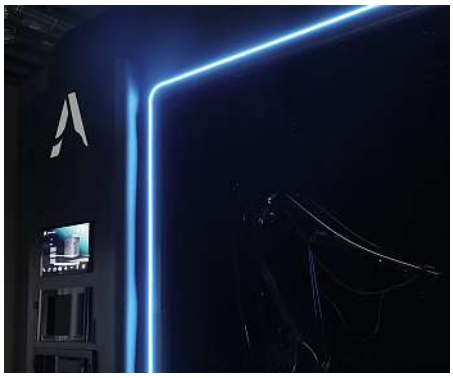
PERFORMANCE AND PRODUCTIVITY

Printing large-scale metal parts



Source: Caracol

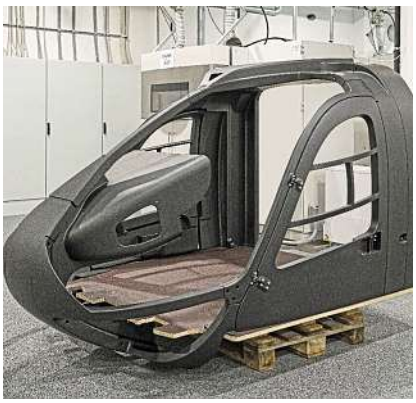
LFAM provider Caracol has introduced a new technology that is set to transform how large-scale metal parts are produced. Vipra AM is a robotic Direct Energy Deposition platform that leverages wire arc AM processes, seamlessly developed into a hardware, software and automation proprietary turnkey system. The platform was created to maximise flexibility, control and performance, expanding LFAM's possibilities to a broader range of applications.

The company offers Vipra in two configurations. Vipra XQ leverages Plasma Arc Deposition technology to produce high-quality components with exceptional finishing and precision. Vipra XP is focused on maximising productivity, minimising operating costs in the manufacturing process of complex large scale metal projects. In both its different product configurations, Vipra AM was built to produce advanced applications such as load bearing finished parts, lightweight structures, high-temperature, high durability autoclave and curing moulds, cladding, repair and on-demand spare parts.

www.caracol-am.com

3D EXTRUSION PRINTING

Lightweight and cost-effective



Source: Q-Big 3D

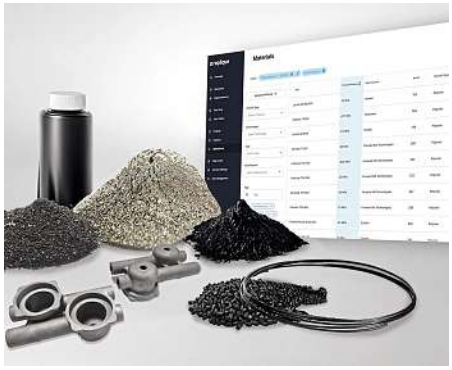
3D extrusion printing unlocks the potential of making large-volume components economically viable. One key to this is the VFGF (Variable Fused Granulate Fabrication) process from Q-Big 3D. Rapid availability of components, very short amortisation periods and high cost-saving potential are among the characteristics of this manufacturing strategy. And there is a cost-relevant advantage compared to alternative 3D printing approaches: the use of commercially available plastic granulate instead of high-priced polymers with filaments. The key element, however, lies in a special feature of the process: the use of a variable nozzle (variable fusing process), which can vary between a turbo and a detailed build mode during the creation of the component.

An example of large-format 3D printing is the 3D cockpit for a helicopter simulator, additively manufactured on a Queen 1 system. Cockpit dimensions measure 2,260 mm, 1,780 mm and 1,705 mm. A low weight of only 200 kg was realised by 3D printing with turbo and detail build modes.

www.qbig3d.de

SOURCING PLATFORM

Expanded technology portfolio



Source: Replique

Expanding beyond 3D printing, Replique now provides clients with access to additional manufacturing technologies, such as forging, metal casting and injection moulding. This expansion gives customers access to over 250 production partners, enabling them to meet their sourcing needs with even greater flexibility. "With this expansion, we are responding to our customers' desire to source all their manufacturing needs — from individual parts to serial production — centrally and using the most suitable technology for each application. This enables companies to quickly adapt to any customer requirements in a complex procurement environment," says Dr. Max Siebert, CEO and Co-Founder of Replique.

Replique's Material Hub now offers a more intuitive experience with a new comparison feature, allowing users to easily assess materials side-by-side and quickly choose the best option for their applications. With the addition of metal materials for additive manufacturing, customers can now qualify for complex, high-strength parts with precision.

www.replique.io

METAL ADDITIVE MANUFACTURING

Five new materials for Ren-AM 500

To help broaden additive manufacturing (AM) adoption across various industrial applications, global engineering technologies company, Renishaw, has expanded the number of processable materials for its Ren-AM 500 series of metal AM systems. The new materials added include commercially pure copper, H13 tool steel, Hastelloy X alloy, super-duplex stainless steel and AlSi7Mg aluminium alloy. These specialist materials provide manufacturers with the ability to create new parts for a wide range of applications.

The company is releasing these five material files for its laser powder bed fusion (LPBF) systems to support the ever-changing needs of its customers. The AM system manufacturer worked directly with customers to develop process parameters for new alloys to open up innovative applications. Renishaw has also added new powder layer thicknesses to its current processable materials. These include 90 µm titanium grade 23, 70 µm stainless steel 316L and 120 µm Inconel 718 parameters that achieve exceptional material build rates.

www.renishaw.com

Source: Renishaw