

## Padma Shri Award for Shri Sekhar Basu, Director, BARC



Shri Sekhar Basu is a renowned nuclear scientist. He worked as Project Director of the Nuclear Submarine Programme and as Chief Executive of the Nuclear Recycle Board at BARC, before taking over as Director, BARC in 2012. Shri Basu is an Engineer of exceptional ability who has played a lead role in multiple areas of nuclear science and engineering and is a major contributor in establishing India as a leader in nuclear field.

Shri Basu was born on 20<sup>th</sup> September 1952 and did his schooling from Ballygunge Government School, Kolkata.

Later he graduated in Mechanical Engineering from Veermata Jijabai Technological Institute (VJTI), University of Mumbai in 1974. After completion of the one year BARC Training School programme in nuclear science and engineering, he joined the Reactor Engineering Division in 1975. He started his career by designing fuel for Boiling Water Reactor, which showed excellent performance. Later he took up the responsibility for the development of the nuclear submarine propulsion plant and built the land-based prototype at Kalpakkam from scratch. He continues to guide the Indian nuclear propulsion programme for the sea going versions. Since 2000, he is also responsible for the design, development, construction and operation of nuclear recycle plants at Tarapur and Kalpakkam. These plants are performing to international standards. Shri Basu is pursuing the design of the Integrated Nuclear Recycle Plant, which will take the nuclear waste management programme to a greater height.

As Chairman of the Project Management Board, he is responsible for the development of the Indian Neutrino Observatory at Tamil Nadu and as Apex Project Co-ordinator, he is spearheading the development of the 1 GeV Superconducting Accelerator for the Accelerator Driven System Programme. Shri Basu is also guiding the establishment of a nuclear fuel cycle park involving research reactors and fuel fabrication & reprocessing facilities at the BARC Vizag campus. Work on the design of Indian Pressurised Water Reactor has also been initiated by him.

As Director, BARC, Shri Basu has taken special initiatives for major expansion in the societal programmes of DAE in the areas of nuclear agriculture, food preservation and nuclear medicine. While pursuing basic research in the field of nuclear science and engineering, he is also working towards the expansion of enrichment and strategic programmes. He represented India in concluding 'Arrangements and Procedures' with the US Government for reprocessing of US hypothecated fuel and has chaired the International Committee for the design review of some modules for the International Thermonuclear Experimental Reactor (ITER) programme.

Shri Basu has several publications to his credit in national and international journals. He has been conferred the Indian Nuclear Society Award 2002 and DAE Awards in 2006 and 2007. He is a Fellow of the Indian National Academy of Engineers (INAE) and the Indian Society for Non Destructive Testing (ISNT). Jadavpur University, Kolkata awarded him the DLit (Honoris Causa) degree in 2013. He was awarded Padma Shri by the Government of India and this award was conferred on him by the President of India at Rashtrapathi Bhavan, New Delhi, on 31<sup>st</sup> March 2014.

## Padma Shri Award for Dr. R.B. Grover, Director, HBNI



Dr. Ravi Bhushan Grover is Director, Homi Bhabha National Institute and occupies Homi Bhabha Chair instituted by the Department of Atomic Energy (DAE). He is a Member of the Atomic Energy Commission, the Board of Research in Nuclear Sciences and the DAE Research Council. He has been the sous-Sherpa of the Government of India for the Nuclear Security Summit process since 2009. He has been leading India's delegation to ITER Council since its inception. He is a Fellow of the Indian National Academy of Engineering (INAE) and also of the World Academy of Art and Science.

