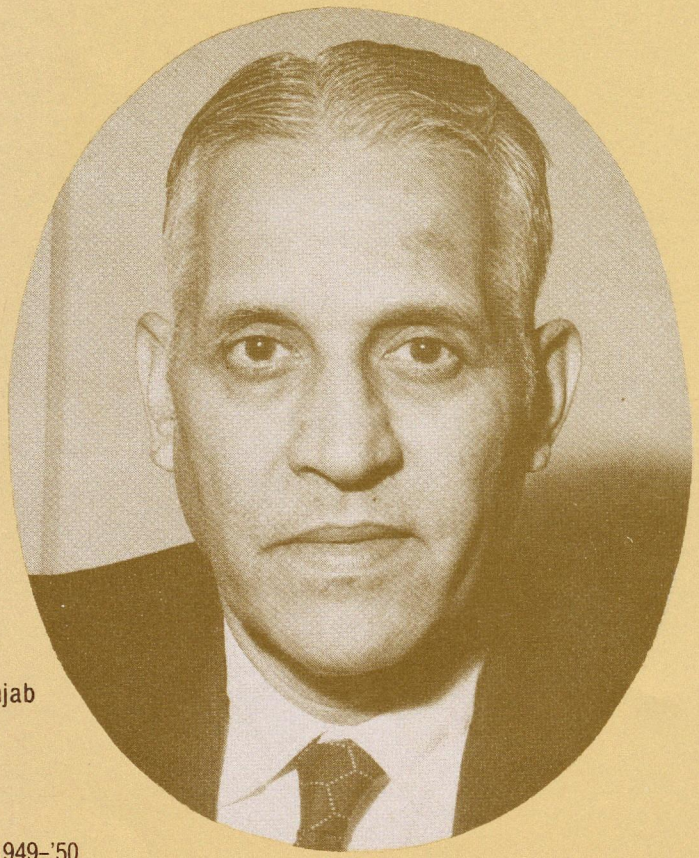
Homage to a Doyen

Dr. Brahm Prakash

A
Commemorative
Tribute

Professor Brahm Prakash



Date of Birth
August 21, 1912
Place of Birth:
Lahore
Expired:
January 3, 1984

ACADEMIC QUALIFICATIONS :

B.Sc. (Hons) in 1933
M.Sc. in 1934
Ph.D. in Physical Chemistry in 1942 (Punjab University)
Sc.D. in Metallurgy in 1949 (MIT. USA)

POSITIONS HELD

Metallurgist in Atomic Energy Commission	— 1949–'50
Professor and Head of Department of Metallurgy at IISc., Bangalore	— 1951–'57
Director, Metallurgy Group (BARC)	— 1957–'72
Project Director, Nuclear Fuel Complex, Hyderabad.	— 1966–'72
Director, Vikram Sarabhai Space Centre	— 1972–'79

Member of Space Commission since its inception in 1972 till his death

Member of Indian Space Research Organisation Council till his death

Member of Board of Directors of Indian Rare Earths Ltd., Bombay

Chairman of Board of Directors of the Uranium Corporation of India.

Chairman of Mishra Dhatu Nigam Ltd. (MIDHANI) till his death.

Member of Board of Directors of Electronics Corporation of India Ltd., Hyderabad.

MEMBERSHIP:

President of the Indian Institute of Metals

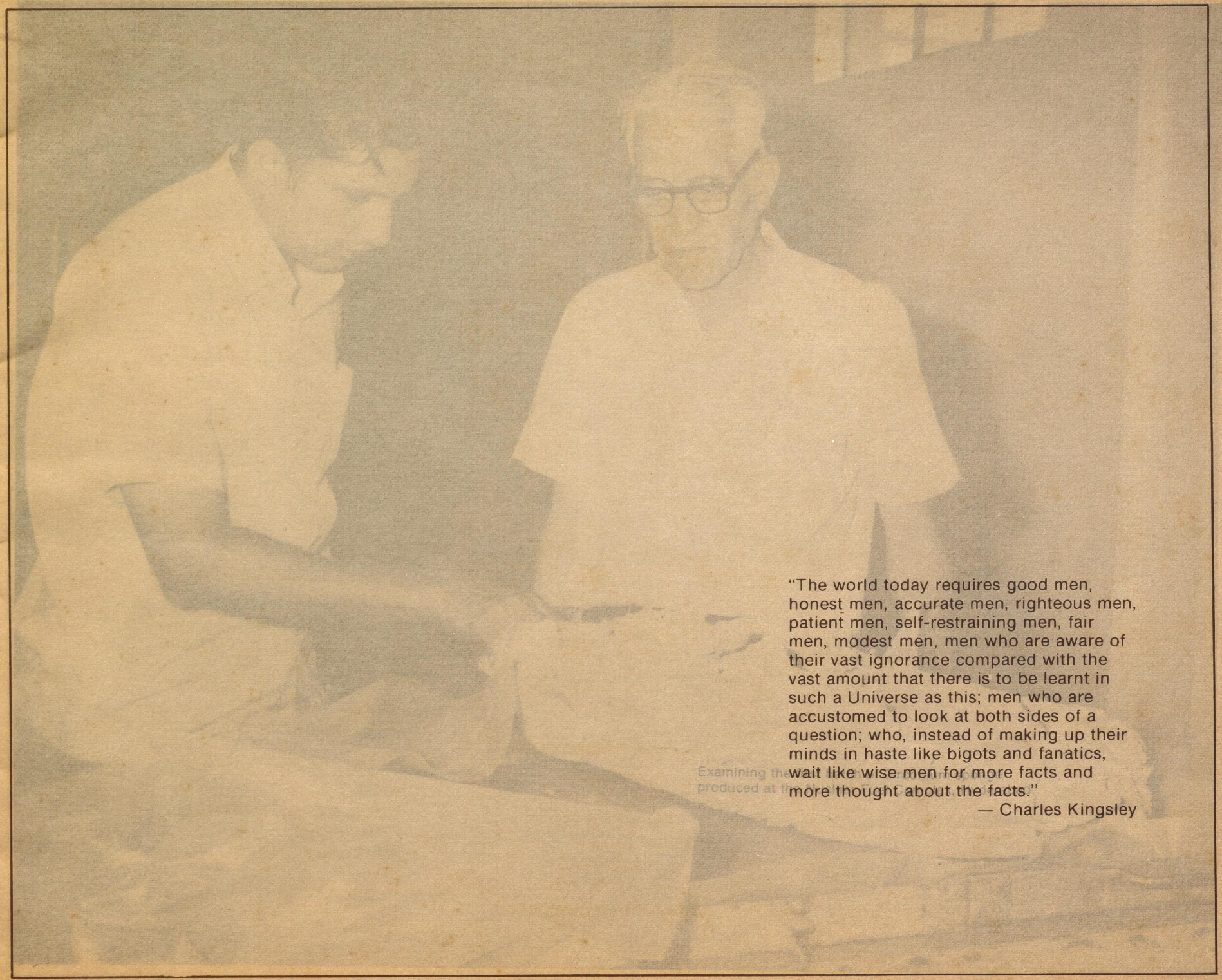
Fellow of Indian National Science Academy

