COOKSONGOLD UNVEILS NEW INDUSTRIAL DIVISION TO PIONEER PRECIOUS METALS USE IN ADDITIVE MANUFACTURING APPLICATIONS

Cooksongold has launched a new industrial division to pioneer the use of precious metal additive manufacturing (AM) for a range of performance-critical applications.

Part of HM Precious Metals, <u>Cookson Industrial</u>, will provide an end-to-end service comprising of consultancy, R&D, NPD and production. This includes conventional and subtractive manufacturing alongside its additive capabilities; all of which will be managed from its Birmingham head office and manufacturing site.

The use of precious metals in additive manufacturing offers organisations a new frontier for performance in extreme environments, where traditional alloys have failed to meet the thermal and material application challenges presented. Cookson Industrial aims to help organisations looking to explore the technology to de-risk their development, simplify their supply chains and shorten time to market.

The company develops and manufactures a broad range of gas atomised precious metal powders on site, including gold, silver, platinum and palladium powders; all of which are refined from recycled sources where possible.

All precious metal powders are available for purchase in small batches up to 15kg, or for use in Cookson Industrial's state-of-the-art additive manufacturing facility in Birmingham. This currently comprises six EOS Precious M 080 and M 100 AM machines, alongside a Renishaw AM 500S Flex single laser AM machine.

Cookson Industrial has already partnered with the University of Birmingham to explore the development of precious metal alloys for additive manufacturing applications across the aerospace, healthcare and glass fibre manufacturing industries. Both organisations were jointly awarded a £750k Early-stage Prosperity Partnership funding from the Engineering & Physical Sciences Research Council (EPSRC).

Leveraging Cooksongold's 100-year heritage in jewellery and luxury product manufacturing, the company is also currently working with Bentley Motors to manufacture a series of components for its Batur by Mulliner line.

Nikesh Patel, Head of Cookson Industrial, comments: "While the use of precious metals in additive manufacturing has largely been confined to the jewellery, luxury lifestyle industries, many more organisations are beginning to explore its potential for use in critical applications."

Aerospace is seen as a key growth market for Cookson Industrial. The company is actively exploring new developments in satellite thruster design to help de-weight parts and reduce the volume of hazardous materials used in the manufacturing process compared to chemical thruster design.

Nikesh continues: "For extreme environments such as aerospace, where there is no room for compromise, the performance characteristics of precious metals can offer a whole new world of design parameters compared to traditional alloys.

"There is also a lot of dynamism in the UK aerospace sector with many legacy processes set for disruption. However, given the significant cost of the powders themselves – a full hopper often outweighs the purchase price of the AM machine – many organisations have struggled to fully commit to R&D. As we produce and print with our own powder supply, we can help derisk the process by offering the optimum parameters for powder production, storage and use. This will help reduce powder loss and the associated impact on project costs, while giving organisations access to one of the most innovative production environments in the UK."

For more information, please visit: <u>www.cookson-industrial.com</u>.

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