N.1: RRCAT celebrated 27th foundation day

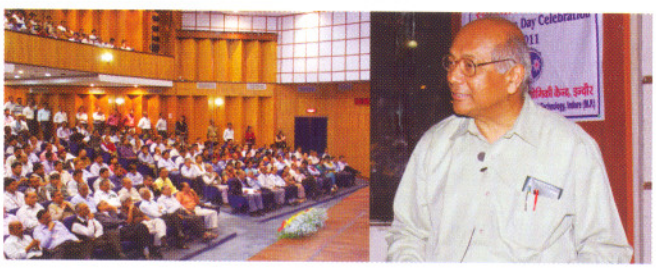
RRCAT celebrated its 27th foundation day on Thursday 24th February 2011. Dr. Srikumar Banerjee, Chairman, Atomic Energy Commission (AEC) and Secretary, Department of Atomic Energy (DAE) was the chief guest and Dr. P D Gupta, Director, RRCAT presided over the function. The programme was started with a welcome address by Dr. P K Gupta, Head, Laser Materials Development & Devices Division and Laser Bio-medical Application & Instrumentation Division.

Dr. P D Gupta, Director RRCAT welcoming Chief Guest Dr. S Banerjee, Chairman AEC & Secretary DAE during RRCAT foundation day celebration.

Following the enriched tradition of foundation day celebration, Dr. P D Gupta presented an overview of the scientific activities of the centre and highlighted the important achievements made during the last year. He informed that Indus-1, the 450 MeV Synchrotron Radiation Source (SRS) had been operated round the clock for over 3,800 hours during the last one year. He expressed his satisfaction of the operation of five beam lines in Indus-1 and appreciated the contribution of the teams involved. He further informed that Indus-2 had been operational from February 2010 at 2 GeV, 100 mA. Three beam lines are already commissioned at Indus-2 and a total operational time of around 2,400 hours during the last one year is achieved. Five more beam lines are under commissioning. Efforts are being made to develop 60 kW Solid State amplifiers to reduce the dependency on imported Klystrons.

Dr. Gupta praised the joint development activities of Proton accelerator and Super conducting Radio frequency cavity by RRCAT and Inter-University Accelerator Centre (IUAC) New Delhi. He informed that the performance of these developed cavities was evaluated at the test facility, Fermilab USA and an accelerating gradient of 23 MV/m was witnessed. He also described the recent contributions of RRCAT to the European Organization for Nuclear Research (CERN), Geneva towards their novel accelerator development program by supplying a Solid State Amplifier. Dr. Gupta congratulated the scientists and staff for the successful development of India's first indigenously built Helium liquefier with liquification rate of 6 liters per hour. He also discussed the highlights of significant advances in the R&D on lasers and their applications in basic research, biomedical applications, materials processing etc. The supply of copper vapour lasers to Bhabha Atomic Research Centre (BARC) was also briefed. He briefed the development of industrial model of 10 kW Nd:YAG laser and the progress made in laser driven electron acceleration using 10 TW Ti-sapphire laser. He discussed about the development of laser based important diagnostic facilities for biomedical applications, like- diagnosis of oral cavity, use of optical coherence tomography, defects in embryos due to ethanol toxicity. He reiterated with pride that the lasers developed at RRCAT are playing an important role in the maintenance of nuclear power plants and replacement of faulty components. He indicated satisfaction on the development of necessary infrastructure including the computer network and power conditioning for Indus-2. He extended the credit of success in these activities to all supporting divisions/sections including purchase, stores, security, accounts and administration.

Dr. P D Gupta, Director RRCAT presenting the overview of centre's activities to the gathering during RRCAT foundation day celebration.