Fellow of Indian Academy of Sciences

Member of American Institute of Mining, Metallurgical and Petroleum Engineers (AIME)

HONOURS/DISTINCTIONS:

Padma Shri	— 1961
Bhatnagar Memorial Award	— 1963
Padma Bhusan	— 1968
Vasvik Award for Metallurgical Science	— 1976
Bhatnagar Memorial Medal of the Indian Academy of Science	— 1979
Bralco Medal of IIM	— 1980



"The world today requires good men, honest men, accurate men, righteous men, patient men, self-restraining men, fair men, modest men, men who are aware of their vast ignorance compared with the vast amount that there is to be learnt in such a Universe as this; men who are accustomed to look at both sides of a question; who, instead of making up their minds in haste like bigots and fanatics, wait like wise men for more facts and more thought about the facts."

— Charles Kingsley

Examining the first batch of Zirconium sponge produced at the Nuclear Fuel Complex, Hyderabad.

Professor Brahm Prakash

A Memoir by C.V. Sundaram

THE glowing tributes that have been paid to the late Professor Brahm Prakash, with spontaneous affection, rich emotion and absolute reverence — by the entire community of scientists & engineers in the country, drawn from all the leading R&D organisations, major public sector undertakings, educational institutions, the Academies and other professional bodies — are some measure of his monumental contributions and their indelible impact on the character and growth of science & engineering activities in our country, over the past three decades. However, to do any justice to the phenomenal content of the life and work of this great Metallurgist and Administrator, and to his total personality as an individual of rare quality, will require a considerable amount of patient research — gathering and collating information and impressions from all available sources, in order to present a complete account for the benefit of posterity. On the occasion of the Memorial Seminar that is being organised on the 72nd anniversary of his birth (August 21, 1912), a beginning has to be made in this direction.

Brahm Prakash had his early research training under Dr. Shanti Swarup Bhatnagar at the University of Punjab in pre-partition Lahore — imbibing from him the inspirations of the twin cultures of science and literature. He obtained his first doctoral degree in physical chemistry in 1942, and was one of the select group of students of distinct promise who were deputed by the Indian Government for advanced academic training in the United States at the end of World War II (1946). His stay at the Massachusetts Institute of Technology provided him the opportunity for a liberal education in metallurgy, under the influence of illustrious professors including John Chipman, Morris Cohen, A.M. Gaudin and Robert Schumann (Jr), and he obtained his Sc. D. specialising in mineral dressing (1949).

Immediately on his return to India, Dr. Brahm Prakash was chosen by Dr. Homi Bhabha for the position of Metallurgist in the Atomic Energy Commission. As the organisation of the Atomic Energy Programme was however still in the earliest stage, Dr. Prakash was posted at the Indian Institute of Science, where he served with distinction as Professor & Head of the Department of Metallurgy (1951-57), at the same time being actively involved in the planning and organisation of the Metallurgy programme for atomic energy development.

While the history of metallurgical education in India dates back to 1923, when the first Department of Metallurgy was established at the Banaras Hindu University, the emphasis in the teaching of metallurgy even in the late 40s was mainly on industrial practice. The credit for formulating a detailed modern curriculum in metallurgy, with a balanced emphasis on the basic science & engineering aspects of chemical, physical and mechanical metallurgy, belongs to Prof. Brahm Prakash. During his tenure at the Indian Institute of Science,I had the opportunity to observe and admire his detailed efforts in introducing the new courses and implementing the teaching programmes in Metallurgical Thermodynamics, General Principles of Extractive Metallurgy & Iron and Steel Making, and Physical Metallurgy of binary & ternary alloy phase diagrams. This period also saw his keen interest in the application of the concepts of thermodynamics in research projects on metal extraction & refining — the programmes of sulpharisation roasting of copper smelter slag,separation of berryllium and aluminium by differential sulpharisation, separation of zirconium and hafnium by vapour phase dechlorination, being some of the illustrative examples. He also took the leading initiative in establishing laboratory facilities for mineral dressing, which were most useful in the early work of the Atomic Minerals Division geologists stationed at Bangalore. In recognition of his professional eminence, Dr. Prakash was selected as one of the 16 Scientific Secretaries for the First United Nations Conference on the

Peaceful Uses of Atomic Energy, held in Geneva in 1955, and the paper presented by him at this Conference on "Separation of hafnium and zirconium by vapour phase dechlorination" was acclaimed as the first original pyro-chemical approach to the important and interesting problem of separating these two very similar elements.

When Dr. Brahm Prakash returned to his assignment in the Atomic Energy Establishment in Bombay in 1957, a nucleus of a metallurgy laboratory had been set up in the office premises of the Department of Atomic Energy at Old Yatch Club, Bombay, the chemistry laboratories were functioning in sheds in the Bombay Dyeing compound at Cadell Road, the construction of the Canada India Reactor was in progress at Trombay, and the decision had been taken that half of the first charge of aluminium clad uranium metal fuel elements for this research reactor will be fabricated in India. His first major responsibility was thus the commissioning of the Fuel Fabrication Facility which was completed in time in 1959. It was a historic moment when the first fuel elements from the Indian production that were flown to Canada for irradiation testing performed even better than the Canadian fuel elements.

