

II - B. TECHNOLOGY DEVELOPMENT AND INNOVATION PROGRAMME

The programme has two sub-components, viz. Technology Development and Demonstration Programme to support technology development efforts of industry-R&D system and Technopreneur Promotion Programme (TePP) to nurture the innovative spirit of individuals.

1. TECHNOLOGY DEVELOPMENT & DEMONSTRATION PROGRAMME

1.1 Objectives

The programme aims at catalyzing and supporting activities relating to technology absorption, adaptation and demonstration including capital goods development, by involving industry and R&D organizations. The specific objectives of the programme are:

- supporting industry for technology development, demonstration and absorption of imported technology
- building indigenous capabilities for development and commercialization of contemporary products and processes of high impact.
- involvement of national research organizations in joint projects with industry
- technology evaluation in selected sectors.

1.2 Activities

The Department provides on a selective basis partial financial support to research, development, design and engineering (RDDE) projects proposed by industry in the following areas:

- Development and demonstration of new or improved product and process technologies including those for

specialized capital goods, for both domestic and export markets.

- Absorption and up-gradation of imported technology.

The partial financial support by DSIR in the above areas, primarily covers prototype development and pilot plant work, test & evaluation of products from such R&D, user trials, etc. Bulk of the cost of the project is met from industry's resources.

The Department, under this activity has so far supported about 166 R&D projects of Industrial units. These projects cover products and processes in various important industries such as metallurgy, electrical, electronics, instrumentation, mechanical engineering, earth moving and industrial machinery, chemicals and explosives, etc. 103 projects have so far been completed and over 30 technologies developed under the scheme have been commercialized or under commercialization. During the year, 63 Technology Development Demonstration projects supported under the scheme were reviewed for progress.

The details of the various projects of industrial units are given below:

CHEMICALS AND FERTILIZERS

Castron Technologies Ltd., Dhanbad

The Project of the company for "Development of Indigenous Technology for Phenanthrene and 9:10 Phenanthrenequinone" in collaboration with Central Fuel Research Institute was supported by DSIR. The process involves solvent extraction of Phenanthrene from Crude Anthracene and oxidation of Phenanthrene. The pilot plant was set up based on the process of upgradation of

Phenanthrene (60%) to around (70%) by chemical methods, developed at CFRI. The performance trials and test runs have been completed. The product obtained meets the desired technical specifications. The project has been successfully completed.

NATCO Pharma Ltd., Hyderabad

The Project of the company for “Development of Pilot Level Anaerobic Reactor to Pharmaceutical Waste” in collaboration with Indian Institute of Chemical Technology (IICT), Hyderabad, was supported by DSIR. The pilot plant was set up based on the Lab work, the basic process design and detailed engineering design at IICT. NATCO Pharma Ltd. and IICT set up the pilot plant at the plant of NATCO Pharma Mehboob Nagar. The performance trials and test runs have been completed. The project has been successfully completed.

Solaris Chemtech Ltd. (Formerly BILT Chemicals Ltd.), Gurgaon

The project of the company for “Development of Technology for Tetra Bromo Bisphenol-A (TBBA) on a Pilot Plant level” was supported by DSIR. The product TBBA is a fire retardant chemical and has considerable potential abroad and in the country. The project involved (a) the Development of Batch process at Ankleshwar, Gujarat based on the technology developed in-house and (b) the Continuous Process at Karwar, Karnataka based on the technology developed at IICT. Both the processes have been completed. The performance trials and test runs have been completed. The project has been successfully completed. The company has exported the product to some eastern countries.

Elkay Chemicals Pvt. Ltd., Pune

The project of the company for “Development of Next Generation Amino Silicon based on hydrosilation technology” has been supported with a grant of Rs. 30.00 lakhs out of a total project cost of Rs. 83.00 lakhs. The hydrosilation process avoids import of silicones – a prohibited costly material. The formulations of amino silicones find applications in textile finishing, personal hygiene, etc. The company has successfully completed the project at Pilot plant level which has resulted in four products viz. Di-amino micro emulsifiable Silocone, Hydrophilic Softner, Microemulsifiable and Amino polyethers, self dispersible hydrophilic softner. The company is in the process of commercialization of three products.

