INDIGENOUS DEVELOPMENT OF ADVANCED TECHNOLOGIES : LASERS AND ACCELERATORS

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Lasers and accelerators are powerful tools at the fore-front of the present day scientific research and technological developments. R&D activities in the areas of lasers and accelerators being pursued at various laboratories of the Department of Atomic Energy (DAE) span wide-ranging applications in basic research, industry, health care, and strategic areas covering energy research and national security, besides participation in large scale international projects. Core strength in these areas has been built through indigenous development of related advanced technologies like radio-frequency (RF) power, ultra-high vacuum, laser and accelerator materials, magnets, power supplies and control systems, superconducting radio-frequency cavities, cryogenics, and high damage threshold optical coatings. An overview of the laser and accelerator activities in DAE laboratories is presented in this article.