The period 1960-72 saw the blossoming of a large number of vital programmes in Trombay. The successful development of the nuclear

Explaining about the Nuclear Fuel Fabrication to Smt. Indira Gandhi while Dr. Vikram A. Sarabhai looks on at Bhabha Atomic Research Centre, Trombay, 1967

metallurgy of zirconium, the establishment of detailed flow sheets for the fabrication and assembly of research and power reactor fuel elements, the harnessing of the sophisticated technology of plutonium fuel, and the detailed planning for the establishment of the Nuclear Fuel Complex at Hyderabad, all belong to this period. The stamp of the leadership of Dr. Brahm Prakash with relentless emphasis on systematic planning and detailed analysis, and meticulous care and insight in assignment and coordination of all the ingredient functions was very evident in the successful implementation of these programmes. The competence and the confidence shown by the various project teams in developing a large range of special materials and components for the atomic energy programme were derived from the excellent and disciplined training that they received.

As an index of the deep trust that was placed by Dr. Bhabha in Dr. Prakash, it may be mentioned that the Metallurgy Group under Dr. Brahm Prakash was the largest Group in Trombay, encompassing not only metallurgy but also programmes in the

Explaining testing of Uranium Ingot to British Royalty at Bhabha Atomic Research Centre, Trombay.

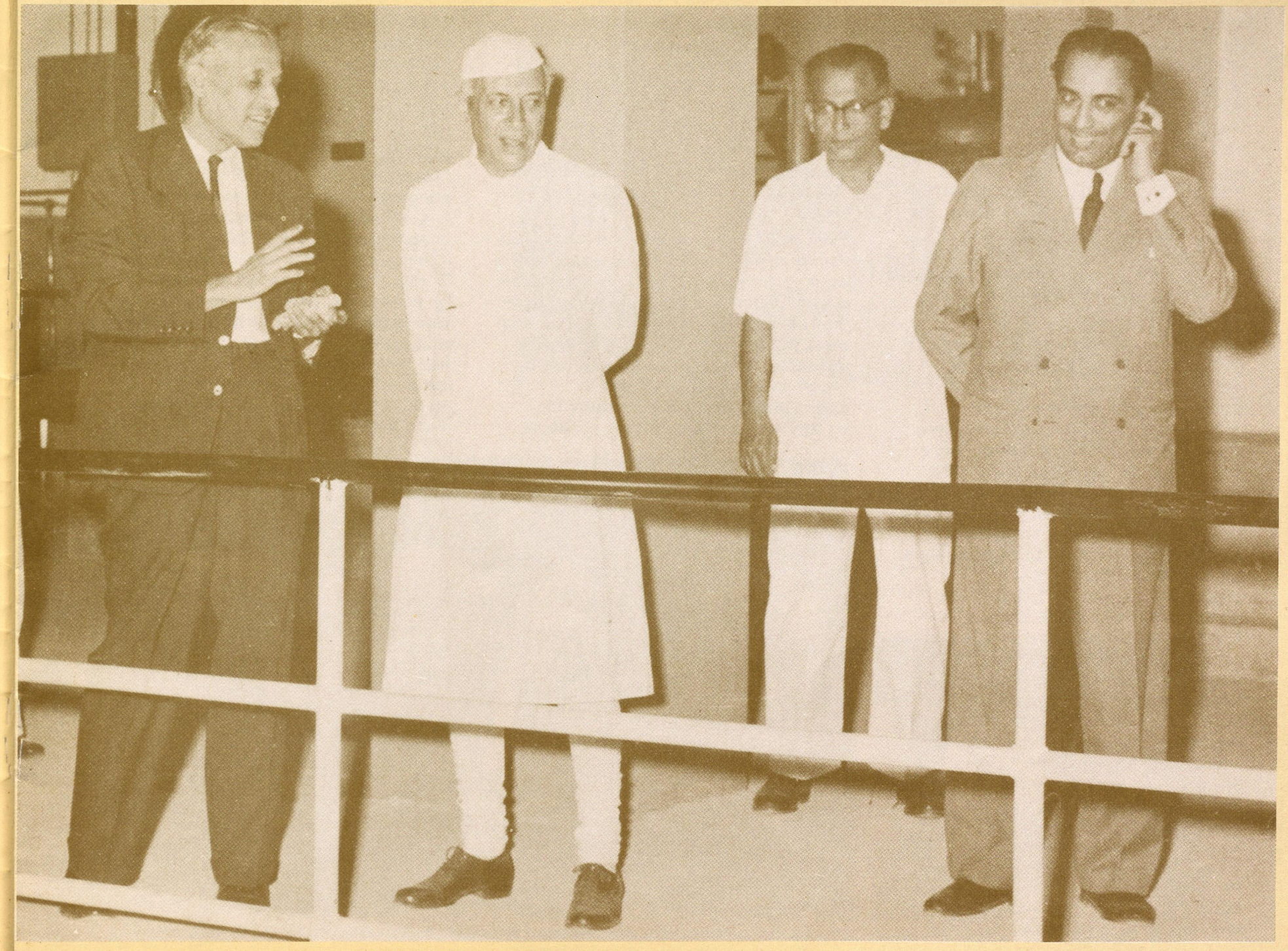
various chemistry disciplines, reactor engineering & operation, isotope production & applications, and even the Engineering Services.

The tragic death of Dr. Homi Bhabha in an air crash on Mont Blanc in January 1966 was a setback to the atomic energy programme, when it was well poised for growth, and it was also a personal loss to Dr. Brahm Prakash. It took some time before the course of progress was resumed under Dr. Vikram Sarabhai, who succeeded Dr. Bhabha as Chairman, Atomic Energy Commission.

Dr. Sarabhai again was quick to respond to the gentle personality of Dr. Prakash, and to recognise his unique qualities and abilities as a programme leader, and the association between the two was one of genuine mutual regard and affection. Dr. Prakash was vested with additional responsibility as Chairman of the newly-formed Uranium Corporation of India Ltd., (Jaduguda) in the year 1967. He held this post till 1981 during which period the Organisation registered a steady growth. During the period 1966-72, Dr. Brahm Prakash functioned as Project Director, Nuclear Fuel Complex and he was responsible for establishing this facility on a very firm base. Today, the Nuclear Fuel Complex is perhaps the best example of translation of indigenous research and development to successful industrial practice, employing advanced and sophisticated processes, techniques and equipment for the production of a variety of nuclear and electronic grade materials and components where chemists, chemical engineers, metallurgists, mechanical & electrical engineers and physicists have all collaborated in a well-knit and integrated scheme.

