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DRDO carries out successful flight trial of Autonomous Flying Wing Technology Demonstrator, an indigenous high-speed flying-wing UAV

India joins elite club of countries to have mastered the controls for flying wing technology in tailless configuration

Defence Research and Development Organisation (DRDO) has successfully carried out a flight trial of Autonomous Flying Wing Technology Demonstrator, an indigenous high-speed flying-wing Unmanned Aerial Vehicle (UAV) from the Aeronautical Test Range, Chitradurga in Karnataka. The successful flying demonstration of this autonomous stealth UAV is a testimony to maturity in the technology readiness levels in the country. With this flight in the tailless configuration, India has joined the elite club of countries to have mastered the controls for the flying wing technology.



This UAV is designed and developed by DRDO's Aeronautical Development Establishment. The maiden flight of this aircraft was demonstrated in July 2022, followed by six flight trials in various developmental configurations using two in-house manufactured prototypes. These flight-tests led to achievements in development of robust aerodynamic and control system; integrated real-time and hardware-in-loop simulation, and state-of-the-art Ground Control Station. The team had optimised the avionic systems, integration and flight operations towards the successful seventh flight in final configuration.

The aircraft prototype, with a complex arrowhead wing platform, is designed and manufactured with light-weight carbon prepreg composite material developed indigenously. Also, the composite structure, impregnated with fibre interrogators for health monitoring, is a showcase of 'Aatmanirbharta' in the aerospace technology. The autonomous landing of this high-speed UAV, without the need for ground radars/infrastructure/pilot, showcased a unique capability demonstration, allowing take-off and landing from any runway with surveyed coordinates. This was possible using onboard sensor data fusion with indigenous satellite-based augmentation using GPS Aided GEO Augmented Navigation (GAGAN) receivers to improve the accuracy and integrity of GPS navigation.

Raksha Mantri Shri Rajnath Singh has complimented DRDO, Armed Forces and the Industry for the successful flight trial of the system. He stated that the successful development of such critical technologies indigenously will further strengthen the Armed Forces.

Secretary Department of Defence R&D and Chairman DRDO Dr Samir V Kamat also congratulated the DRDO and the teams associated with this successful flight trial.

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