Embargo Tuesday 8 November 5 pm Melbourne time, 7 am Paris time

Melbourne's 3D jet engine technology flies into production in France

Launch at the Australian Embassy in Paris, France

Further information including photographs and HD footage of printing, engines, and production lines visit www.amaero.com.au or www.scienceinpublic.com.au/monash-uni (password: printing)

The Monash University-led team who printed a jet engine last year have enabled a new venture for manufacturing aerospace components in France.

Melbourne-based Amaero Engineering—a spin out company from Monash University's innovation cluster—has signed an agreement with the University and Safran Power Units to print turbojet components for Safran, the French-based global aerospace and defence company.

"Our new facility will be embedded within the Safran Power Units factory in Toulouse and will make components for Safran's auxiliary power units and turbojet engines," said Mr Barrie Finnin, CEO of Monash spin-out company Amaero.

Monash University's Vice-Provost (Research and Research Infrastructure) Professor Ian Smith said that the Amaero-Safran agreement is an excellent example of the University's exceptional research having commercial impact on a global scale.

"I am delighted that Monash is contributing to global innovation and attracting business investment with our world-class research. The Amaero-Safran collaboration is a fabulous example of how universities and industry can link together to translate research into real commercial outcomes," Professor Smith said.

"The new venture is part of Monash University's large-scale investment in innovation on our Clayton campus, which brings together a dynamic cluster of research, research infrastructure and industry partners. Collectively we and our industry collaborators are driving technological change and advancing manufacturing – delivering real social and economic impact."

The world's first 3D printed jet engine was revealed to the world at the 2015 Melbourne International Airshow. As part of a project supported by the Science and Industry Endowment Fund (SIEF) Safran, Monash University and Amaero, in collaboration with Deakin University and the CSIRO, took a Safran gas turbine power unit from a Falcon executive jet, scanned it and created two copies using their customised 3D metal printers. This research is now being extended further through the support of Australian Research Council's (ARC) strategic initiative "Industry Transformation Research Hub" and several industrial partners including Safran and Amaero.

"We proved that our team were world-leaders," said Professor Xinhua Wu, Director of the Monash Centre for Additive Manufacturing. "I'm delighted to see our technology leap from the laboratory to a factory at the heart of Europe's aerospace industry in Toulouse," Professor Wu said.

Amaero will establish a new manufacturing facility on the Safran Power Units site in Toulouse using a 3D printing technology known as Selective Laser Melting. They will not only bring the know-how and intellectual property they've developed in partnership with Monash University, they will also relocate two of the large printers they have customised for this precise manufacturing task.

Safran Power Units will test and validate the components the team makes, and then the factory will enter serial production, producing components that Safran Power Units will post process, machine and assemble into auxiliary power units and turbojet engines for commercial and defence use. The project team expect that production will commence in the first quarter of 2017.

The collaborative agreement is between Safran Power Units, Amaero and Monash University.

“Over the past five years, Safran Power Units and Monash University have successfully worked on a demonstration phase. Innovations generated by research and joint collaboration lead us to a new milestone: introducing 3D printing into production stage for major engine parts. We are committed to add tangible value to our products for the benefit of our customers. The stakes are high: weight reduction, huge production cycles shortening and designs innovation. Safran Group advances and our partner leading-edge expertise allow us to stay ahead and to supply the most sophisticated components. This is not just a matter of 3D printing, the 3P rule applies: setting the right parameter for the right part and the right expected performance,” declared François Tarel, CEO of Safran Power Units.

The development and commercialisation of this advanced 3D metal printing technology has been supported by Monash University; Safran; and the Australian Government through the Entrepreneur’s Programme; the ARC; and other agencies. CSIRO and Deakin University are also participants in the original engine printing project supported by SIEF which continues to provide valuable data and software tools.

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