The premature demise of Dr. Sarabhai in the winter of 1971 came as a point of heart-searching for Dr. Prakash. While he was approaching the year of his retirement, his love and involvement in the atomic energy effort on many fronts was still at its peak. He however decided to accept the offer of Directorship at the Vikram Sarabhai Space Centre,Trivandrum.

Two excellent bouquets of tributes have been brought out by Vikram Sarabhai Space Centre and the Indian Space Research Organisation, in grateful remembrance of the many-sided contributions of Dr Brahm Prakash to the Space Programme. As one reads and reacts to these sensitive offerings of universal affection, admiration and regard, it is obvious and clear that Dr. Prakash proved to be such a tower of strength and inspiration to the entire Space Department, at a very crucial and formative stage. To quote Prof. M.G.K. Menon, "It was Dr. Brahm Prakash who brought success to the VSSC, welding all the amorphous entities out of which it was composed, and nurturing it to make it the dynamic



In a lighter mood with Pandit Jawaharlal Nehru and Shri Homi J. Bhabha at Bhabha Atomic Research Centre, Trombay.

structure it is today". Unfortunately, the period of his service at Trivandrum (1972-79). was also a period when Dr. Prakash had to live away from his family in Bombay, the pressures of work took a toll on his health, and he retired from active service soon after the first SLV-3 launch in 1979. He however continued his association with the programme as Member, Space Commission, to see the completion of the SLV-3 Programme, and also the detailed planning of the future projects of the Department of Space.

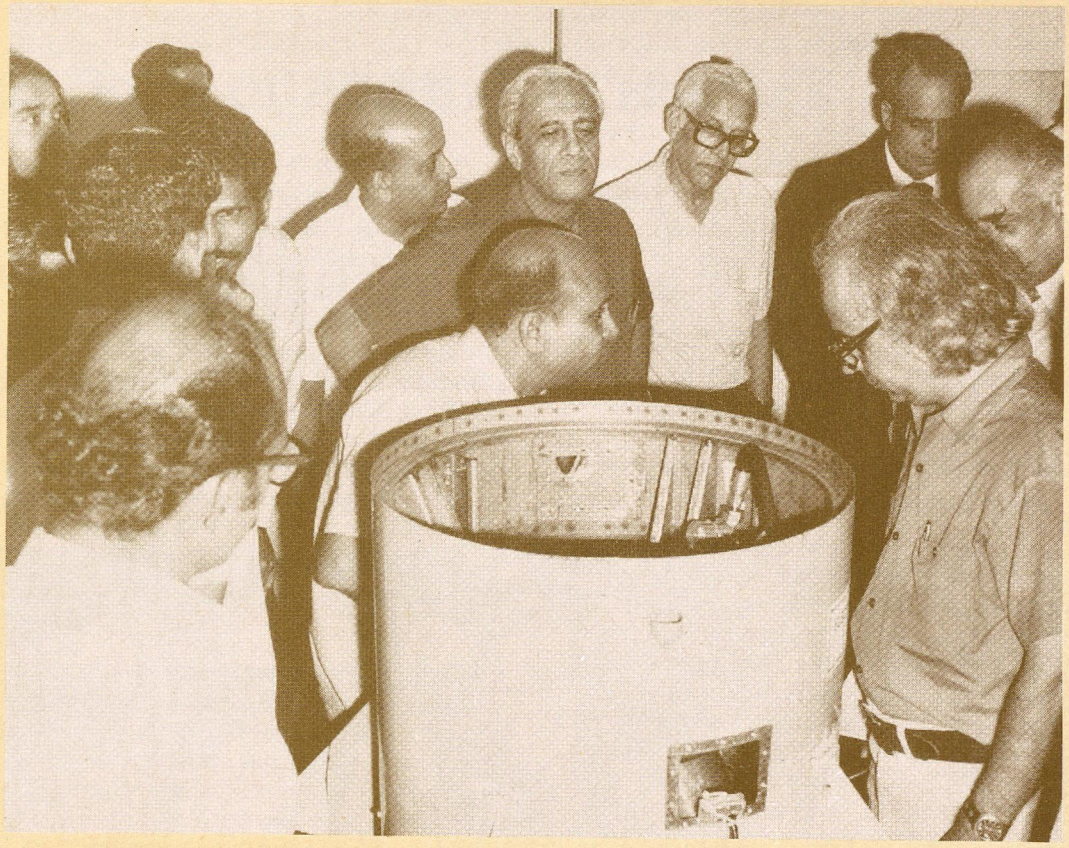
Whether it was at the Indian Institute of Science or the Department of Atomic Energy or the Department of Space, the professional life of Dr. Brahm Prakash was not confined to his primary responsibilities in these organisations. By virtue of his vast experience and erudition, and his reputation for objectivity and integrity, his esteemed counsel and active participation in decision making were constantly sought by many organisations like DST, CSIR, the Ministries, the Universities and the Academies. He played a crucial role in deciding on the product-mix for the Superalloys Project, Mishra Dhatu Nigam, of the Ministry of Defence Production, at Hyderabad. He was a regular and active member on the Advisory Councils of NML, RRL (B) and NAL, in the formulation of their R&D programmes. He was the president of the Indian Institute of Metals in its Silver Jubilee Year (1972), when the important decision to form the three Divisions of Iron & Steel, Metals Sciences and Industrial Metallurgy, was taken, which gave new dimensions for the growth of the Institute. All these extramural assignments were always most cheerfully and readily accepted, and most conscientiously executed. At the point of his death on January 3, 1984 in Bombay — after an illness due to lung cancer - he was still actively connected with major responsibilities including the chairmanship of Mishra Dhatu Nigam.

Even in a brief account, the range and vitality, and the enduring quality of the work of Dr. Brahm Prakash emerge so clearly. What is even more amazing is that so much was achieved, under the most difficult constraints and amidst formidable pressures, without any touch of ostentation or self—consciousness, with a consistent equanimity of temper, rare courage and confidence, and the unflagging everyday concentration of a Tapaswin.

