



SPEE3D TO MANUFACTURE METAL PARTS FOR THE DEFENSE, INDUSTRIAL, AND SPACE INDUSTRIES ONSITE AT RAPID + TCT CONFERENCE

Company will Showcase its Patented Cold Spray Additive Manufacturing Technology, Announces a Partnership with UC Irvine's Department of Materials Science and Engineering, and Features White Paper Research Led by Steven Camilleri, Co-Founder and CTO

Chicago, IL – May 1, 2023 – [SPEE3D](#), a leading metal additive manufacturing company, announced its presence at the RAPID + TCT Conference – North America's largest and most influential additive manufacturing event – starting tomorrow through May 4 at McCormick Place. The company will manufacture parts onsite for various uses and industries, showcasing its patented cold spray additive manufacturing (CSAM) technology that enables on-demand production of critical parts in minutes and hours versus days.

Attendees can see the [LightSPEE3D](#) in action printing these parts in copper at booth 3112:

- Cooling Block: Small heat exchanger block used in a wide range of industries; 2 lbs.; printed in 18 minutes
- Rocket Nozzle Liner: A scaled-down example of a rocket nozzle used in the Space industry; 4.5 lbs.; printed in 35 minutes
- V8 Manifold Inlet Runner: Printed for an s5000 open-wheeler that was built by Garry Rogers Motorsport and demonstrated at the 2022 Melbourne Grand Prix. This part is bolted onto the engine and separates the inlet manifold from the engine while air runs through it between the two; 4.3 lbs.; printed in 32 minutes

SPEE3D will have various other parts on display in the booth made of aluminum, aluminum bronze, and copper.

In addition, SPEE3D is kicking off a partnership with a team of researchers from the University of California, Irvine (UCI) Department of Materials Science and Engineering. The UCI [WarpSPEE3D](#) printer has been acquired with grant support from the Air Force Office of Scientific Research (AFOSR), with Professor Daniel Mumm as the Principal Investigator. The system will be deployed with the [Advanced Casting Research Center \(ACRC\)](#), headed up by Professors Diran Apelian and Daniel Mumm – where SPEE3D is a member of the consortium –

and the [Institute for Design and Manufacturing Innovation \(IDMI\)](#), with Prof. Lorenzo Valdevit as Director. The WarpSPEE3D enhances the comprehensive suite of additive manufacturing and materials characterization systems at UCI and supports a vital role in developing a future workforce adept in manufacturing emerging advanced materials systems.

“We are excited to work with SPEE3D to advance fundamental studies of cold-spray-based materials consolidation and to explore the capabilities of this unique instrumentation,” said Daniel Mumm, Professor at UC Irvine. “The WarpSPEE3D will play a crucial role in our core mission of educating and training the next generation of scientists and engineers knowledgeable in materials processing and additive manufacturing, focusing on solid-state consolidation achieved through cold-spray.”

At RAPID, Metal AM will be distributing its [Spring issue](#) featuring the the research article, “What is ‘good’ metal AM? Exploring the industry’s value metrics for production,” (pgs. 137-149), co-authored by Steve Camilleri, Co-Founder and Chief Technology Officer at SPEE3D, along with Andrew Duguid, Sam Katz, and Chris Massar also from SPEE3D; Martin McMahon from MAM Solutions; Victor Champagne from the US Army Research Laboratory; Ozan Özdemir from Northeastern University; Anthony Naccarelli and Timothy Eden from Penn State University; Krishnan Kannoorpatti from Charles Darwin University; and Bruce McLean from the University of Sydney.

The authors first establish the use cases for traditional mass production and supply chain versus those better suited for additive manufacturing, allowing the connection between production and delivery to be handled differently since AM is smaller in scale and allows for distributed versus centralized production. They then propose a framework of critical criteria to assist industrial organizations in identifying which additive manufacturing processes – under the classes of sinter-based AM, direct energy deposition, and powder bed fusion – are appropriate for their specific manufacturing needs. Additionally, they look to open a dialogue with other additive experts to validate their assertions.

Finally, SPEE3D’s valued partners will be at the booth representing their companies and their technologies:

- [Alkin](#): A manufacturer of high-pressure compressors for specialty gases. Alkin and SPEE3D have worked together to develop a custom compressor used exclusively in SPEE3D’s printers.

- [Comet](#): A public-private partnership between New Jersey Institute of Technology, New Jersey Innovation Institute, and US Army DEVCOM AC, advancing innovation, education, and workforce development in Advanced Manufacturing. SPEE3D has partnered with COMET to deliver industry, government, and educational workforce training on Cold Spray Additive Manufacturing.
- [Diversitech](#): A provider of customizable air pollution control solutions that comply with local regulations, ensuring commercial processes are free from harmful pollutants. SPEE3D's printers use Diversitech dust collectors to ensure that the air exiting SPEE3D systems is clean of any pollutants.

About SPEE3D

SPEE3D is a leading metal additive manufacturing technology company dedicated to the research, development, and delivery of metal 3D printers and integrated systems utilizing its patented Cold Spray Additive Manufacturing (CSAM) technology. SPEE3D advanced manufacturing solutions offer significantly faster production than traditional metal manufacturing for a wide range of materials. More information on SPEE3D can be found at <https://spee3d.com/>

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