

Product News

Units Form Large AM Service Organization

Stratasys has combined its RedEye, Solid Concepts and Harvest Technologies divisions to form Stratasys Direct Manufacturing, one of the largest 3D printing and advanced manufacturing service organizations in North America.

With eight facilities located throughout the United States, Stratasys Direct Manufacturing offers a portfolio of technologies and materials to produce parts for applications ranging from models and prototypes to end-use components and assemblies. Technologies include direct metal laser sintering, fused deposition modeling, PolyJet, laser sintering, stereolithography, urethane casting, CNC machining, tooling and molding. stratasysdirect.com

Partners Target Quality Control in Metal-Based AM

EOS and Germany's MTU Aero Engines have signed an agreement for joint strategic development related to a system of quality control for metal-based additive manufacturing. The first result of the joint endeavor is use of optical tomography (OT) in the modular EOS monitoring portfolio. In addition to several sensors that monitor the general system status, the camera-based OT technology controls the exposure process and melting characteristics of the material to ensure optimum coating and exposure quality.

According to EOS, the system enables a large part of the quality control process that previously took place downstream to now be performed during the manufacturing process, resulting in reduced costs. eos.info

New AM System Aimed at Production

Renishaw has developed a new additive manufacturing system designed and engineered specifically for production manufacturing. Provisionally named the "EVO Project," the system includes a 500-W laser, high-capacity filtration and automated powder handling. It is expected to be available during the second half of this year.

The new machine is designed for single-material industrial production. Powder handling is said to be almost entirely hands-off, while powder recirculation, recycling and recovery are all carried out within the inert atmosphere of the system. renishaw.com



System Designed for Series Production

ExOne has announced its largest 3D printing system, the Exerial, marking a move from rapid prototyping and small batch production, for which the company's other systems are used, to industrial series production.

Unlike ExOne's other indirect printing systems, this printer contains multiple industrial stations that allow for continuous production and simultaneous processing. It is equipped with two job boxes, each 1.5 times larger than the single job box in the company's next-largest model, the S-Max. The Exerial system offers a total build platform of 3,168 L and is capable of printing output rates nearly four times faster than the S-Max. exone.com



Hybrid Machine Combines Metal Powder Technology with 5-Axis Machining

Hermle has integrated additive manufacturing capability into its C 40 U five-axis machining center. The new MPA 40 machine incorporates the company's metal powder application (MPA) technology, a thermal spray process based on lower-energy kinetic compacting, or micro-forging. The hybrid machine has a powder application nozzle mounted alongside the vertical milling spindle and a heater built into the fourth/fifth-axis rotary swiveling table.

A production cycle involves clamping an application-specific faceplate onto the rotary table, importing the CAD model of the component to be produced, and converting the 3D data into successive micro-forging and milling cycles, which can be followed by water quenching and heat treatment, if necessary. Finished components can be as large as 550 mm in diameter and 460 mm deep, and weigh as much as 600 kg. hermlemachine.com

AM Database Includes Machines, Materials

Senvol has launched a free, online database of additive manufacturing machines and materials. Users can search by more than 30 fields, including machine build size, material type and material tensile strength. For example, users can search the database to find materials compatible with certain machines, materials of certain tensile strengths and available metal AM machines. senvol.com