The second chapter of the Bhagawat Gita describes the qualities of a स्थितप्रज्ञ (Sthita—prajna), as an individual of steadfast mind and intellect, functioning in a state of consistent enlightenment. In fact, the entire Gita is devoted to a programme of progressive self—discipline in order to attain such a state of stability. Prof Brahm Prakash was not a philosopher by profession. However, to all of us, who were fortunate to have worked with him closely, it was clear that he had the natural gifts of an unruffled mind with unlimited compassion, and he took the greatest care to sustain these virtues.

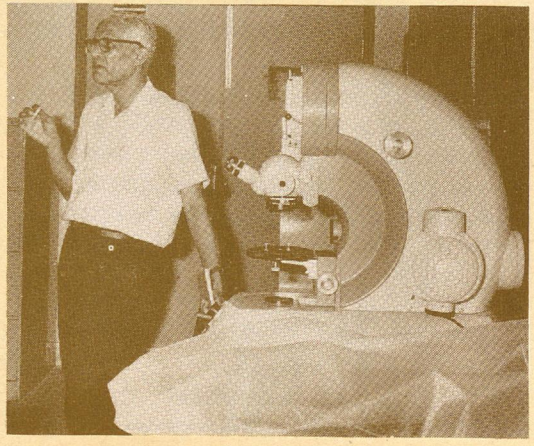
Briefing Shri Lal Bahadur Shastri on machining of Uranium Rod at Bhabha Atomic Research Centre, Trombay.

George Orwell, in his beautiful essay on Gandhiji has stated that "It was so comforting to know that a person of such high moral stature and fibre was living in one corner of the world. And leaving, what a sweet smell he has left behind!". These sentiments will as well apply to Professor Brahm Prakash.



With Scientists at Vikram Sarabhai Space Centre, Trivandrum.

In a jovial mood with Shri M.C. Sarin at Mishra Dhatu Nigam Limited, Hyderabad.



In a contemplative mood at Nuclear Fuel Complex, Hyderabad.

Inspecting equipment at Uranium Metal Plant, Nuclear Fuel Complex, Hyderabad, 1971.

Extracts of Tributes to Prof. Brahm Prakash

He was one of the few scientists of the country who helped to build up our atomic energy programme from its inception. His contributions to material sciences are responsible for putting India on the map of the foremost countries in these fields. We owe Dr. Brahm Prakash a lot and it is fitting that the institutions which he helped to build should remember him for a long time to come.

Dr. Raja Ramanna,
Chairman, Atomic Energy Commission

I first met Brahm Prakash some 39 years ago on board a Norwegian troop ship in Karachi. Over this long stretch of time my first impression of a gentle, quiet, unusually capable person has remained. As we came to know each other better first at the Indian Institute of Science and then in ISRO, my amazement at his patience, ability to keep calm, unruffled and clear headed continued to grow. He worked hard, long hours and meticulously, but never made a show of it. His outstanding work in metallurgy, the many contributions at BARC, VSSC and many bodies which he participated in, all bore the characteristic stamp of careful, brilliant work, often bringing him into the limelight, but leaving him essentially the same simple, straight forward person. Never raised his voice in anger, never missed a schedule or failed to fully complete a responsibility he had undertaken–how do you measure the contributions of such a mani We will all miss him.

Prof. S. Dhawan
Chairman, Space Commission & Secretary, Dept. of Space

He was a scientist whose views and judgements I trusted implicitly. He was always gentle, quiet and unassuming... it was he who brought success to the Vikram Sarabhai Space Centre, welding all the amorphous entities of which it was composed and nurturing it to make it the dynamic structure it is today... He had such great human qualities of sincerity, kindness, ability to see other peoples' view points, complete objectivity and patience... The country has truly lost a great man...

Prof. MGK Menon
Member, Planning Commission

I interacted with Professor Brahm Prakash at different levels and was increasingly struck by his many fine qualities of head and heart. His chain smoking and frequent drinking of black coffee intrigued me somewhat, but like so many others, I dared not question him on these addictions! His gracious personality, his total dedication to duty and his generous nature without a trace of parochialism or narrowness of any type had an ennobling influence over me.

Professor Prakash discussed religion and philosophy very rarely, although he was a good listener to discussions and discourses in these areas. All the same, he impressed me at all times as essentially a spiritual person who derived his strength from within. Like many who knew him. well, I shall always remember him with gratitude and admiration as a Karma-yogi par excellence.

Prof. T.R. Anantaraman
Banaras Hindu University, Varanasi

Over the years, he had retained all the qualities that endeared him to his associates and colleagues. Dr. Brahm Prakash was a distinguished scientist but even more importantly he was a very decent and humane person, who, by example and gentle persuasion, was able to motivate his team to achieve remarkable results. A man of simple habits, great scholarship and pleasant disposition, he will be long remembered for his invaluable contribution to the metallurgy profession and to the country in the frontier areas of Atomic Energy and Space.

Dr. N. Bhanu Prasad
Former Chairman, ONGC and Former Secretary Dept. of Atomic Energy

Dr. Brahm Prakash played a pioneering role in harmonising the activities at Thumba and giving a purpose to India's leading space research complex in Trivandrum named after Dr. Vikram A. Sarabhai. All of us have had the privilege of working under his noble leadership. His humanity combined with utter humility was exemplary. All of us drew inspiration from his thoroughness, hard work and steadfastness. He was uniformly loved and respected by his colleagues and peers.

The eminence, which the organisation has earned in the scientific and technological field of the country, is largely due to his dedication and tireless efforts.

Dr. V.R. Gowariker,
Director, VSSC.

It is quite befitting to organise such a seminar Dr. Brahm Prakash had made pioneering contributions to metallurgy in the country.

His services to Midhani were outstanding. He was a great help in times of crises and his advice was useful. I valued Dr. Brahm Prakash, the man, very much.

Dr. R.V. Tamhankar,
Former Chairman & Managing Director, Mishra Dhatu Nigam Limited.

