

CSIR Foundation Day

CSIR Foundation Day in NAL is always eagerly awaited. It brings in interesting and illuminating lectures from the best personalities in the area of Indian aerospace. On 26 September 2001, S R Valluri Auditorium was packed to its capacity with eager audience.

Dr R V Krishnan welcomed the gathering with a brief introduction of the day's speakers, Mr R V Perumal, Associate Director-Projects, Vikram Sarabhai Space Centre, Thiruvananthapuram and Dr Ranjan Moodithaya, Head, Acoustic Test Facility (ATF), NAL. He pointed out that the two significant events this year in the field of aerospace are the maiden flight of LCA early this year and the launch of GSLV later. He said that Mr Perumal and his team converted an aborted launch into a successful launch in a shortest possible time. While introducing Dr Ranjan, he said Acoustic Test Facility goes hand in hand with space programme.

Mr Perumal, in his opening remarks in the CSIR Foundation Day Lecture, opined that there are three developments in the area of Indian engineering. He added the third one to what Dr Krishnan had already mentioned, was indigenous Indica car. He said, "of the three, GSLV had certain advantage of heritage - SLV, ASLV and PSLV. Each of them, a milestone in their respective field demonstrating the capability in Indian engineering and technology, which had unfortunately not catching the imagination of Indian business men earlier to that".

Dr Perumal treated the audience to a wonderful ringside view with his introduction to GSLV, description of certain systems, flight performance of GSLV on 18 April 2001. He said "SLV and ASLV were technology demonstrators, where we were trying to learn and probably lose our fear in the area of designing and developing launch vehicles. PSLV and GSLV are truly the operational vehicles developed by ISRO."

He said that, in NAL, ISRO has done 400 blow downs in 1.2 meter and 450 blow downs in 0.6 meter wind tunnels and similar number of blow downs in Russia; 15 tests in ATF of NAL.

He gave a dramatic account of millisecond countdowns at the time of launching, "what you saw on 28 March, abort command due to a short fall in the performance of one L-40 was issued before 100 milliseconds of the actual take off" he said. Talking about the future space programme he said "India has the capability to launch and is offering in coming days commercial service. We do hope that we will make success of the commercial program-mes so that we get back some of the investments made over the last 30 years or so in the Indian space programme". The audience, coming back from the world of launch vehicles and satellites, gave a thunderous applause. It is truly a great moment when one feels proud of Indian scientists and being Indian.

We know Dr Ranjan as an accomplished scientist, but a business lecture from him, we did not expect. But what do you call his lecture when ATF, which is bringing in crores of rupees of revenue to the organisation? So his lecture is aptly called business lecture.

Dr Ranjan briefly traced the history of ATF, which started on 26 February 1986 and completed 1800 blow downs, more than 80 systems and earned more than 12 crores revenue. He said tests were conducted both on launch vehicles and spacecrafts. He said "other than tests, we have also done indigenisation, and by the way of indigenisation we have cancelled orders worth of almost 36,000 dollars. They were held up, thanks to the sanctions. We could cancel and save that much. Using spin off technology, we were able to export items worth of 60,000 dollars, and we hope to do more."

He pointed out that the design of ATF is totally indigenous and one of the best facilities in the world. He said this is not only his assessment but vouched by Chief of the European Test Facility and the Chief of Russian Test Facility. "Both uttered the similar words-I wish I had this facility -that

is possible because of the design which has a 120 ton door and absorption of energy is minimum. We also give post acoustic test support," he said. He added that apart from supporting space programme, testing was done on LCA canopy ejection. He said that they cancelled the order for a calibrator of 25 years old design and built a better one and also exported to Westinghouse and Lockheed, which reported to be working flawlessly. He attributed the success mainly due to the teamwork. "Never his work, it is our work" he said. Now we know the secret behind the successful and lasting partnership of ATF and Indian space programme. "It is one single team".

Dr B R Pai, Head, Propulsion Division, NAL, in his presidential address commented on the two "delightful lectures". He said "this is the great achievement for the Indian engineering and Indian scientists and we hope that by next August we will have a completely successful launch of GSLV".

Responding to Dr Ranjan's business lecture he said, "we only heard the noise, but we know that it is the noise with a purpose, it is earning good revenue for the laboratory with this facility. I always admire the Indian space programme which has been beautifully structured and since 1960s they have several parallel programs in various fields like launch vehicles, satellite development and they are always meeting the country's needs". He said that NAL has been closely associated with ISRO right from its inception, Wind Tunnel Centre of NAL has provided tremendous amount information for the programme, Surface Engineering Division of NAL has also provided key technologies for coatings and special optical surfaces for the programme and some tests were also done in Propulsion. He concluded his speech with a vision for the future "we will continue our efforts in cooperating with ISRO and I hope this partnership will lead the country to greater heights".

As customary, Mr Samuel, COA, read out the awards for meritorious students and outstanding sports-persons for the children of NAL employees and the awards were given by Mr Perumal.

Mr M R Narasimhaswamy expertly compered the programme in his inimitable style and also he proposed the vote of thanks.

K Anantha Rao