



**National Aerospace Laboratories, Bangalore**  
***- on a Golden Threshold***

**NAL Golden Jubilee Celebration - 6 Jun 2008**  
**Press Release**

National Aerospace Laboratories (NAL), Bangalore, a constituent institution of the Council of Scientific and Industrial Research (CSIR) under the Ministry of Science and Technology, Govt. of India, and a premier aerospace research and technology development organization of the country is all set to enter its Golden Jubilee year. The vision to start NAL was indeed great, as at that time, no major national aerospace programmes were being considered. Started as the National Aeronautical Laboratory in June 1959 in New Delhi, NAL was shifted to Bangalore in March 1960 and started its operations in the Bangalore Palace Campus. Today, its activities and facilities are spread over three campuses located on the Airport Road and behind the HAL Airport. In 1993 it was renamed "National Aerospace Laboratories" to reflect its multidisciplinary contributions to aeronautics and space sectors.

Over the years, NAL has built up a high degree of competence in almost the entire range of aerospace disciplines. To mention a few, high speed aerodynamic testing, turbo machinery and advanced combustion, weather prediction codes, flight mechanics and control law development, development of fibres and prepregs, advanced techniques for composite fabrication, new materials and processing, surface modification technologies, failure analysis and accident investigation. This knowledgebase has contributed to all the national aerospace programmes and also received international recognition. NAL has also built and is operating very sophisticated test facilities which are unique in the country and are comparable to those abroad. Prominent among these are the National Aerodynamic Test Facilities (NTAF), The Full Scale Fatigue Test Facility (FSFT), The NAL-ISRO Acoustic Test Facility (ATF), Engineer-in Loop Simulator (EILS), Turbomachinery and Combustion Test Rigs, Composite Fabrication Facilities and 128 - node Parallel Computer system.

In the early years, NAL took up a large number of R&D programmes and completed them successfully. As the country initiated major programmes in the sector, NAL's expertise enabled it to contribute to all of them either through development of new technologies or upgrading the available ones. The beneficiary programmes included the Tejas-Light Combat Aircraft, the Space Launch Vehicle and Satellite programmes of ISRO, the Kaveri engine programme, the Integrated Guided Missile Development programme, aircraft and helicopter programmes of HAL and strategic programmes of DRDO. Many programmes of IAF including Aircraft and Helicopter Life Extension and In-Flight measurement programmes have received value added inputs from NAL.

Of late, a large number of international agencies including aerospace giants have been discussing with NAL on possible collaborative projects.

In recent years, NAL has been spearheading India's nascent civil aircraft development programmes and has made great strides in reaching its ambitious goals. An all composite trainer aircraft, HANSA, is fully certified and many are being used by the

Indian flying clubs to train future pilots. It is expected to receive international certification and break into the overseas skies in the near future. Two prototypes of SARAS, a 14-seater multi-role light transport aircraft, designed by NAL are under flight testing and the certification is expected by 2010. NAL is being supported in these efforts by ASTE / IAF, DGCA, ADA, HAL and a number of organizations. A 5-seater general aviation aircraft is being designed, for the first time in partnership with a private industry, M/s Mahindra Plexion Pvt Ltd and preliminary studies on the development of a 70-seater Regional Transport Aircraft has recently been initiated.

NAL has also utilized its high technology expertise to generate spin off technologies in the non-conventional energy and fuel economy areas. These have added to the societal value of NAL's contributions. For over three decades now, NAL has also been contributing to popularizing science in the Kannada language through many activities including the publication of "KANAADA", a Kannada Science journal.

However, the best contribution of NAL to the nation is strategic in nature and includes overcoming the problems faced due to the denial of technology and those due to sanctions imposed by foreign governments. NAL has risen to the occasion and developed alternates in many situations. This has also enhanced the bargaining position of the country when technology imports are unavoidable.

NAL is the only aerospace organization in the civilian sector in the country with full spectrum of activities covering R&D, technology development, testing and analysis, design, development and certification of full aircraft, limited production, marketing and product support. In spite of many challenging problems, NAL has charted out an ambitious plan for its future programmes and is looking forward to the excitement of completing them.

NAL has been able to reach its present stature and achieve all the above due to confidence and support received from CSIR, our Head Quarters and the vision of its founding Director, Dr. P. Nilakantan, the inspiring leadership provided by his illustrious successors, support from user institutions of its outputs and its team of dedicated staff members – both past and present.

As part of the Golden Jubilee Celebrations, NAL is planning a number of S&T events including international/national conferences and seminars. The Celebrations will be flagged off at a special function on the 6<sup>th</sup> June 2008 by the Director General of CSIR, Prof S.K.Brahmachari. The function will be presided over by Dr. S.R.Valluri, former Director of NAL.