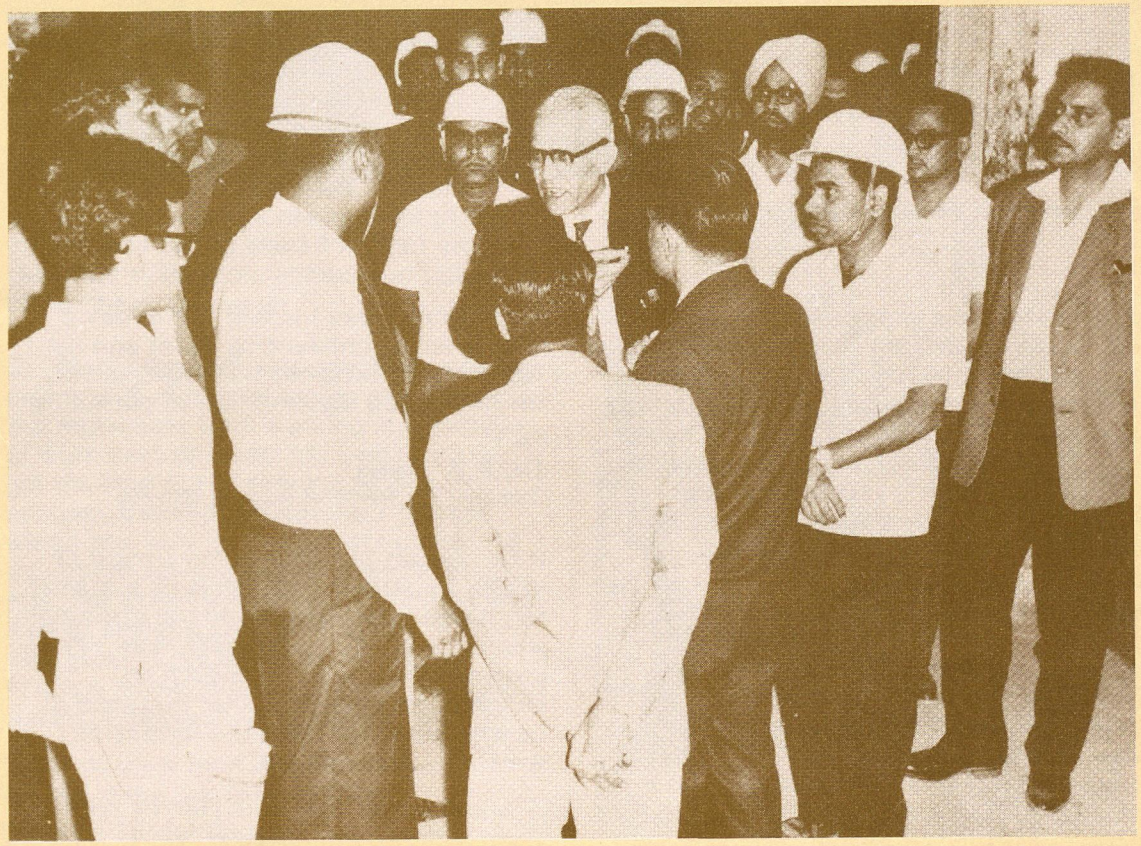
Prof. Brahm Prakash came from the Indian institute of Science, Bangalore and took up the task of starting a programme on materials and other important requirements for the nuclear programme. I have had the privilege of working with him in the task of development and production of nuclear fuels. Prof. Brahm Prakash proved himself to be an excellent guide and had the unique characteristic of remaining unruffled even under the most trying situations. For me it used to be a great consolation to go to him when faced with very difficult situations and wonder at his philosophic approach. He was very particular about the correctness and thoroughness in all aspects of working and inspired everbody who had the privilege of working with him to emulate his noble example. He was a person of rare qualities. Anybody who had the opportunity to work with him will cherish the pleasant memories about him.

Dr. N. Kondal Rao,
Former Chief Executive,
Nuclear Fuel Complex.

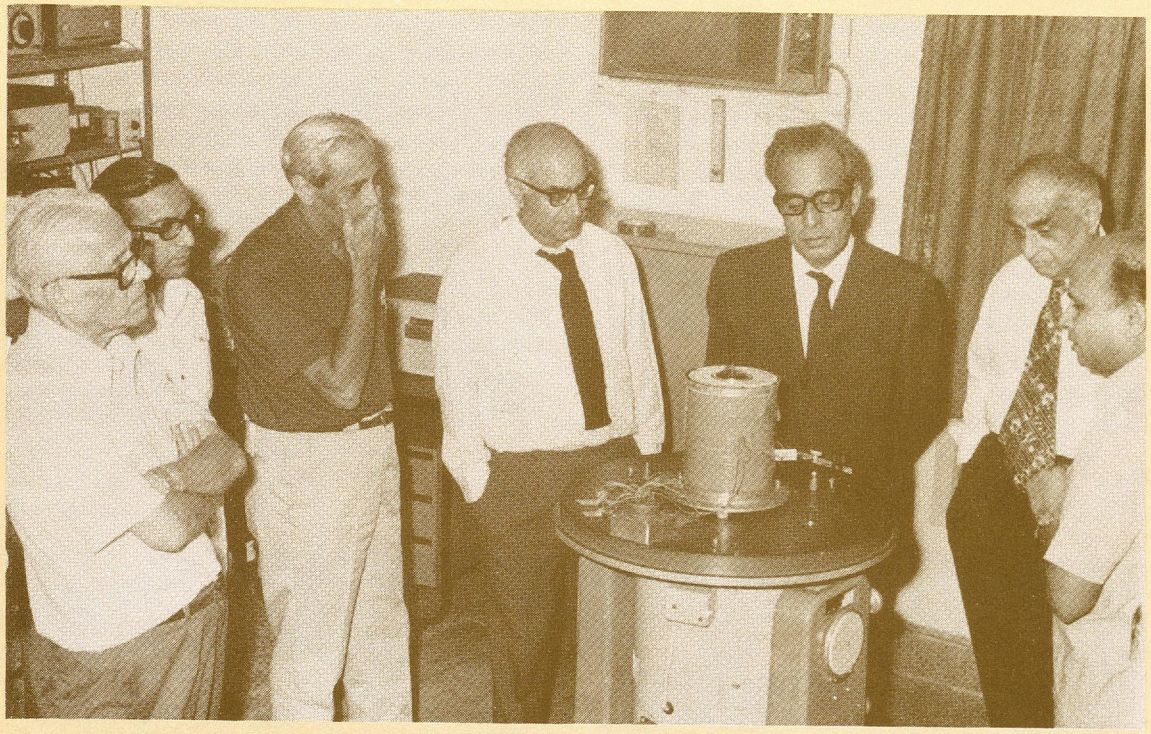
He would never raise an eyebrow no matter how big a mistake one might have committed for to him no one was infallible including himself. The confidence he enthused was beyond the scope of words. His way of communication through few words and silence was in itself a new technology in modern management terms. His ever meditative face enthused reverence and respect, and when approached that uneasiness of meeting Dr. Brahm Prakash, Director, VSSC, would melt away and one would come away feeling at ease. Institutions are named in memory of such eminent men. But one wonders, if Dr. Brahm Prakash would have liked that to happen. On the contrary, this gathering of the galaxy of Indian Metallurgists, his students and disciples, to pay their homage in the memorial seminar itself is more than what he would have asked for.