General Exports & Credits Ltd., New Delhi , Dalmia Centre for Research & Development (DCRD), Coimbatore and Indian Institute of Chemical Technology, Hyderabad

The joint project for “Development of Azadirachtin from Neem Seeds Kernels and its Formulations” has been supported with a grant of Rs. 65.00 lakhs, out of a total project cost of Rs. 248.97 lakhs. IICT, Hyderabad has been entrusted with the task of designing and engineering of the pilot plant. The project has been successfully completed. The field trials were also conducted successfully at Central Institute for Cotton Research, Coimbatore.

Haryana Leather Chemicals Ltd, Haryana

The Project of the company for “Development of Technology for Cross-linked Polyurethane Dispersions” has been supported by DSIR. The lab samples have been tested at CLRI. The pilot plant is operational and the product samples have also been tested for the desired specifications. The project is nearing completion.

Pennwalt Ltd. Mumbai

The Project of the company for “Coating of Chemical Process Equipment with Fluoropolymer and other High performance Powders” has been supported by DSIR. The company has undertaken the coating trials of the fluoropolymer compositions, which do not have any inflammable solvents in ordinary oven. A specially designed Solvent Venting Oven has been utilized for the fluoropolymer coatings containing inflammable solvents. The performance trials and test runs are under way. The project is nearing completion.

TCM Ltd., Mettur Dam, Tamil Nadu

The Project of the company for “Development of Carbon-dioxide Route for the manufacture of Barium Carbonate” based on the use of lecofines with Barytes in the continuous rotary kiln, has been supported by DSIR. The flue gases from the rotary kiln have been treated and the carbon dioxide obtained has been successfully employed for precipitation of Barium Sulphide to get Barium Carbonate. The quality of the product has been improved to 98.5%. The project is nearing completion.

Anu's Laboratories Ltd., Hyderabad

The project of the company for “Development of Process for manufacture of 1-Bromo-3-Chloro Propane (B.C.P.) & 1, 3-Dibromo Propane (D.B.P.) in Pilot Plant” has been supported by DSIR with a financial support of Rs.64.00 lakhs out of a total project outlay of Rs.130.00 lakhs. The process developed at the lab scale involves the step of hydro bromination using hydrogen bromide gas. Application: 1-Bromo-3-Chloro Propane (B.C.P.) is a basic chemical used for manufacture of several intermediates for bulk drugs and other chemicals. 1,3-Dibromo Propane (D.B.P.) is used for manufacture of other chemicals.

Engineers India Ltd., Gurgaon

The project of the company for “Development of Membrane Technology Natural Gas Separation” in collaboration with Indian Institute of Chemical Technology (IICT) Hyderabad been supported by DSIR. Efforts are on to set up a pilot plant at ONGC, Hazira. The project is environmentally friendly and is in progress.

Haryana Leather Chemicals Ltd, Haryana

The Project of the company for “Development of Technology for Polymeric Fat liquors for Upholstery Leather” has been supported by DSIR. The lab samples have been tested. The design of the pilot plant is under preparation. The pilot plant is proposed to be installed by April 2006. The project is in progress.

Forest Research Institute (FRI), Dehradun

The project of the institute for “Identification, Development and Utilisation of Natural Dyes from the Forest Plants of Utranchal” has been supported by DSIR with a financial support of Rs.25.16 lakhs out of a total project outlay of Rs.61.32 lakhs. Ministry of Environment & Forests (MoEF), New Delhi is also supporting the project with an equal financial support, thus making total support of Rs. 50.32 lakhs. The project is based on forest waste, which is available in plenty. Under the project, natural dyes are proposed to be extracted from 5 plant materials viz. *Populus deltoids*; *Pinus roxburghii*; *Eucalyptus hybrid*; *Cassia tora*; & *lantana camara*. The pilot plant has been installed and trial runs are being conducted by FRI. Natural dyes for use by textile manufacturers; dyers, paper and pulp industry etc. are the expected yield.

Anirox Pigments Ltd., Kolkata

The project of the company for “Development of Stable Oil in Water Ink Emulsion, based on

Water Reducible Nigrosine Dyes for Ink jet Computer Printers” has been supported with a grant of Rs. 50.00 lakhs out of a total project cost of Rs. 147.00 lakhs. The company is at present engaged in the production of Nigrosine Dye, which finds many applications, one of which is in the ink industry.

