

MT Aerospace and ArianeGroup sign development contracts with ESA for enhanced Ariane 6 composite upper stage technologies

- **MT Aerospace and ArianeGroup are signing two contracts to demonstrate maturity of all enabling technologies for a new lightweight, cost-optimized, versatile Ariane 6 composite upper stage**
- **PHOEBUS is a project to validate technologies and concepts for an optimized upper stage on Ariane 6**

Paris, May 14, 2019

The European Space Agency (ESA) today signed two contracts for technology maturation with MT Aerospace AG, an affiliate of the listed OHB SE space and technology group and with ArianeGroup, lead contractor for Ariane 6.

MT Aerospace and ArianeGroup are combining their respective skills in Augsburg and Bremen to design and test the Prototype of a Highly OptimizEd Black Upper Stage (PHOEBUS). The continuous evolution of the Ariane 6 launcher in terms of greater competitiveness and improved performance requires the exploration and utilization of composite technologies.

PHOEBUS will increase the readiness level of the technologies for an improved upper stage with respect to cost/weight savings and stage performance improvements (payload capacity increase by around two metric tons for geostationary orbit). As from 2021 these technologies will be integrated into an upper stage demonstrator to prove system compatibility with fuels (liquid oxygen and hydrogen on a large scale), and to demonstrate filling and draining processes and integrity of the primary and secondary structures.

To demonstrate the maturity of all enabling technologies both companies are working closely together: ArianeGroup will focus on innovative stage architectures and system integration, while MT Aerospace's concentrates on materials and technologies for composite tanks and structures under cryogenic conditions. This will pave the way for a subsequent product development of the new upper stage for Ariane 6 evolution to be named Icarus (Innovative Carbon Ariane Upper Stage). Decisions regarding further funding of this carbon- fiber reinforced plastic (CFRP) upper stage will be taken at Space19+, the ESA Ministerial Council at the end of this year.

Press contact:
ArianeGroup
Astrid Emerit

+33 6 86 65 45 02
astrid.emerit@ariane.group

Julien WATELET
+33.6 88.06.11.48
julien.watelet@ariane.group

Kirsten LEUNG
+49 421 4372 5326
kirsten.leung@ariane.group

MT Aerospace AG
Nivart Holsworth

+49 821 505 1033
pr@mt-aerospace.de

About MT Aerospace

MT Aerospace is an internationally leading company in the aerospace industry with 700 employees at sites in Augsburg, Mainz (Germany), Cagliari (Italy), Santiago de Chile and Kourou (French Guyana). MT Aerospace develops and manufactures key components for the ARIANE European launch system, the Airbus fleet, space vehicles and satellites. MT Aerospace is a technology leader in lightweight structures using metal and composite materials. With a work share of 10%, it is the largest supplier to the ARIANE program outside France.
www.mt-aerospace.de

About ArianeGroup

ArianeGroup develops and supplies innovative and competitive solutions for civil and military space launchers, with expertise in all aspects of state-of-the-art propulsion technologies. ArianeGroup is lead contractor for Europe's Ariane 5 and Ariane 6 launcher families, responsible for both design and the entire production chain, up to and including marketing by its Arianespace subsidiary, as well as for the missiles of the French oceanic deterrent force. ArianeGroup and its subsidiaries enjoy a global reputation as specialists in the field of equipment and propulsion for space applications, while their expertise also benefits other industrial sectors. The group is a joint venture equally owned by Airbus and Safran, and employs approximately 9,000 highly qualified staff in France and Germany. Its 2018 revenues amounted to 3.6 billion euros.