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AEC Unveils Hybrid Additive and Subtractive Manufacturing Cell at IMTS 2026

New FANUC® Robot-Based System Integrates Precision Milling, Metal Additive Manufacturing, and Automated Inspection in a Single Flexible Platform: Live at Booth 338999, South Hall

GREER, SC, [RELEASE DATE], 2026. AEC (Automation Engineering Company), a FANUC Authorized System Integrator and leader in advanced manufacturing automation, today announced the launch of its new Hybrid Manufacturing Cell, which will debut at the International Manufacturing Technology Show (IMTS), September 14–19, 2026, in Chicago, IL. AEC will showcase the system live at Booth 338999 in the South Hall, alongside its Accustrip High-Pressure Coolant Systems and Accustrip Chip Shredders.

The Hybrid Manufacturing Cell combines a FANUC industrial robot with a WEISS high-performance milling spindle and the ability to automatically change to a Meltio Direct Energy Deposition (DED) laser deposition head, enabling both additive and subtractive manufacturing within a single automated platform.

Designed for manufacturers seeking maximum flexibility, reduced setup times, and expanded production capabilities, the system features a scalable architecture that can be engineered to accommodate virtually any part size or production requirement. The solution is customizable to meet each application's dimensional, throughput, and performance objectives, making it ideal for tooling, repair, remanufacturing, and prototype development and production.

A key differentiator of the system is its integrated metrology capability. Using a Renishaw touch probe, the robot performs automated part registration, workpiece alignment, and in-process measurement to establish precise part location prior to machining or deposition, improving dimensional accuracy, minimizing setup time, and providing closed-loop process verification throughout manufacturing.

The Hybrid Manufacturing Cell enables users to seamlessly transition between machining and metal additive manufacturing without moving the workpiece to another machine. Automated end-of-arm-tooling (EoAT) changing allows the robot to switch between a range of milling spindles coupled with an automatic tool changer (ATC), the Renishaw probing system, and the Meltio DED laser head, creating a highly flexible manufacturing platform capable of building, machining, measuring, and repairing parts in a single setup.

“Our new hybrid manufacturing platform gives manufacturers the freedom to build, machine, inspect, repair, and finish complex metal components without multiple setups,” said Keith Luce, Welding and Automation Manager at AEC. “By combining proven FANUC robotic automation with precision milling, integrated metrology, and Meltio’s wire-laser deposition technology, we’re delivering a complete manufacturing solution that reduces lead times, improves material utilization, and expands the range of parts our customers can produce.”

Visit AEC at IMTS

AEC invites manufacturers to see the Hybrid Manufacturing Cell in action and discuss automation strategy in person at Booth 338999, South Hall, September 14–19, 2026. To schedule a meeting at the show, visit [IMTS LANDING PAGE URL] or contact [CONTACT NAME / EMAIL].

Phase II: Digital Repair and Reverse Engineering Workflow

In addition to the hybrid manufacturing platform, AEC is developing a Phase II digital manufacturing workflow that further streamlines component repair and remanufacturing.

The next phase will incorporate 3D scanning technology to digitally capture worn or damaged components. The scanned geometry will be used to generate machining and additive manufacturing toolpaths using RobotMaster offline robot programming software together with Meltio Space additive manufacturing software.

This digital workflow is designed to significantly reduce programming time for repair applications while enabling manufacturers to quickly restore high-value components. By combining scanning, intelligent toolpath generation, robotic machining, and directed energy deposition, the system creates a complete end-to-end solution for reverse engineering, feature restoration, and component remanufacturing.

Potential applications include:

- Repair and remanufacture of high-value industrial components
- Restoration of worn tooling and molds
- Aerospace and defense component repair
- Heavy equipment rebuilds
- Near-net-shape manufacturing followed by precision finish machining
- Engineering change implementation and feature addition

Key Features

- FANUC industrial robot platform providing multi-axis manufacturing flexibility
- WEISS high-performance milling spindle for precision subtractive machining
- Automatic tool changing between milling, probing, and additive manufacturing
- Meltio Direct Energy Deposition laser head for metal additive manufacturing
- Integrated Renishaw touch probe for automated part registration, work offsets, and in-process inspection
- Hybrid additive and subtractive manufacturing within a single work envelope
- Large-format part capacity up to 32" × 70"
- Single-fixture manufacturing minimizes setup time and improves positional accuracy
- Future-ready digital workflow supporting reverse engineering and automated repair programming
- Upgradable to utilize external 2-axis positioners for 5-axis machining with a milling spindle and additive capability via the Meltio Blue Laser DED system

About AEC

Automation Engineering Company (AEC) is a FANUC Authorized System Integrator and UL 508A-certified manufacturer of turnkey robotic automation systems, based in Greer, South Carolina. For 44 years, AEC has helped manufacturers compete and win through U.S.-based engineering and design of robotic system integration, additive and subtractive manufacturing solutions, tube and bar load/unload systems, coolant and chip management systems, and turnkey CNC manufacturing solutions, serving industries including manufacturing, welding and fabrication, defense and aerospace, printing, automotive, and panel build. Learn more at www.teamaec.com.

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