Schevaran Laboratories Pvt. Ltd., Mysore

The project of the company for “Development of product for control of Psychrophilic and Psychrotrophic Food Spoilage Micro-organisms in Cold Storages” with the help of Central Food Technological Research Institute, Mysore has been supported with a grant of Rs. 8 lakhs out of total project cost of Rs. 23 lakhs. The company has developed an eco-friendly formulation especially for cold storages, cold storage carriers and refrigerators, which will be effective at temperature below 8°C and will not be toxic to human beings. The developed formulation will also be biodegradable. The product is being tested by CFTRI, Mysore.

DRUGS & PHARMACEUTICALS

Lifecare Innovation Pvt. Ltd., New Delhi

The project of the company for “Scale up Process Development of Liposomal Amphotericin B, Awareness Programme and Clinical Performance Trials” has been supported with a financial support of Rs.47.80 lakhs out of a total project outlay of Rs.149.76 lakhs. Amphotericin B is a macrolide polyene antibiotic produced by strain of *Streptomyces nodosus*. Amphotericin B shows a high order of in vitro activity against many species of fungi viz. *Histoplasma capsulatum*, *Cryptococcus immitis*, etc. Liposomal Amphotericin B is used for treatment of Kala-Azar.

TTK Healthcare Ltd., Bangalore and Sree Chitra Tirunal Institute for Medical Sciences and Technology, (SCTIMST), Trivandrum

This joint project for “Development of Improved Tilting Disc Heart Valve Prosthesis” has been supported by DSIR with a financial support of Rs.40 lakhs out of a total project outlay of Rs.90.42 lakhs. The company in collaboration with SCTIMST, Trivandrum intends to develop improved tilting disc heart valve prosthesis. The improvements in the valve will provide better performance characteristics (functional and durability); the new valve will be MRI compatible with improved thrombo resistance and with presence of radio-opaque marker for fluoroscopic visualization. The reduction in the production cost is expected to make the product more cost-effective.

Punjab Chemicals & Crop Protection Ltd., (formerly known as Punjab Chemicals & Pharmaceuticals Ltd.), Chandigarh

The project of the company for “Development of Process for the manufacture of Ethyl 2 - (2-aminothiazol-4-yl) - 2 - methoxyiminoacetate and 2-formylamino-4-thazole acetic acid ethyl ester in Pilot Plant” has been supported by DSIR with a financial support of Rs.65.00 lakhs out of a total project outlay of Rs.141.00 lakhs. It is proposed to develop process for manufacture of Ethyl 2-(2-aminothiazol-4-yl) – 2 - methoxyiminoacetate and 2-formylamino-4-thaizole acetic acid ethyl ester. These two are key raw materials for the manufacture of a large number of cephalosporins based antibiotics.

SMS Pharmaceuticals Ltd., Hyderabad

The project of the company for “Development of Active Pharmaceutical Ingredients (API), API Intermediates and Metal Acetylacetonates”

has been supported by DSIR with a financial support of Rs.135.00 lakhs out of a total project outlay of Rs.475.00 lakhs. The company intends to scale up processes for manufacture of Active Pharmaceutical Ingredients (API), API Intermediates and Metal Acetylacetonates. The API proposed to be developed are: Diltiazem Hydrochloride (API), Zolmitriptan (API) and Taxol C-13 side chain (API intermediate). The process makes use of heterogeneous catalyst developed by IICT, Hyderabad, which is recoverable and reusable. Diltiazem is used for hypertension and anti-angina. Zolmitriptan is used for alleviating migraine. Metal Acetylacetonates are used as catalysts, glass coating agents, paints, ink etc.

Central Institute for Research on Goats (CIRG), Mathura

The project of the company for “Development of inactivated vaccine using native isolates of Mycobacterium avium subspecies paratuberculosis against Johne’s disease in goats and sheep” has been supported by DSIR with a financial support of Rs.4.00 lakhs. It is proposed to develop a vaccine for Johne’s disease in Goats and Sheep.

FDC Ltd., Mumbai

The project of the company for “Development of a manufacturing process for a new product for the treatment of Thalassemia” has been supported by DSIR with a financial support of Rs.22.50 lakhs out of a total project outlay of Rs.45.00 lakhs for Phase-A of the project. The company intends to undertake development of a product (formulation) for preventing iron accumulation in patients with thalassemia.

