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Aubert & Duval supports AFRC for the official launch of a multi-function hydraulic press capability

Alongside a long-standing Tier 1 membership, Aubert & Duval supported the official launch of a new multi-function hydraulic press capability within the University of Strathclyde's Advanced Forming Research Centre (AFRC), part of the National Manufacturing Institute Scotland Group. Based in Renfrewshire, Scotland but with global relevance and impact, it is focused on developing materials transformation research at an industrial scale.

Since 2010, the partnership between Aubert & Duval and the AFRC has been underpinned by a consistent goal: a focus on the continuous development of applied research on forging of complex metallic materials, and the translation of that research capability to industrially relevant environments.

The new press capability, known as FutureForge, is unique within European research setting and has been established to drive the improved understanding and control of open and closed die forging processes for complex materials.

Specifically, the FutureForge capability will allow Aubert & Duval to test new technologies and processes at a semi-industrial scale, improve the associated forging routes and understand how to optimise heating technologies – all of this will be enabled by access to digital forging data that will be recorded and analysed within an Industry 4.0 context and using digital simulations, such as Forge®.

Aubert & Duval's established partnership with the AFRC will provide reliable access to this new asset, with technical characteristics as follow: 1200 tons in open die mode and 2000 tons in closed die mode; one manipulator manual or automatic mode with a capacity of 1 ton; one isothermal cassette; 2 furnaces with a length of 4 meters and temperature range from 350°C to 1200°C. These capabilities will allow work on a large range of materials (aluminum, special steels, superalloys, and titanium alloys), within a fully digitised environment, which can be linked to simulation software.

Ludovic MOLLIEUX, Aubert & Duval technical VP: *« We want to thank the AFRC for the implementation of such an impressive and exceptional capability, which will help us to continue our advancement of the supply of highest quality forged product that our customers demand. Aubert & Duval maintains our commitment to position itself at the*

top of the metallurgical know-how by working in partnership with the best research centers. It's a key objective for our business, and today's launch of FutureForge is a major milestone in that partnership strategy. »

Professor Brad Wynne, AFRC Director: *« With the largest hot forging press of its kind, dedicated solely to R&D, unparalleled connectivity capabilities, and over a decade of experience in materials science, the Advanced Forming Research Centre is in a unique position to help the forging industry embrace net-zero, unlock energy savings, accelerate productivity, and ultimately transform this vitally important industry for future generations.*

The 2,000 tonne press, multiple furnaces, ground-breaking smart manipulator and fully connected, data-driven, control room, that make up FutureForge, provide the sector with the industry-scale test bed it requires to help de-risk investment in innovation around materials, process improvements and energy utilisation. »

AUBERT & DUVAL

Aubert & Duval is one of the world's leading producers and processors of complex metallic materials (special steels, superalloys, titanium, aluminum). It is owned in equal parts by Airbus, Safran and the Tikehau Capital fund. Serving strategic industries such as aeronautics, space, defense and energy, Aubert & Duval provides its customers with a comprehensive production chain, ranging from materials design to forged blank parts, enabling them to secure their supply chain and meet their decarbonization challenges. www.aubertduval.com

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