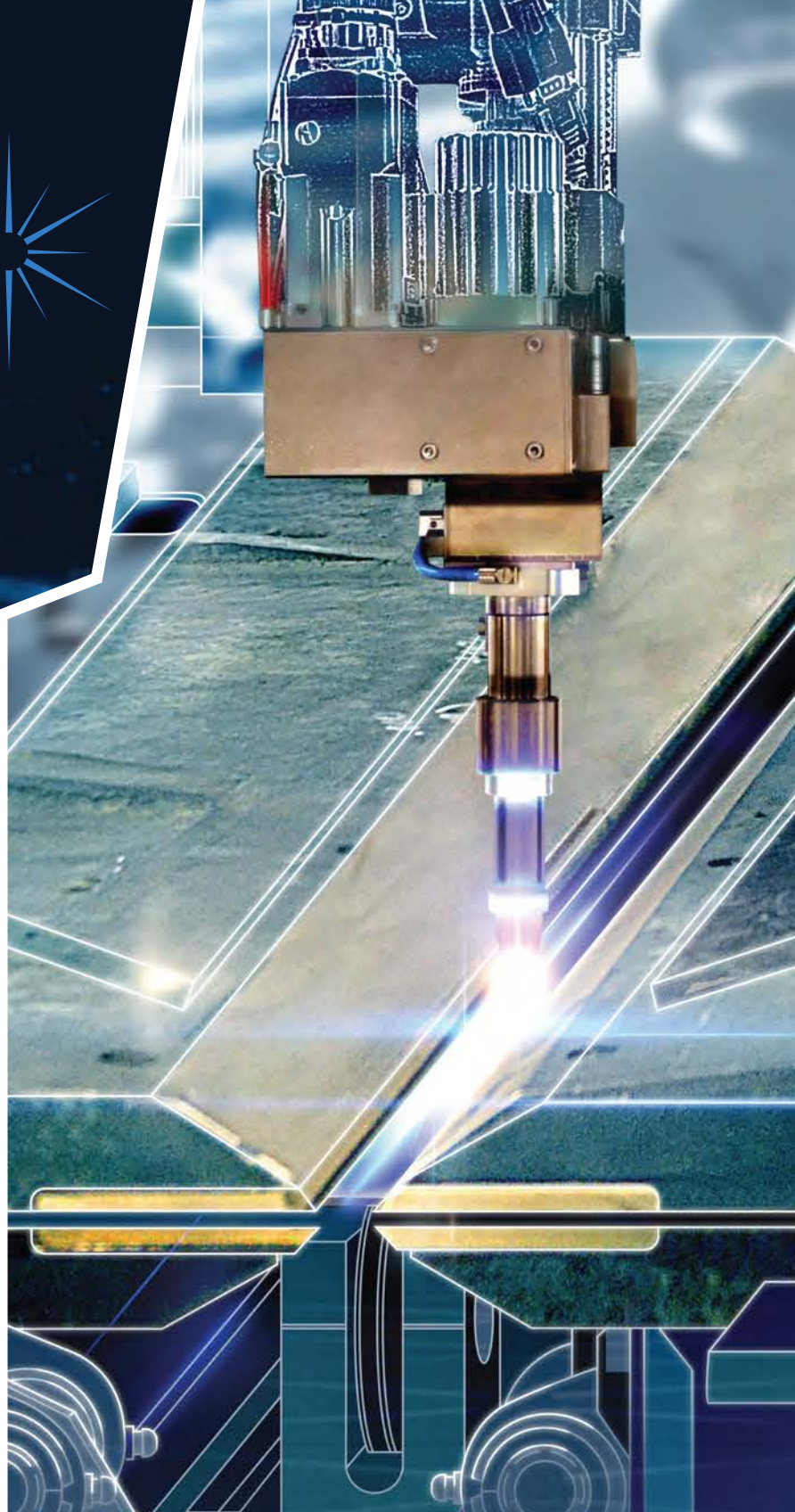


THE NEW ECLIPSE X1

LASER WELDING SYSTEM

FOR METAL FINISHING
AND GALVANIZING LINES

- JOINS LCS THROUGH AHSS & UHSS STEEL GRADES AND OTHER METALS
- ZERO WELD OVERTHICKNESS
- OVERCOMES VARIATION IN STRIP SHAPE AND PRESENTATION
- REAL-TIME FEEDBACK WITH GOOD/BAD WELD QUALITY VERIFICATION
- MADE IN THE USA