B.K. Sarkar,
Head, Test & Evaluation Division, VSSC.

Some persons do not impose themselves on us while they are in our midst, yet they leave a vacuum when they depart. We keenly feel their imperceptible presence, we miss them.Dr.Brahm Prakash was one such. Meetings with him provided me a close encounter of the best kind. The bony frame, the pallid face and the jerky movements do not belong to the type that impresses from a distance. Slowly did one realize that there was an aura about him; he exuded certain benign waves. One was then struck by a presence. When he bared his tobacco—



At Uranium Corporation of India Limited, Jaduguda.



With members of the Space Commission at VSSC

stained teeth in a gracious smile laden with sincerity, one was at ease again. The best was when he, occasionally, broke into peals of rapturous laughter; there was in him the innocence of a child. He spoke so little; yet said so much. He demanded no obsequiousness; yet commanded reverence. He had no different rules for himself from those he set for others.

P. Radhakrishnan,
Head, Test & Evaluation Division, VSSC.

It was a privilege to have known Dr.Brahm Prakash for the period during which we treated him here at the Tata Memorial Centre; we all know of him as a brilliant and outstanding scientist of our times and a workaholic and yet during the period of his illness he refused to be cowed down by the stresses and strains of his illness and continued to work. Ih my own humble way I would like to pay a tribute to his undaunting spirit and his legacy, for, it becomes our responsibility for its onward transmission to our future ages.

Dr. P.B. Desai,
Director, Tata Memorial Hospital, Bombay.

If Dr. Vikram Sarabhai is the creator of VSSC, Dr. Brahm Prakash is its sustainer, for, it was he who nurtured the institution when it needed nourishment most. He provided the centre with such an enlightened leadership that everyone of us who have had the good fortune of working under him felt;

"i would rather walk with Him by faith
Than pick my way by sight"
His humility did not consist in hiding his talents or virtues but in respecting the dignity of all those who served under him and in recognizing the fact that no one is infallible, not even the leader.

Manoranjan Rao,
Head, Library & Information Division, VSSC.

He was too gentleman-like to be provoked. No bangs, no harsh words, not even raising of voice. He was a selfless man with full sense of responsibility, dedication and devotion to duty. It was difficult to make him enter into arguments, counter arguments and speak more than required. He was a man of least words, very kind hearted, completely human and a thorough gentleman.

H.C. Katiyar,
Dy. Chief Executive (Retd), NFC.

Ten years ago I met at VSSC a fair, honest and kind man. I learnt soon thereafter that he was a colossus in the world of Science and Technology. There were several occasions when a raging controversy would be resolved by looking at the problem the way Dr. Brahm Prakash would look at it. Dr. BP's judgement of issues and people was respected by even those who considered themselves adversely affected by that judgement. I will miss him, as will a whole generation of scientists in our country who look with alarm at a depleting resource: people with integrity and compassion, merit and fine judgement.

Dr. V. Siddhartha
Advisor, CSIR

The best that I can say of my relationship to Dr. Brahm Prakash is that I am one among the countless who held him in high esteem but did not have the opportunity to get close to him. His periodical visits to the Department of Metallurgical Engineering, BHU, were always regarded as important events and constituted a source of much encouragement and inspiration. At

Hyderabad it became possible to see him a little more closely at work as Chairman, Midhani. I shall also remember that in his capacity for unceasing professional involvement as well as in his unobtrusive determination to contribute to india's metallurgical and technological strength he was a Titan; and that in the way he carried himself and in his style of functioning he was a grand solitary.

Dr. P. Rama Rao,
Director, Defence Metallurgical Research Laboratory.

Professor Brahm Prakash was a towering personality in the field of metallurgical engineering, and was widely reputed both in the country and abroad. It was my good fortune to have been his first research student at the Indian Institute of Science, Bangalore from January 1950. From that day till his last days, I had the privilege to work under his guidance in some capacity or other. By his personal charm and good nature, by his tolerance, generosity and good will and by setting a sterling example, he brought the best out of his colleagues and associates. His commitment and enthusiasm to various projects till his last days, at great personal discomfort and without any material benefits should be a pointer to all of us.

Prof. R. Mallikarjunan,
Professor & Head, Metallurgical Engg. Department, Indian Institute of Technology, Powai.

For Dr. Brahm Prakash it was 'work' that came first above all and the work had to have the stamp of "Excellence". Nothing short satisfied him. He will patiently correct page after page of lengthy reports with meticulous attention to accuracy.

He was a leader who led not by 'preaching' but by 'practicising' what he believed was 'Right'. Qualities such as Honesty, Integrity, devotion to duty, hard-work, urge for perfection and humility are synonymous with Dr. Brahm Prakash. Metallurgy can be learnt from many but not those virtues. I personally feel proud that I have had the opportunity and the good fortune to work under his guidance.

R.B. Subramanyam,
Director (Projects), Defence Metallurgical Research Laboratory.

I was fortunate to be with Prof. Brahm Prakash for seven years. He worked from 8 A.M. to 10 P.M. on all days of week. He alloted half of his daily schedule for progressing SLV-3 project. Most of us used to rush to Dr. Brahm Prakash to report the successful test of guidance system, static test results and good flight testing. His remarks used to be, "Better to record the test results and relate to design specification". We also used to present to him few test results either of high deviations or failure. He used to smile and say "Better to analyse the results calmly and the experience be used in future work". Every week, a major event of the project was taking place for eight years. His value system of success and failure, is to see them, in unison.

Dr. Brahm Prakash was presiding over the events with minimum words and no pomp. But thousands were working at hundreds of work centres under his guidance. He got the best out of everybody with his uniquely evolved management system which had very high order of nobility. All the credits for success he gave to his men. He would put us with big minds and men of position and he would be in the background. We enshrine Dr. Brahm Prakash as his mission made many men of quality in Science. We gratefully feel:

"Lives of great men all remind us
We can make our lives sublime".

