Press release

Bremen Ariane 6 Facility Inaugurated

Bremen, October 29, 2019

- **ArianeGroup and invited guests today inaugurated the integration hall for the Ariane6 upper stage in Bremen, Germany**
- **The first two Ariane6 upper stages are currently in the final assembly phase in the fully operational new facility**
- **Equipped with the re-ignitiable Vinci engine, the upperstage is a key element for Ariane 6 versatility, capable of carrying out all missions to all orbits**
- **The inaugural flight of Ariane 6 is scheduled for the second half of 2020**
- **Download photos and videos here**

ArianeGroup has officially inaugurated the integration hall for the Ariane 6 upper stages in Bremen in the presence of Ms. Sarah Ryglewski, Secretary of State to the German Ministry of Finance (BMF), the European Space Agency (ESA) Coordinator Thomas Reiter, Dr. Gerd Kraft, representative of the German Aerospace Center DLR (Deutsches Zentrum für Luft und Raumfahrt), and the Mayor of Bremen, Dr. Andreas Bovenschulte.

In this 6,000 m², 21m high building, ArianeGroup is currently finalizing the integration of two Ariane 6 upper stages that will be tested early next year. The first will be sent for test firings to the new DLR test bench inaugurated last February in Lampoldshausen. The second will join the other components of the launcher in Kourou, French Guiana, for combined testing of the launcher and the ELA-4 launch pad prior to the inaugural flight, scheduled for the second half of 2020.

"I am delighted to celebrate the inauguration of the Bremen integration hall as Ariane 6 development enters the final stretch. The qualifying phase for a first flight in the second half of 2020 has begun," said Pierre Godart, CEO of ArianeGroup in Germany. *"This success demonstrates that Bremen is a crucial center of competence for the European space industry. Together with the support of ESA, the national space agencies and all the European partners in the Ariane 6 program, we will carry out all missions to all orbits in support of European space ambitions with our competitive, always evolving launcher*."

The Ariane 6 upper stages are equipped with the re-ignitable Vinci® engine, which enables the future European launcher to carry out all types of missions, whatever the duration and orbit, including, particularly, deployment of satellite constellations. Its main feature is its multiple ignition capability: Vinci® can be re-ignited as often as necessary to place several payloads into orbit during a single mission.

The first flight model of the Vinci engine for the inaugural launch of Ariane 6 is already in integration at the ArianeGroup Vernon site in France, while the ArianeGroup Ottobrunn, Germany site is currently working on the combustion chambers for the Vinci and Vulcain 2.1 engines for the

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launchers scheduled to fly between 2021 and 2023. Following the start of series production of the first 14 launchers on May 6, the entire industrial chain is working to produce the launchers that will fly from the first half of 2021, in accordance with the schedule established with the first customers for Ariane 6. The ArianeGroup Bremen site currently employs around 550 highly qualified people, including about 100 who are working in the building inaugurated today. All manufacturing and integration processes for the upper stages are based on industry 4.0 technologies designed for efficient production at the lowest cost in an environmentally friendly manner.

ArianeGroup's new Future Launcher Integration Concept (FLIC) combines real-time information, networked devices, intelligent planning systems, virtual 3D models, augmented reality, and smart glasses. The aluminum structure of the cryogenic tanks is stripped using the high-precision LST Laser Surface Treatment process, which is considerably more environmentally friendly than the chemical processes used to date. The external thermal insulation of propellant tanks is based on the ETI (External Thermal Insulation) system, a process developed collaboratively by ArianeGroup, ESA, DLR, and other specialized partners, which is unique in the world.

In Bremen, ArianeGroup and MT Aerospace, an OHB subsidiary, work side by side. MT Aerospace manufactures metal structures for hydrogen and oxygen tanks in a building adjacent to the integration hall where ArianeGroup equips and integrates these tanks into the launcher upper stage, together with the Vinci engine and the avionics.

Ariane 6 is an ESA program. ArianeGroup is design authority and lead contractor for launcher development and operations.

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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.
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