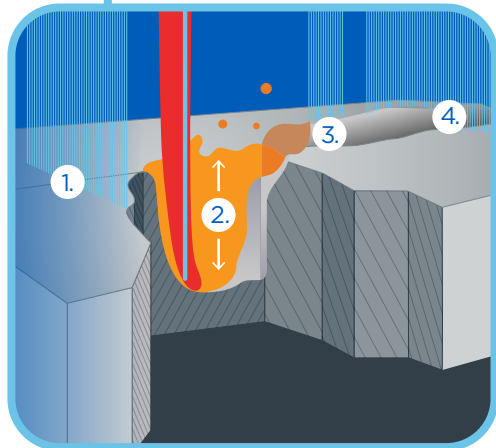
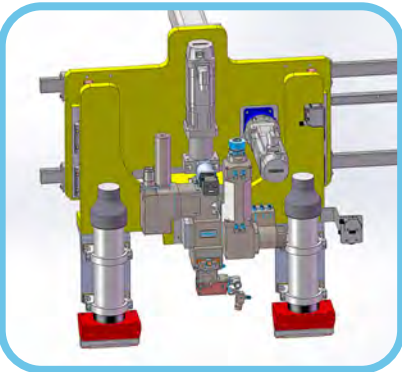
Taylor-Winfield has a long and substantial history of providing the highest quality coil joining welding machines to the metals processing industry. Our new **Eclipse X1** solid-state fiber laser welder is no exception. The Eclipse X1 is the most technologically advanced laser welder for metal finishing and galvanizing lines, eclipsing all other current systems on the international market.

**Taylor
Winfield**
TECHNOLOGIES, INC.

Multi-Functional Laser Welding Head with Integral Seam Tracking

Welding and seam tracking integrated into a single module for highest quality welding and automatic compensation for strip shape variability.

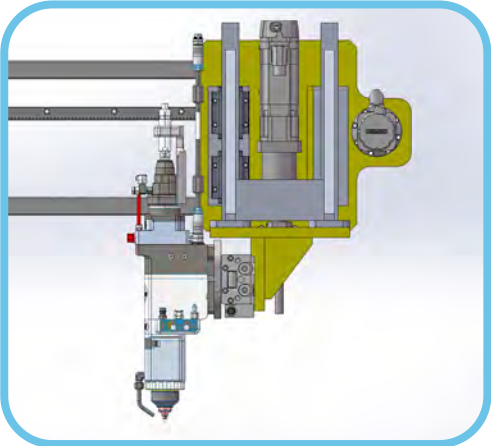
- Programmable multi-directional beam pattern for unsurpassed weld finish and quality
- Automatic lateral position adjustment to overcome seam position variability across the strip
- Programmable servo-controlled drive for speed and accuracy
- Sealed covers and air knife to prevent contamination and minimize maintenance
- Designed for harsh factory environment
- Shown with Inline Induction Pre & Post Weld Heat Treatment (PWHT) heads



Machine Operation and Weld Quality Feedback

Real-time machine operation with **GOOD** / **BAD** weld quality feedback on operator HMI to prevent weld breaks in the process line.

- Weld Quality monitoring includes, but is not limited to, the following across the entire abutted strip seam width:
- 1. Seam Profile:** Looks ahead of laser to track seam variances
- 2. Weld Depth & Penetration:** Measures actual depth of weld penetration
- 3. Finished Weld Surface:** Measures post-weld height and finished profile
- 4. Traversed Profile:** Measures width of finished weld
- Machine sequence and utility feed monitoring
- Data acquisition and uploading of weld results to upper-level QC systems
- Live online remote support for optimal machine performance



