PRESS RELEASE — FOR IMMEDIATE RELEASE

FIRST SALE OF CALIBUR3 METAL AM SYSTEM

— Wayland Additive sells first system to Exergy Solutions which ignites collaboration to address wear using Vibenite®

(10th May 2021, Huddersfield, U.K.) In advance of its physical launch event 19th May 2021, Wayland Additive is delighted to be able to announce the first sale of its Calibur3 metal AM system to Exergy Solutions Inc., Calgary, Canada.

Since its virtual launch event held in March, Wayland has garnered significant interest in the Calibur3 machine from across a wide cross section of industry. Peter Hansford, Director of Business Development at Wayland Additive, comments: "We are extremely pleased with the response to the launch of our Calibur3 machine, and to be able to announce our first sale to Exergy is very exciting. We are in advanced discussions with a number of companies interested in our ground-breaking metal AM process, all of which recognise that NeuBeam™ affords them access to numerous production alternatives. Most importantly, the charging issues that make electron beam (EBM) processes so unstable have been fully neutralized with NeuBeam™. Moreover, NeuBeam™ is a hot "part" process rather than a hot "bed" process like traditional eBeam processes. This efficiently creates parts that are free of residual stresses because the high temperatures are only applied to the part and not the bed, ensuring free-flowing powder post-build (no sinter cake) and stress-free parts with reduced energy consumption."

Traditional workarounds for the eBeam process have been developed by the AM industry, but these lead to downstream complexities. The use of very high processing temperatures across the entire build plate creates a part within a semi-sintered cake, and this makes part removal and post processing very difficult, time consuming and expensive. These compromises also severely limit the materials that can be used, the geometrical forms that can be produced and ultimately the applications that can benefit from the eBeam process.

Neubeam™ is material agnostic, can produce complex geometries that are impossible on other eBeam systems, and is typically 30-40% faster by removing the need to maintain and sinter the cake.

Exergy Solutions is an engineering consultancy offering end-to-end, fit-for-purpose lab-scale and pilot-scale equipment for research and innovation. The company has been operating in Calgary since 2013 and opened its X-Lab in 2019, offering state-of-the-art industrial additive manufacturing and post-processing solutions, as well as a wireless augmented and virtual reality studio. Exergy works with clients in a variety of sectors including demanding, highly regulated industries such as oil and gas, mining, manufacturing, and R&D.

The purchase of the first Calibur3 by Exergy Solutions is a strategic move, enabled with support from Next Generation Manufacturing Canada (NGen). “NGen’s mission is to support the development of unique, world-leading manufacturing capabilities in Canada” said Jayson Myers, CEO, NGen. “It is investments like this that will enable our manufacturers to compete in the global marketplace and deliver the integrated engineering solutions that their customers need” As Dr. Dave Waldbillig, Director of Advanced Manufacturing at Exergy explains, “The investment in Wayland’s technology means that we can present a compelling solution to our customer’s wear challenges. The partnership combines the high wear resistance and toughness of the Vibenite® series of materials from VBN Components, with the larger build volume and speed of the NeuBeam™ process, and Exergy Solution’s application engineering support. Exergy focuses on developing solutions for high wear environments where complex geometries and large part sizes are needed for applications across many industry sectors such as oil and gas, minerals processing, forestry, agriculture, pulp and paper, and power generation among others. Wayland’s Calbur3 metal AM system supports innovation for Exergy with its ability to process a wide range of materials in its large build volume meaning we can focus on large footprint components.”

The Vibenite® series of materials used by Exergy are developed by VBN Components, which has a reputation for creating unique hard and wear resistant materials for additive manufacturing, thereby allowing customers to create large geometrically-complex parts and components that are impossible to produce using traditional production processes. The Vibenite® series of materials are characterised by the production of components with extreme fatigue resistance thanks to the high cleanliness in Vibenite® materials, supreme wear resistance and hardness, thanks to the high carbide content, and no porosities and full hardness all the way through the component.

Billy Rideout, CEO, at Exergy concludes. “The alliance between Exergy, Wayland, and VBN means that we are able to offer significant customer benefits. With support

from VBN, Exergy can now supply full-service design, manufacturing, and qualification support for large parts with complex geometries made from materials that are difficult or impossible to machine. This in turn means longer component lifetimes, with the entire part (not just specific areas of the part) made from highly wear resistant materials."

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