



1909-1966

Homi Jehangir Bhabha

THE architect of India's nuclear energy programme, an imaginative administrator with a multi-faceted personality and one of the most outstanding scientists that India has ever produced, Homi Jehangir Bhabha was also an ardent nationalist.

Born in Mumbai on 30 October 1909, Bhabha was educated at the Cathedral and John Cannon High School. Later he entered Elphinstone College and the Royal Institute of Science, Bombay. His parents took a keen interest in shaping Bhabha's love for science. At the age of 15, he had already read Einstein's book on Relativity.

Bhabha loved physics and mathematics, but bowing to his father's wishes he left for Cambridge to study engineering in 1927. He wanted to change to mathematics but his father promised that if he got a first in engineering he would finance further studies in mathematics. He passed the Mechanical Engineering Tripos in the first class in 1930 and then went on to pursue his studies in theoretical physics as a research scholar. Bhabha worked with Pauli in Zurich, Enrico Fermi in Rome and Kramers in Utrecht.



His first scientific paper in 1933 dealing with the part played by electron showers in the absorption of gamma radiation got him the Isaac Newton Fellowship. In 1937, Bhabha along with Heitler presented the 'Cascade Theory of Electron Showers', which is today known as the 'Bhabha-Heitler Cascade Theory'. The theory explained the process of electron showers in cosmic rays.

Bhabha returned to India in 1939 and in 1940 accepted the post of Reader at the Indian Institute of Science, in charge of a special cosmic ray research unit set up for him with money given by the Sir Dorab Tata Trust. In 1941, he was elected a member of the Royal Society and became a Professor in 1942. He even got an offer from the Oxford University but he declined. In his heart he nurtured a desire to build an excellent institution of research in India. It was Bhabha's foresightedness and patriotism that eventually led to the establishment of the Tata Institute of Fundamental Research (TIFR). Today TIFR has grown to be one of the finest research institutes of the world.

Bhabha believed that the only way of overcoming the power supply problem was through the introduction of nuclear power in a phased manner. In 1948, the Atomic Energy Commission was formed and Bhabha was appointed Chairman of the Commission. Due its promise, the Commission's scope of work was enlarged. The Department of Atomic Energy thus came into existence as a separate department of the Government

of India in 1954, under the direct control of Prime Minister Nehru. Bhabha became the Ex-officio Secretary of the Department.

Bhabha also worked hard to set up the Atomic Energy Establishment at Trombay for application of atomic energy to peaceful purposes. On 12 January 1967, the Prime Minister Mrs Indira Gandhi renamed the Trombay Establishment as the Bhabha Atomic Research Centre (BARC).

Bhabha worked to make the country self-reliant in nuclear energy. He stressed that while India needed to draw on the expertise already built up in other countries, her objective must be to exploit her own resources of scientists and technologists and of raw materials. Reactors like Apsara, uranium and zirconium plants, the Van de Graff and cyclotron equipment—were all Bhabha's gifts to the nation. Bhabha was also among the first to advocate the peaceful uses of atomic energy. The crowning success of Bhabha's life-long passion came on 18 May 1974 when India conducted its first nuclear explosion for peaceful purposes, at Pokhran in Rajasthan.

However, Bhabha did not live to see the culmination of his dreams. While he was going to attend an international conference, the Air India Boeing 707 'Kanchenjunga' in which Bhabha was travelling, crashed in a snowstorm on 24 January 1966 at Mont Blanc bringing to a tragic end the life of one of the greatest scientists the Indian soil has given birth to.