Dr. S Banerjee, Chairman AEC & Secretary DAE, addressing the gathering during RRCAT foundation day celebration

In his chief guest address, Dr. S. Banerjee congratulated the scientists, engineers and the supporting staff of RRCAT and expressed his happiness over the progress made in the areas of lasers and accelerators. He presented a talk titled, "DAE Culture", describing the evolution of DAE culture

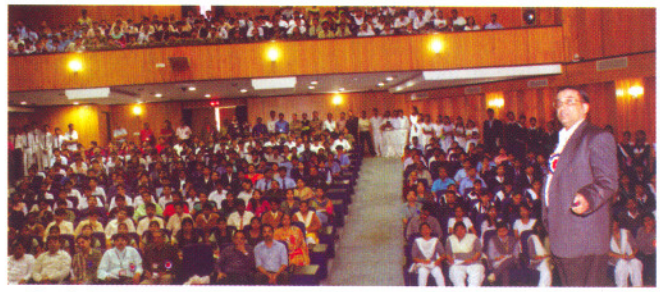
passing through different phases of development. He admired the evolved diversified DAE culture for in-built patience, perseverance, resilience and mutual appreciation. He informed that realistic planning; continuous involvement and follow up; strict adherence to time schedules; foreseeing obstacles and remedial measures are the keys to success in DAE projects. Inspiring the members of system operation and maintenance, he explained that these activities have key-role in programme deliverables. Though the work demands discipline and tasks are repetitive in nature, there is a wide scope of innovations. He advised the research groups to avoid fashionable research and to focus on the activities linked with the DAE mandates. Explaining the importance of all activities, he told that every pixel in the picture has its own importance and the wrong placement of single pixel is enough to distort the whole picture.

Dr. S C Mehandale, Head, Laser Physics Applications Division proposed the vote of thanks. The foundation day programme was anchored by Dr. S M Oak, Head Solid State Laser Division.

N.2: National Science Day at RRCAT

National Science Day is celebrated every year on the last Saturday of February at Raja Ramanna Centre for Advanced Technology, Indore. This year, it was celebrated on 26 February, 2011. More than 1350 students and teachers of 103 schools and colleges from Indore and nearby area visited the scientific facilities at RRCAT. The programme was started with the welcome speech by Shri H S Vora, Convener, National Science Day-2011 (NSD-2011). Shri Vora invited Dr. P D Gupta, Director RRCAT for the inauguration of NSD-2011 and to address the gathering. In his address, Dr. Gupta informed that the National Science Day is celebrated to commemorate the path-breaking discovery of Raman effect which led to the winning of Nobel Prize by Prof. C.V. Raman. Dr. Gupta highlighted several inspirational aspects of Prof. Raman's personality and life-style besides his scientific contributions. Dr. Gupta also discussed the growth of Indian science in the last few decades and the contributions of the Department of Atomic Energy in the enhancement of science and technology capabilities of our country. He also gave an overview of laser and accelerator activities at RRCAT and explained several applications. His simple and easy to understand explanations stimulated all the students and teachers towards the science. He also briefed the prospects of scientific research as a career to the students. Shri Sanjay Chouksey, Co-Convener, NSD-2011 proposed vote of thanks.

RRCAT volunteers escorted the students to various laboratories in small groups. There were about 75 exhibits/posters/ presentations in 12 buildings to explain the scientific and technical activities of the centre. The students



Dr. P D Gupta, Director RRCAT addressing the students and teachers during National Science Day Celebration

and teachers were very much impressed by the interesting exhibits. Students visited Synchrotron Radiation Sources (SRS) : Indus-1 and Indus-2, laser laboratories, cryogenic laboratory, workshop and various other laboratories. Snacks and lunch were arranged to all the students and accompanying faculties. The laboratories were kept open for family members of RRCAT employees to visit and see the on-going activities.

Students visiting Indus-2 during National Science Day Celebration

This yearly effort brought an enthusiastic approach among the students. They admired the scientific activities being pursued by DAE in general and RRCAT in particular.

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N.3: Interaction Meet on Utilization of Laser Technology in Industry & Medicine at RRCAT

A two-day interaction meet on utilization of lasers in industry and medicine was organized during 28th - 29th April 2011 at Raja Ramanna Centre for Advanced Technology, Indore. The meet, organized by Indian Laser Association (ILA) in association with RRCAT, was a part of the celebrations to mark 50 years of invention of laser. The motive of this meet was to foster interaction between academic/research institutions of the country and Indian industry. The prime objective of the meet was to showcase indigenous technologies developed in the area of the industrial and medical applications of lasers in major academic and