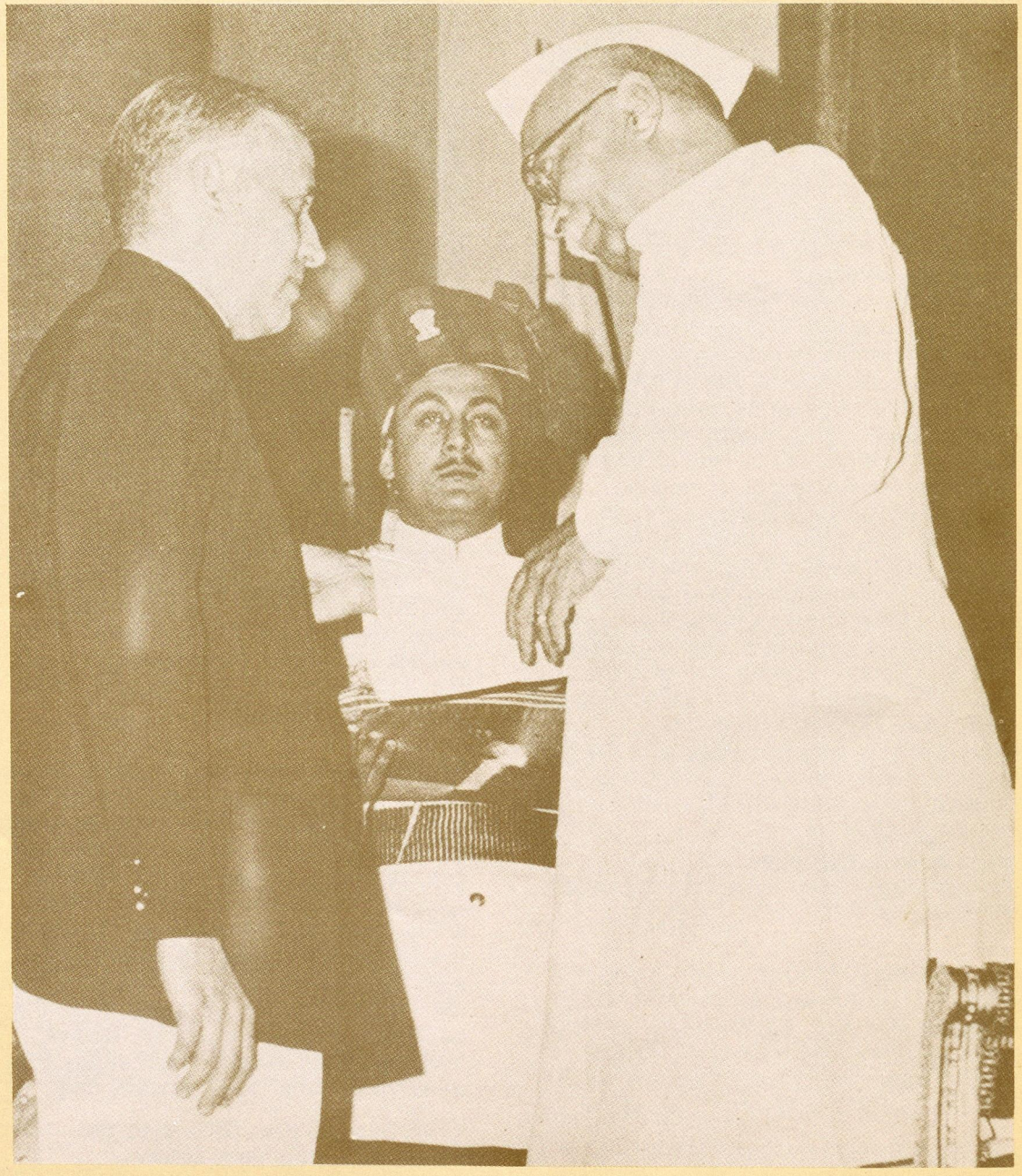
Dr. APJ Abdul Kalam

Planting a sappling at Mishra Dhatu Nigam Limited, Hyderabad.

I had the good fortune of beginning my career with a team that worked under the stewardship of Dr. Brahm Prakash. In the beginning, of course, I had no contact with him and we looked at him more with awe than admiration as a Scientist chosen by Dr.Bhabha. In subsequent meetings related to progress of work, as he would ask searching questions, it started becoming apparent he not only knew our names but was also aware of the work we were doing. In a hierarchial system, I think there can be no greater motivation than the feeling that the senior most leader is aware of what one is doing. His quest for perfection not only in technical endeavours but even in its presentation was almost obsessive as he would make us rewrite the project reports even for minor blemishes. Project Faggots (present Atomic Fuels Division) and the Nuclear Fuel complex (as completed in 1972) are the projects he handled as Director and they are among the few projects with practically no cost or time over—run. They bear testimony to his ability to get things done in a cost effective manner.

After he left Atomic Energy, I had practically no contact with him, but whenever, I chanced to meet him, inspite of big level difference that separated us, I found him remembering not only me but all other colleagues at NFC who worked for him. This was his humaneness. Yet, when it came to work, he was impersonal. Without being close to him, I wonder how he has left an image devoid of all parochialism, shunning all machination, radiating only goodness. I cherish this image with reverence.

K.K. Sinha,
Managing Director, Mishra Dhatu Nigam Limited.



Receiving 'Padma Shri' award in 1961
from the President of India Dr. Rajendra Prasad.

"In many respects, we should consider ourselves fortunate to be living in the present era of Indian metallurgy. On the one hand, there are many urgent tasks of national importance which call for strategic planning and dedicated execution. On the other, there is the opportunity to participate in the revolution that is taking place in the metallurgical profession as such—so that we can project a prestigious image of ourselves, and contribute to the mainstream of metallurgical thought. It is a situation of many challenges and opportunities-where, I am confident, Indian Metallurgists will give a creditable account of themselves and lay the foundations for a glorious tomorrow".

BRAHM PRAKASH

Designed and Produced by the Associated Advertisers and Printed at Pragati Art Printers.

Released on the occasion of Dr. Brahm Prakash Memorial Seminar

August 21-22, 1984 Hyderabad