



“I am pushing in the device tomorrow, and after that, do not say remove it because I cannot. You cannot tell me to stop”, Dr. Homi Sethna responded with sheer conviction when the then Prime Minister of India, Smt. Indira Gandhi suggested postponing the Pokhran Test in 1974 (Laxman 2010). This operation holds a significant place in history as it marks the success of the nation’s first nuclear bomb test.

Dr. Homi Nusserwanji Sethna who led India into the atomic age lived here in his abode at the Panorama Building in Malabar Hill. He was born to a Parsi family in Mumbai on 24th August 1923. He started as an apprentice in the nuclear field but swiftly evolved into a pioneering figure. From directing the Engineering group at the Atomic Energy establishment at Trombay to leading the Bhabha Atomic Research Centre at a critical juncture, his remarkable career, spanning several decades, is best known for his leadership in 1974 Operation Smiling Buddha in Pokhran.

Dr. Homi earned a bachelor’s degree in science from the University Department of Chemical Technology (UDCT) in Mumbai. He pursued a Masters in Chemical Engineering at the University of Michigan, USA. Performing well in his postgraduate studies, he advanced into an early professional journey in the United Kingdom. The nuclear power industry in the United Kingdom and other Western countries was a direct consequence of European involvement in World War II. The events at Hiroshima and Nagasaki underscored the world’s growing interest in nuclear energy. In 1947, he joined the Imperial Chemical Industries in the United Kingdom as a trainee through the TATA-ICI scheme. During this period, he realised the growing urgency and merit of atomic energy (Parathasarthy 2011, 1245).



Returning to India after intensive training abroad, Dr. Homi got a start to his career in a rather unconventional setting at the Wellington Gymkhana, Haji Ali, a private sports club hosting eminent personalities as its members. It was here that he first crossed paths with Dr. Homi Bhabha (Subramaniam 2010). The next day, he had an offer letter to commence work at the Tata Institute of Fundamental Research, Mumbai, led by Bhabha. In an interview, Sethna fondly regarded Dr. Bhabha as the pillar of the nuclear program and a significant source of inspiration for him (GBH Archives 1987). Under the direction of his idol and alongside his colleague Raja Ramanna, Homi Sethna pursued atomic energy research.

Dr. Homi was appointed the Director of the Engineering group at the Atomic Energy Establishment, Trombay. He supervised the construction of the plutonium plant. Sethna's journey unfolded from the extraction of Rare Earth from monazite-rich beach sands in Alwaye, Kerala, to the production of pure thorium extracts in 1958. He and Homi Bhabha represented India in international forums. He attended the First Geneva Conference on Peaceful Uses of Atomic Energy in 1955. He later assumed the role of Deputy Secretary General in the subsequent session (Parathasarthy 2011, 1245).

In a tragic turn of events, Dr. Homi Bhabha, the face behind India's atomic mission, met his untimely demise. The nation mourned, but the efforts had to continue. Sethna's exceptional capabilities led him to become the Director of the Bhabha Atomic Research Centre (BARC). As a new chapter in India's nuclear saga began to unfold, the death of another esteemed personality came as a setback. Vikram Sarabhai, the father of the Indian Space Programme, passed away at 52 years. Dr. Homi Sethna then took on the substantial responsibility of Chairmanship of the Atomic Energy Commission. His commitment to the atomic programme left a lasting impression.

The support of the Indira Gandhi government to the nuclear scientists culminated in the historic 'Operation Smiling Buddha'. Sethna held the reins of the nuclear test at ground zero. On 18th May 1974, the successful Pokhran test propelled India into the league of nuclear-armed nations in a single attempt. After a momentous triumph, Dr. Homi Sethna sent a coded message to Indira Gandhi saying, "Buddha Is Smiling" (Laxman 2010). Sethna described it as a "peaceful nuclear experiment" (GBH Archives 1987). In an interview, Sethna dedicated this achievement to his mentor, Homi Bhabha.

Dr. Homi was also instrumental in building nuclear reactors, notably Apsara (1969) in Tarapur, Bombay, the first reactor in Asia outside the Soviet Union. Within the next seven years, he and his team committed themselves to establishing three plants at Kota, Madras and Narora. These marked the establishment of India's scientific endeavours within just a few years after gaining independence. Dr. Homi's other assignment was the establishment of India's first Uranium Mill at Jaduguda in 1967. Although the uranium ore quality from the Jaduguda mine was inferior, and the restrictions on importing uranium were not as stringent as they became after 1974, Dr. Homi decided to establish a mine in India despite doubts about its economic feasibility. He spearheaded the production of uranium metal. These successive achievements solidified Sethna's reputation as the architect of India's uranium plants. He designed the plutonium plant, which represented the first major step in India's nuclear power generation program. He was actively involved in setting up the Nehru Centre at Worli, Mumbai, the largest interactive centre in India (Sheth 2013, 1660).

Dr. Homi was the Project Manager of the 40-megawatt natural uranium heavy water moderated research reactor, Canada-India Research US (CIRUS). He was dedicated to organising the entire fuel cycle, especially in atomic minerals exploration. He keenly monitored the progress of the geologists and scientific staff at the Atomic Minerals. The CIRUS reactor continues to be in operation to this day. He made India the 5th country to have a reprocessing plant without any foreign collaboration, which turned out to be the most economical plant in the world (Sethna 1979, 4-7).



After his retirement, Dr. Homi remained a board member for various industrial institutions. He contributed to international science as a member of the New York Academy of Sciences and the International Atomic Energy Agency's scientific advisory committee. He became the first chairman of the Maharashtra Academy of Sciences. He also held key positions in Tata Electric Companies and Tata Sons. His influence extended to prestigious organisations, including the Royal Swedish Academy of Engineering Sciences and the United Nations Scientific Advisory Committee. In 1991, he served as Sheriff of Mumbai. He was a part of the Research Advisory Committee of the Planning Commission in 1998. He also earned accolades such as the Shanti Swarup Bhatnagar Memorial Award and the Sir Walter Puckey Prize (Menon and Subramaniam 2010).

The nation honoured Dr. Homi Sethna with three civilian awards of the highest degrees of honour, the Padma Vibushan, Padma Bhushan and Padma Shri. He passed away due to lung fibrosis on 5th September 2010 in his Walkeshwar residence. His funeral took place in the Parsi Tower of Silence in Malabar Hills. He made India self-reliant in nuclear technology, leaving a lasting impact on the country's scientific journey.



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