

The HANSA-3 (NG) Advancing India's Aviation Future



THE HANSA-3 (NG), a next-generation, two-seater trainer aircraft developed by the CSIR-National Aerospace Laboratories (CSIR-NAL) in Bengaluru, is set to transform pilot training in India. Designed to address the growing demand for skilled pilots, this indigenous aircraft aligns with the “Atmanirbhar Bharat” initiative, promoting self-reliance in the aviation sector. Led by Dr Abhay A Pashilkar, Director of CSIR-NAL, the project delivers a modern, cost-effective, and reliable platform for flight training schools, reinforcing India’s ambition to become a global aviation hub.

Innovative Design and Technology

The HANSA-3 (NG) represented a significant advancement over earlier Hansa models. It featured a low-wing design, a composite airframe made of lightweight fibreglass and carbon fibre, and a bubble canopy that provided excellent visibility for both the pilot and instructor. The aircraft’s glass cockpit included two Primary Flight Displays (PFDs) and a Central Digital Engine Display unit, offering a modern digital interface for real-time flight data. Electrically operated flaps and an advanced electronic fuel injection system ensured smooth handling and optimal performance at various altitudes. With dual controls, the HANSA-3 (NG) was ideal for ab-initio training, allowing instructors to guide trainees effectively.

Durability and Versatility

The composite airframe offered corrosion resistance, damage tolerance, and ease of repair, making the aircraft rugged enough to withstand frequent training flights while reducing maintenance costs for flying clubs. Dr Pashilkar highlighted the aircraft’s affordability, noting that over its lifecycle, the HANSA-3 (NG) would cost significantly less than comparable imported planes, making it an attractive option for Indian institutions. Beyond pilot training, the aircraft’s versatility allowed it to be used for surveillance, aerial photography, and environmental monitoring, broadening its utility in the aviation sector.