

MWe each at Kaiga and at Rajasthan is progressing as per schedule. Significant progress has been made in the detailed design of 500 MWe PHWR units to be constructed in Tarapur.

Nuclear safety is our primary concern in reactor design and operation. This is achieved through Quality Assurance in every stage and by well defined regulatory practices supervised by an independent Atomic Energy Regulatory Board (AERB).

R & D programmes in reactor engineering have led to the development of a number of useful technologies for power reactors such as in-service inspection system for coolant channels, remote video inspection systems, vibration based diagnostic system for identification of contact of coolant channels with calandria tubes, etc. We also continued our work on the design of an Advanced Heavy Water Reactor.

We are building a Synchrotron Radiation Facility at the Centre for Advanced Technology at Indore. The first radiation source in this facility will be a vacuum ultra-violet and soft X-ray electron storage ring. The entire system has been designed and fabricated in India. It is expected to be commissioned next year. I must say in this context that neutrons and synchrotron radiation are emerging as complementary tools for condensed matter and biophysics research.

India has had thirty years of experience in the field of reprocessing spent nuclear fuel. In addition to the two existing reprocessing plants at Trombay and Tarapur, we are setting up another spent fuel reprocessing plant at Kalpakkam which is in an advanced stage of completion. An engineering scale facility is also being set up to separate U233 from thorium – which for us is the nuclear fuel for the future. Treatment and safe disposal of various types of radioactive wastes generated in the nuclear fuel cycle activities has been accorded highest priority in our nuclear programme. A number of development programmes are in progress in the management of low, intermediate and high level wastes. We are also participating in a number of

coordinated research programmes with the Agency in this area.

India is a leading producer of radioisotopes which find diverse applications in cancer therapy, non-destructive testing, industrial process control, agricultural research, and preparation of radiopharmaceuticals. During the year, isotope studies were taken up to determine the salinisation and recharge to ground water, movement of silt at ports, flow measurements in rivers and identification of water seepage in dams. Research in nuclear agriculture has resulted in improvement of crops and utilisation of fertilizers and in the protection of plants against insects and pests.

Nuclear technology, being multi-disciplinary in character, also offers a unique opportunity to the nuclear centres in any state to transfer spin-off technologies in materials, information and bio-technology areas (for example, welding, non-destructive testing, chemical plant control and robotics) to industry. We have been successful in transferring knowhow and technology to Indian industry in areas as diverse as solar photovoltaics to improve efficiency and yield, immobilised enzyme technology to produce invert sugar, computer design technology for a powerful parallel processing system, DC thyristor chopper control technology to effect energy savings for the benefit of the Indian Railways and so on.

Mr President, before I conclude, please permit me to once again reiterate the necessity for the Agency to redouble its efforts in the promotion of peaceful applications of nuclear energy, which are numerous in addition to electricity production and to initiate on a large scale, public awareness programmes. The safeguards system should be streamlined to be productive and cost effective. There is an immediate necessity to rejuvenate and expand programmes for international cooperation for peaceful applications of nuclear energy. On our part, we would render our active support and cooperation to the Agency in successfully achieving these aims in the coming year.

Thank you, Mr President

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12. "Engineering aspects of UHV systems in accelerators", A S RajaRao, Bulletin Indian Vacuum society, **24**, 3 (1993).
13. "Study of minor hysteresis loops of $YBaCuO$: dc and ac hysteresis effects in granular samples", S B Roy, S Kumar, A K Pradhan, P Chaddah, Ram Prasad and N C Soni, Physica C, **218**, 476 (1993).
8. "Microtron project at CAT", H C Soni and S S Ramamurthi, *ibid.*
9. "Calibration procedures for beam position monitors", Ashish Dey, Anil Banerji, Ved Prakash, R M Pandey, T A Puntambekar, D K Joshi, R K Nathwane, *ibid.*
10. "Beam position monitoring in transferline - 2 of INDUS-1", R K Nathwani, Ved Prakash, M K Jain, Saranappa and Anil Banerji, *ibid.*
11. "Beam profile monitor for the electron accelerators at CAT", Anil Banerji, R M Pandey, D K Joshi, T A Puntambekar, Alpana Rajan, R K Nathwani and S S Ramamurthi, *ibid.*
12. "Granularity effects in the ac magnetisation of ceramic superconductors", P Chaddah, invited talk at the DAE solid state physics symposium, BARC, Dec. 27-31, 1993.
13. "Electronic structure of small metal particles within the local density approximation", invited talk by M K Harbola, *ibid.*
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 28. "Role of x-rays from laser produced plasma on ablation studies", T Desai, V K Senecha and H C Pant, *ibid*.
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 31. "Design and fabrication of Pockel cell using KDP crystal", V S Tiwari and V K Wadhawan, *ibid*.
 32. "Growth and characterization of KDP crystal and device fabrication", U N Roy, *ibid*.
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'हिन्दी दिवस' समारोह

