

# 50 Years of National Aerospace Laboratories



Hansa.

**N**ational Aerospace Laboratories (NAL), India's premier aerospace research body and a constituent of Council of Scientific and Industrial Research (CSIR), is celebrating its Golden Jubilee. It was instituted on 1 June 1959 in Delhi and moved to Bangalore soon after, nine months later and set up its first offices in the stables of the Mysore Maharaja's Palace on the Jayamahala Road!

Originally the National Aeronautical Laboratory, it was renamed National Aerospace Laboratories in April 1993, with its growing involvement in India's space programme. NAL's primary mandate is to develop aerospace technologies, design and build small and medium-size civil aircraft and support all national aerospace programmes. NAL also houses sophisticated test facilities for aerospace technologies, the best in the country and comparable to those abroad.

Some of NAL's contributions lie in advanced carbon fibre composite airframe components and flight control laws design for India's prestigious LCA Tejas programme, aero elastic testing of launch vehicle models, high speed wind tunnel model design and testing for all aeronautical organisations, acoustic



Saras.

testing of satellites, sunshield mirrors for satellites, full scale fatigue testing of fighter aircraft for usable life extension, high speed combustor design and related test facilities for hypersonic vehicles, failure analysis and accident investigation for airlines, defence services and design organisations, ground based radomes for whether radars, and airborne radomes for aircraft, runway visibility assessor for airports etc.

NAL's achievement in civil aeronautics is well known. A dozen Hansa, the two-seat, all composite (first in India) trainers are flying in a number of flying clubs, recently two being placed with the Chennai Flying Club. Two prototypes of the Saras 14-seat multi-role light transport aircraft are currently aiding flight certification, and a third weight optimised Production Standard Aircraft is under manufacture and is expected to fly soon. The aircraft is expected to have full certification by DGCA in mid-2010. The IAF has indicated its intention to procure 15 Saras (with possibly more later) for its operational use.



NAL's proposed Regional Transport Aircraft (RTA)



Dr. AR Upadhyaya, Director NAL.