

## Press Release October 1, 2008



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For Immediate Release: **Good News in Connecticut Based Business**

Joining Technologies, Inc. (East Granby, Connecticut) headlined a recent article in the Hartford Courant titled "Repair, For the Air". The article features Joining Technologies' newest industrial Laser Applied Powdered workstation (LAP™), an advanced laser cladding technology that can help the aerospace industry's challenge to refurbish worn parts.

Story adapted and distributed by Linda Fitzgerald, PR and Marketing Director Joining Technologies, Inc.

## **New England-Based Company Banks On Technology to Help Airlines Increase Overhaul Opportunities**



Rick Hartford

Scott Boynton, left, and Scott Poeppel work on the robot-controlled laser cladding system at Joining Technologies.

EAST GRANBY, CT - Dave Hudson, president of Joining Technologies, Inc., hopes the company's most recent purchase — an \$800,000 Robotic laser cladding system — will "tidy up" some overstuffed warehouses around the country.

For years, the airline industry has been warehousing "lots of expensive aircraft parts", Hudson said, because the technology to repair them didn't exist. The industry's only option — typically an expensive one — has been to replace the part with a brand-new assembly, even if it's only slightly worn.

However, recent advances in precision laser welding techniques, along with the Federal Aviation Administration's approval for certain specific repairs, could help empty some of those warehouses.

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Joining Technologies, a Connecticut based company that specializes in precision welding, is acquiring equipment and developing the latest techniques to take advantage of the new regulations.

Michael Francoeur, the company's founder and chief executive, began his electron beam welding business in a small shop in Cheshire, CT in 1992. He relocated to East Granby in 1998 and officially launched what is now Joining Technologies, Inc. The company originally specialized in weld restoration of tool steel dies and molds, and other precision welded products like medical devices, sensors and controls, but in recent years it has branched out into aerospace part restoration and OEM parts manufacture.

"Our experience in high precision welding and in-depth knowledge of materials, robotics and process control technology gives us a clear advantage", Hudson explained. "We're adapting this knowledge and focusing our resources to this new method of high value aircraft engine component restoration."

Today, the company's lasers, electron beam welders and gas tungsten arc welders are making critical welds on everything from jet engines to laparoscopic medical devices, and a variety of manufactured components for defense tier 1 subcontractors. The firm's most recent purchase, a new Laser Applied Powder workstation (LAP™), "is going to allow us to offer repairs on some very expensive aircraft parts where repairs did not exist before," Hudson said.

The LAP™ workstation's ability to focus a high energy laser beam means that only the targeted area heats during the fusion welding process, unlike some other welding processes in which heat can spread to the surrounding metal, causing the entire part to change dimensionally, rendering the part unusable.

"That tendency is why the FAA, in previous years, would not allow the repair of some critical aerospace parts", said Jim Edwards, the company's quality assurance coordinator. Hudson adds, "A restored aircraft engine component has to meet all of the specifications of a new part. We feel that our new LAP™ process not only meets these requirements but has the potential to exceed them in many cases".

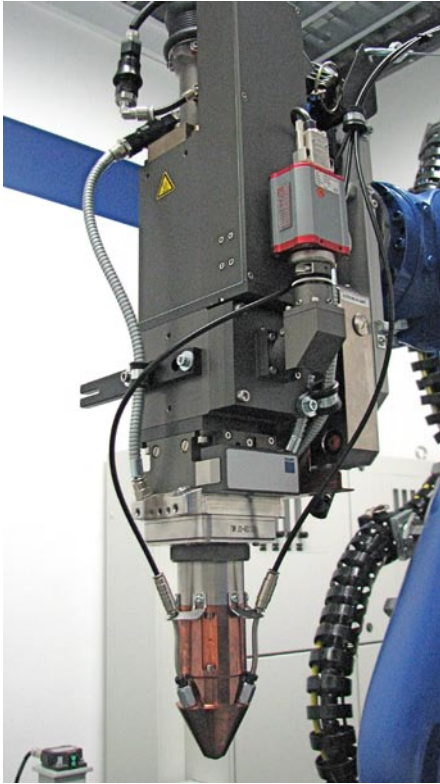
In the last two years, the company's workforce has increased from 30 to over 50, as it has added new laser joining equipment and services, including metallurgical analysis, finite element computer modeling and numerous complimentary processes. "This surge in technical competence has paved the way for us to offer a complete supply chain management solution to those who prefer to purchase an assembly rather than individual components."

"Our company is on a 35 percent per year top line growth track", said Hudson, who would not disclose detailed financial information about the privately owned corporation. "We have a good thing going here and I'm very proud and fortunate to be a part of it. Our firm has also added six engineers as it expands into advanced manufacturing processes like those found in our additive technology labs. We will soon be able to build virgin components from computer generated designs. We call this 'free forming'. That is really exciting stuff and we plan on taking the lead in this developing field of additive technology."

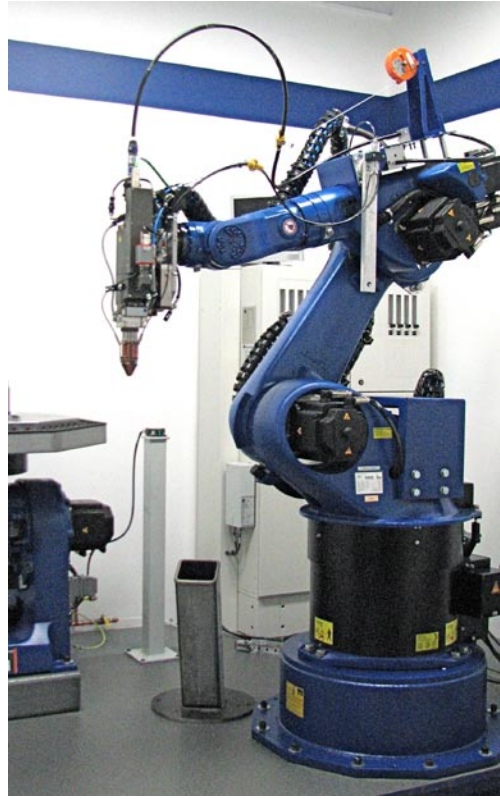
"The airlines are always seeking ways to reuse restored parts rather than buying new", Hudson explains, "and that's why we just made a very large investment in a new laser cladding system and a high performance engineering team that can meet the challenge. We know the business is there and we know that our service is unique in that we've combined large envelope, precision laser cladding with flexibility of an 8 axis robot and tilt rotary system".

Hudson summarizes: "The new LAP™ system is going to allow us to offer repairs to OEMs like Pratt & Whitney, Rolls Royce, Mitsubishi, GE and others. Military depots have also begun to realize the benefits of laser cladding, and we believe that there is a myriad of other applications awaiting this technology. For example, we are beginning to apply the technology to the high performance race industry. We're looking at refurbishing some high-value parts, like camshafts, valve seats, brake discs, and more for NASCAR, and drag cars. This process will revolutionize the recycling of high value components across many industries".

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Laser and powder delivery payload mounted to robot



View of robot and Powder feed delivery system

View of robot with rotary tilt