Precision Laser Cutting Head

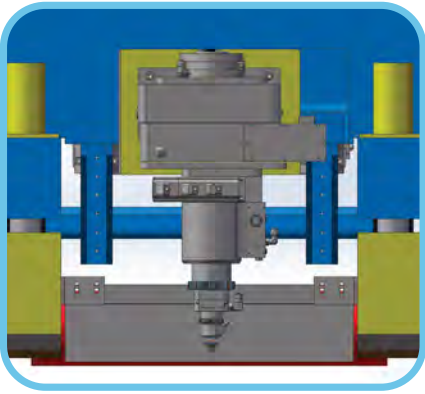
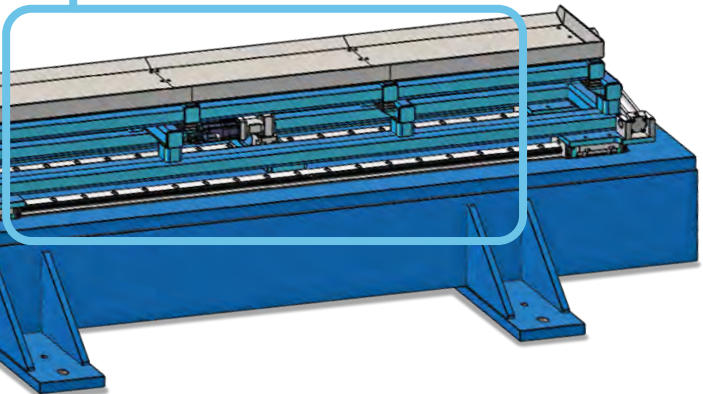
Programmable servo-controlled laser cutting head for accurate and repeatable cutting of strip head and tail ends.

- Accurate and repeatable cutting performance at fast cycle times
- Automatically adapts to contours in strip shape
- Integrated cooling and gas assist for clean, precise, high quality edge cut
- Integrated air blast to expel material from cut zone, prevent contamination of cutting head, and minimize maintenance
- Designed for harsh factory environment

Automatic Scrap Handling

“Touch-Free” scrap handling capable of delivering scrap pieces to a receiving bin for safety and ease of handling.

- Automatic sequencing and control of scrap handling
- Customer supplied scrap bin located at floor level on entry or exit side of welder
- Safe handling of scrap pieces
- Capable of delivering full-width samples to the operator side of the welder for manual weld quality destructive testing



Adjustable Laser Weld Identification Hole Cutting Head

Exit side programmable servo-controlled laser cutting head with strip hold-down clamps for fast and accurate weld identification hole cutting.

- Programmable motion controller for hole shape (circle, rectangle, slot, etc.)
- Hydraulic strip hold-down clamps
- Hole diameter - 2.0" (≤50mm)



PUSHING BOUNDARIES. UPHOLDING TRADITION.

Strip Material Specifications

Eclipse X1 Laser Welding System can join hot and cold rolled LCS through AHSS & UHSS “automotive” steel grades and other materials.

General material specifications include:

- Material Thickness
Range: 0.016 - 0.157” (0.41 - 4.0mm)
- Material Width
Range: 33 - 76” (850 - 1930mm)
- Material Grades:
LCS, SS, Silicon,
High Boron,
AHSS, UHSS
- Other thickness ranges, widths and material grades including aluminum and other non-ferrous materials evaluated upon request

Laser Coil Joining R&D Laboratory

Taylor-Winfield’s full-service metal joining and induction heating R&D laboratory is equipped with a full-size 76” (1930mm) coil joining laser welder. Our lab can analyze weld results including, but not limited to, micro-sectioning/imaging, destructive tensile and bulge testing to validate weld results.

The Laser Coil Joining R&D Laboratory is equipped with:

- 76”(1930mm) fully functional Laser Welder with Entry and Exit Clamps, Planish Post and PLC
- 6 kW IPG Photonics power supply
- Servo-controlled carriage drive with laser welding and cutting heads
- Inline Induction Post Weld Heat Treatment (PWHT) system



Field Service

Taylor-Winfield’s comprehensive customer service support includes:

- Worldwide onsite field service
- Preventative maintenance support
- Machine repair support
- Equipment testing & diagnostics
- Machine upgrade support
- Real-time remote diagnostics via TW Connect®

THE TAYLOR-WINFIELD LEGACY

Since the beginning of the continuous metals processing industry to today, the Taylor-Winfield name has been synonymous with the highest quality coil joining welding machines. Our motto “Our Customers’ Success is Our Success” is our commitment the Eclipse X1 laser welding system will deliver the results expected for customers worldwide.