MIND'SPARK

News Letter

Department of Mechanical Engineering

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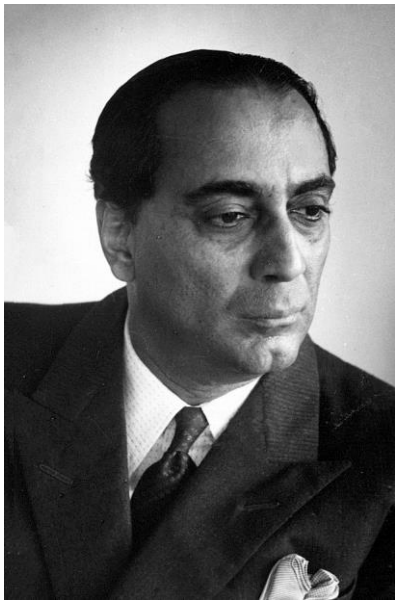

Homi Jehangir Bhabha, (30 Oct 1909 – 24 Jan 1966)

He was an Indian nuclear physicist, founding director, and professor of physics at the Tata Institute of Fundamental Research (TIFR). He is "Father of Indian nuclear programme", he was also the founding director of the Atomic Energy Establishment, Trombay (AEET) which is now named the Bhabha Atomic Research Centre in his honour. TIFR and AEET were the cornerstone of Indian development of nuclear weapons which Bhabha also supervised as director.

Homi Bhabha was awarded the Adams Prize (1942) & Padma Bhushan (1954). He was also nominated for the Nobel Prize for Physics in 1951 & 1953–1956. He attended the Royal Institute of Science in 1927 before joining Caius College of Cambridge University. He obtained a degree in mechanical engineering from Cambridge. He joined the Tata Steel or Tata Steel Mills in Jamshedpur as a metallurgist.

In January 1933, he received his doctorate in nuclear physics after publishing his paper, "The Absorption of Cosmic radiation". The paper offered an explanation of the absorption features and electron shower production in cosmic rays. It helped him win the Isaac Newton Studentship in 1934. He completed his doctoral studies in theoretical physics under Ralph H. Fowler. In 1935, Bhabha published a paper in the Proceedings of the Royal Society, Series A, in which he performed the first

calculation to determine the cross section of electron-positron scattering. Electron-positron scattering was later named Bhabha scattering, in honour of his contributions in the field.

Starting his nuclear physics career in Britain, Bhabha returned to India in September 1939. He accepted a post of reader in physics at the Indian Institute of Science in Bengaluru, headed by Nobel laureate C.V. Raman. Bhabha established the Cosmic Ray Research Unit at the institute & worked on the theory of point particles movement. He independently conducted research on nuclear weapons in 1944. In 1945, he established the Tata Institute of Fundamental Research in Bombay, and the Atomic Energy Commission in 1948, serving as its first chairman.

Bhabha gained international prominence after deriving a correct expression for the probability of scattering positrons by electrons, a process now known as Bhabha scattering. His major contribution included his work on Compton scattering, R-process.

Department of Mechanical Engineering

VISION

To be a reputed centre of excellence in the field of Mechanical Engineering by synergizing innovative technologies and research for the progress of society.

MISSION

M1: To impart quality education by means of state-of-the-art infrastructure.

M2: To involve in training and activities on leadership qualities and social responsibilities.

M3: To inculcate the habit of lifelong learning, practice professional ethics and serve the society.

M4: To establish industry- institute interaction for stakeholder development