'आम देशवासी के लिए सहज और सरल भाषा के रूप में हिन्दी को विकसित करने के लिए हमें उसे विद्वत्पूर्ण, भाषायी पांडित्य प्रदर्शन से दूर रखना होगा। साधारण व्यक्ति यद्यपि अपने स्थानीय स्वरूप में हिन्दी बोलता है, पढ़ता है एवं प्रयोग में लाता है किन्तु जब कहीं हिन्दी की बात होती है तो उसके मन में यह संकोच होता है कि कहीं वह अशुद्ध हिन्दी का प्रयोग तो नहीं कर रहा है। हिन्दी के प्रयोग को बढ़ाने में इस संकोच को मिटाना आवश्यक है। ऐसा संकोच बोली व शब्दों के आंचलिक स्वरूप के प्रयोग के कारणों से भी होता है। बहुधा अधिक परिनिष्ठ हिन्दी बोलने वाले/प्रयोग करने वाले उन लोगों की कठिनाईयों को नहीं समझते जिनकी मातृभाषा हिन्दी नहीं है या जिन्होंने हिन्दी सीखी है।' यह विचार सुविख्यात साहित्यकार और भाषाविद् डॉ. नेमीचंद जैन ने प्रगत प्रौद्योगिकी केंद्र, इन्दौर द्वारा आयोजित 'हिन्दी दिवस' समारोह के अवसर पर मुख्य-अतिथि के रूप में व्यक्त किए। समारोह की अध्यक्षता श्री वी.के.कुलकर्णी, मुख्य अभियंता

ने की। समारोह में, केंद्र में हिन्दी में किए जाने वाले कार्य की समीक्षा वैज्ञानिक श्री हेमचंद्र पंत ने की। श्री सत्यनारायण व्यास, अध्यक्ष (राजभाषा कार्यान्वयन समिति) ने अतिथियों का स्वागत तथा श्री सुनील सरवाही, सहायक निदेशक (राजभाषा) ने कार्यक्रम संचालन किया। इस अवसर पर प्रश्न-मंच तथा हिन्दी की विभिन्न प्रतियोगिताओं से संबंधित लगभग पैंसठ पुरस्कार प्रदान किए गए।

केंद्र में इस वर्ष 'हिन्दी दिवस' समारोह अत्यंत व्यापक रूप से आयोजित किया गया। इसमें दो दिवसीय हिन्दी कार्यशाला, वैज्ञानिक निबंध व हिन्दी निबंध, टिप्पण आलेखन, वैज्ञानिक एवं तकनीकी अनुवाद, शब्दानुवाद, टंकण प्रवीणता की प्रतिस्पर्धाएँ तथा कर्मचारियों व परमाणु ऊर्जा केंद्रीय विद्यालय के छात्र-छात्राओं के लिए क्रमशः प्रश्न-मंच और प्रश्नोत्तरी कार्यक्रम प्रमुख थे। हिन्दी दिवस के अवसर पर एक कवि-गोष्ठी का आयोजन भी किया गया जिसमें नगर के लब्ध-प्रतिष्ठित कवियों ने भाग लेकर उपस्थित श्रोताओं को भाव-विभोर कर दिया।