

## **N.1: Celebration of RRCAT Foundation Day**

RRCAT celebrated its 35<sup>th</sup> Foundation Day on Monday, 19<sup>th</sup> February 2018. Dr. A. K. Bhaduri, Director, Indira Gandhi Centre for Atomic Research, Kalpakkam, Tamilnadu, was the Chief Guest of the function. Dr. P. A. Naik, Director, RRCAT, presided over the function. Shri S. C. Joshi, Director, Proton Accelerator Group, delivered the welcome address and introduced the Chief Guest to the audience.

Dr. P. A. Naik presented an overview of the scientific activities of the Centre and highlighted the important accomplishments of the past one year. He informed that the indigenously developed Indus National Facility is extensively used by researchers from about 140 institutes all over the country and 765 user experiments were conducted in 2017. He mentioned about the contributions of Indus Facility towards Mars Orbital Mission. He also informed about the progress of the indigenously developed Infrared Free Electron Laser for materials science studies and 10 MeV industrial electron linac for irradiation of agricultural and pharmaceutical products. A 5-cell niobium superconducting radio frequency cavity has been fabricated, processed and tested in RRCAT for the first time and achieved the design field gradient of 18 MV/m. This is being pursued under the Indian Institute Fermilab Collaboration (IIFC). This is an essential technological breakthrough for Indian Spallation Neutron Source program. Laser systems developed at RRCAT have provided crucial support in the nuclear reactor maintenance. Low-cost compact laser based diagnostic instruments like Tuberculosiscope and Oncodiagnoscope have been developed for screening large population for TB and oral cancer. RRCAT is also embarking on new major project like the Laser Interferometer Gravitational Wave Observatory (LIGO). The Centre also plays its part in developing skilled manpower within the country by running several courses for students, including M. Tech. and Ph.D. programmes.

Dr. A.K. Bhaduri, who himself has done excellent work on welding of austenitic stainless steel and ferritic steel as well as hard facing applications for the fast reactor program,

delivered an erudite talk on the development of important materials and fabrication techniques for the fast breeder reactor program. These developments are essential for long term security and sustainability of the 3-stage nuclear programme of India. The talk enthralled the 700 strong audiences of scientists, engineers and distinguished guests from universities and other institutes. The program concluded with vote of thanks delivered by Dr. S.B. Roy, Director, Materials Science Group. The programme was conducted by Shri S. V. Nakhe, Director, Laser Group.



*Chief Guest, Dr. A. K. Bhaduri delivering his talk.*



*Dr. P. A. Naik, Director, RRCAT presenting memento to the Chief Guest, Dr. A. K. Bhaduri.*

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*Director, RRCAT presenting an overview of the scientific activities of the Centre.*