

ArianeGroup and Oerlikon Sign Order for the Production of Additively Manufactured Parts for Ariane 6 Rocket

June 19, 2023 – Paris and Munich – Oerlikon AM and ArianeGroup signed an order worth up to €900,000 for the production of 3D-printed heat exchanger sets for the new Ariane 6 rocket launcher. The Ariane 6 launcher is a strategic vector for European space access, bringing satellites and high-tech payloads into orbit several times per year. The successful cooperation with ArianeGroup, and the use of additively manufactured components, is another important milestone for Oerlikon as it consolidates its position as a recognized supplier of AM parts to space companies.

Ariane 6 is expected to play a key role in Europe's space activities, including scientific exploration, Earth observation, telecommunications, and national security. It is designed for optimized flexibility and efficiency, to provide a reliable and cost-effective means of launching a wide variety of payloads into space, including satellites. 3D printed aluminum parts from Oerlikon AM will act as heat management devices (heat exchangers) for onboard equipment, supporting the performance and flexibility of the new launcher.

Compact and lightweight

Oerlikon AM worked very closely with the Ariane 6 technical team to ensure the heat management solution meets the most stringent technical specifications. During the development process, the team exploited key advantages of metal 3D printing versus conventional manufacturing, such as increased geometric freedom of design, minimal weight, and rapid lead times. As a result, the heat exchangers' new, compact design fits perfectly into the very limited installation space, capitalizing on the benefits of additive manufacturing.

Designed for series production

After its initial launch, Ariane 6 will take-off several times per year into various orbits, including low Earth orbit, geostationary transfer orbit and sun-synchronous orbit. Thus, the heat exchanger sets were explicitly designed for serial production. Oerlikon AM will support ArianeGroup to meet their production requirements over the coming years, based on the forecasted demand for the rocket. Ariane 6 is projected to emerge as a leading European solution for access to space, with substantial anticipated market demand.

Milestone on the route to class 1 supplier

"Delivering components for Ariane 6 is an important milestone as we consolidate and expand our position as a reliable and innovative partner for serial parts in the space industry. Driving the industrialization of class 2 and 3 space components is the prerequisite of our success. These products are already part of our product portfolio, taking us an important step further on our way to supplying the industry with flight-critical class 1 parts in very short term," says Hendrik Alfter, Managing Director, Oerlikon AM. "We are confident in our level of expertise and maturity, and further announcements on flight critical parts for launcher applications will follow soon: We have been working in close collaboration with our customers on these applications for a long time now," concludes Hendrik Alfter.

Visit Oerlikon at the Paris Air Show in Hall 2B, Booth E157, and meet the developers of the additively manufactured set of heat exchangers for the Ariane 6 rockets.
For interviews or more information, please contact us.



About Oerlikon Surface Solutions Division

Oerlikon is a leading global provider of surface and additive manufacturing solutions and services. The division offers an extensive portfolio of market-leading thin-film, thermal spray and additive manufacturing technologies, equipment, components and materials. Emission reduction in transportation, maximized longevity and performance of tools and components, increased efficiency and intelligent materials are hallmarks of its leadership. Pioneering technology for decades, the division serves customers with standardized and customized solutions across a worldwide network of more than 170 sites in 37 countries.

With its technology brands – Oerlikon Balzers, Oerlikon Metco and Oerlikon AM – Oerlikon's Surface Solutions division focuses on technologies and services that improve and maximize performance, function, design, reliability and sustainability, which are innovative, game-changing advantages for customers in the automotive, aviation, tooling, general industries, luxury, medical, semiconductors, power generation and oil & gas markets.

The division is part of the publicly listed Oerlikon Group (SIX: OERL), headquartered in Switzerland, which has more than 13 000 employees and generated sales of CHF 2.9 billion in 2022.

For further information: www.oerlikon.com/surface-solutions

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