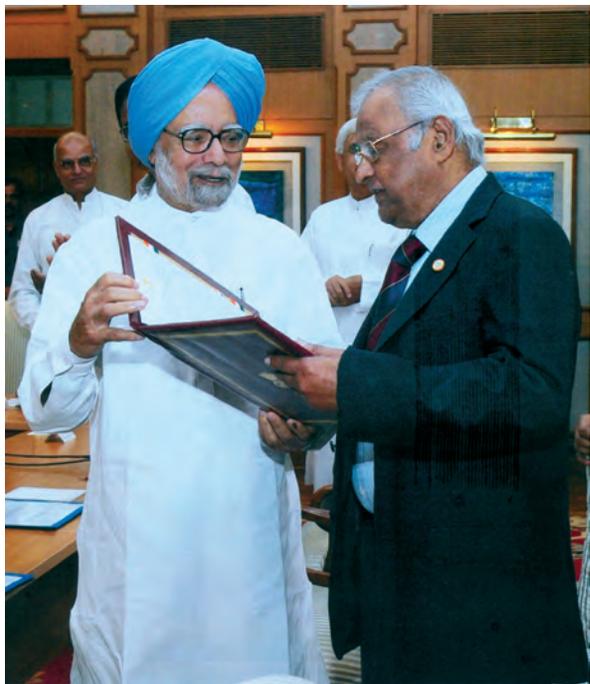
Born on 17th Feb., 1949, Dr. Grover studied mechanical engineering at Delhi School of Engineering, Delhi University and nuclear engineering at BARC Training School. He joined Bhabha Atomic Research Centre (BARC) in 1971 and up to 1996 worked as a nuclear engineer specializing in reactor thermal hydraulics. In parallel, in 1982, he received a PhD in the faculty of engineering at Indian Institute of Science, Bangalore. Post 1996, he worked in various capacities in BARC including as Head of the newly established Technology Transfer & Collaboration Division; and Director, Knowledge Management Group. He was Head of the Strategic Planning Group, DAE since its setting up in December 2000 until his superannuation on 28th February 2013. He was Principal Adviser, DAE (in the rank of Secretary

to Government of India) from October, 2010 to February 2013. He was involved in conceptualizing the setting up of HBNI, a deemed to be university under the Department of Atomic Energy and was nominated its Founder Director in June 2005.

Dr. Grover was responsible for core and fuel thermal hydraulics, and safety analysis of the research reactor-Dhruva- a first such job in India. He did similar work also process design of systems and equipment for a compact light water reactor. In 2004, Dr. Grover completed formulation of a scenario for growth of electricity demand for the next five decades, first such long-term forecast in India.

Besides distinguishing himself as an engineer, Dr. Grover played a maximum role in all steps taken by the Government of India towards opening international civil nuclear trade. This involved negotiations with professionals from many advanced countries and International Atomic Energy Agency. He was part of the team involved in outreach with member-countries of the Nuclear Suppliers Group (NSG) which led to NSG amending its guidelines facilitating international civil nuclear trade with India.

Dr. Grover was bestowed with Lifetime Achievement Award of the DAE on 15 January 2013. Other awards won by him include Distinguished Alumnus Award by Indian Institute of Science and Indian Institute of Science Alumni Association in 2011; Distinguished Alumnus Award by Delhi College of Engineering Alumni Association in 2009; Dhirubai Ambani Oration Award by Indian Institute of Chemical Engineers in 2008; and Indian Nuclear Society Award-2006 for Nuclear Reactor Technology, including Nuclear Safety. He was President of the Indian Society of Heat and Mass Transfer for the period 2010-2013. During a career spanning four decades, Dr. Grover has distinguished himself as an academic, research and development engineer, a science administrator and a nuclear diplomat.



## Exceptional Service Award

Dr. V.V. Kulkarni, Project Director (New Technologies), BARC, was honoured with the Exceptional Service Award by the Prime Minister of India on 24th April, 2014.

His citation reads, "On behalf of the Prime Minister of India, I commend Dr. V.V. Kulkarni, Project Director (New Technologies), BARC for his exceptional service to the nation. Over the last five decades, Dr. Kulkarni has worked with exemplary commitment, resolve and a sense of duty, often at considerable personal sacrifice, in one of the most complex and challenging areas of Science and Technology. Through his excellence in scientific research, project management and systems development, he has played a vital role in a national mission of critical importance.

The nation is proud of Dr. Kulkarni's enormous and unique achievements and expresses its deepest gratitude for his lifelong service".

- Name of the Scientist : **Dr. S.M. Yusuf, SSPD**  
 Name of the Award : P.K. IYENGAR MEMORIAL AWARD for excellence in Experimental Physics (2012)  
 Instituted by : Indian Physics Association, The award was present on 11<sup>th</sup> April 2014.
- Name of the Scientists : **Sudhir Kumar, D. Datta\*, S.D. Sharma, G. Chourasiya and D. A. R. Babu**  
 Affiliation : Radiological Physics & Advisory Division, \*Health Physics Division, BARC  
 Name of Award : Best oral paper award of Association of Medical Physicists of India  
 Title of the Paper : "Estimation of distance error by fuzzy set theory required for strength determination of HDR <sup>192</sup>Ir brachytherapy sources"  
 Presented at : 34<sup>th</sup> National Conference of Association of Medical Physicist of India (AMPI) held at Saha Institute of Nuclear Physics (SINP), Kolkata during November 13-16, 2013.