Arch Pharmalabs Ltd., Mumbai

The project of the company for “Scale up studies for Polymorphic Form-I of Clopidogrel Bisulphate Process” has been

supported by DSIR with a financial support of Rs.57.50 lakhs out of a total project outlay of Rs. 119.268 lakhs for Phase-A of the project. The compound is used as drug for reducing ischemic strokes, heart attacks, etc. Clopidogrel is more effective than Aspirin even at much lower dosage.

ELECTRICAL, ELECTRONICS & COMMUNICATIONS

Coral Telecom Ltd., Noida

The project of the company for “Development of STM-1 based customer premises equipment (CPE)” has been approved with a financial support of Rs. 80 lakhs out of a total Project outlay of Rs. 227 lakhs. The broadband access terminal as per TEC specifications has been developed.

Goldstone Teleservices Ltd., Secunderabad

The project of the company for “Development of technology for manufacture of EHV Composite Insulator for application in 132 KV, 220 KV and 400 KV electrical power T&D lines” has been supported with a grant of Rs. 202 lakhs out of a total project outlay of Rs. 404 lakhs. A new generation insulator for power transmission and distribution utilities greatly minimizing the breakdowns due to insulator failure/replacement has been developed.

MIC Electronics Ltd., Hyderabad

The project of the company for “Development of Fraud Management and Control Centre” has been supported with a grant of Rs. 33 lakhs out of a total project outlay of Rs. 76 lakhhs. CDR collection system has been developed and demonstrated.

Transasia Biomedicals Ltd., Mumbai

The Project of the company for “Development of Fully Automatic High Speed Blood Chemistry Analyser, Model XL-100” has been supported with a grant of Rs. 90 lakhs out of a total project outlay of Rs. 226 lakhs. Three prototypes have been developed and demonstrated.

Rajasthan Electronics & Instruments Ltd., Jaipur

The project of the company for “Development of Animal Identification system through RFID” has been supported with a grant of Rs.20 lakhs out of the total project cost of Rs.52.75 lakhs. The project will help dairy farmers. The prototypes have been developed along with the animal identification system.

Astra Microwave Products Ltd., Hyderabad

The project of the company for “Development of GAAs Low Noise Amplifier MMICs” has been supported with a grant of Rs.40 lakhs out of the total project cost of Rs.105.95 lakhs. A GAAs Low Noise Amplifier MMICs has been successfully developed for the first time.

Abacus Softech Ltd., New Delhi

The project of the company for “Development of upgraded digital voice logger with 32 channels, E-1 and FAX compatibility” has been approved with a support of Rs.75 lakhs out of total project cost of Rs.215 lakhs. This equipment meets the needs of security agencies.

Aptech Ltd., Mumbai

The project of the company for “Development of Learning Content Management System (LCMS)” in collaboration with Indian Institute of Information Technology, Allahabad has

been supported with a grant of Rs 60 lakhs out of a total project outlay of Rs 260 lakhs. The alpha version of LCMS has been developed and is under testing.

NED Energy Ltd., Hyderabad

The project of the company for “Development of High Energy Density Valve regulated Lead acid batteries” in collaboration with Indian Institute of Science, Bangalore has been approved with a financial support of Rs 46 lakhs out of total project cost of Rs 121 lakhs. Prototype has been developed and is under evaluation. Papers were published and patent applications have been filed.

SM Telesys Ltd., Noida and Atal Behari Vajpayee Indian Institute of Information Technology and Management, Gwalior

This joint project for “Development of CTI (Computer Telephony Integration) based Call Centre Software” has been supported with a grant of Rs. 30 lakhs out of a total project outlay of Rs. 85 lakhs. The software package will facilitate adoption of customer friendly marketing practices by small businessmen and professionals.

BEL Optronics Devices Ltd., Pune

The project of the company for “Development of SUPERGEN Image Intensifier tube” has been approved with a financial support of Rs 71 lakhs out of a total project outlay of Rs. 353 lakhs. Significant benefits have accrued from the process spin-offs.

Aishwarya Telecom Private Ltd., Hyderabad

The project of the company for “Development of Optical Time Domain Reflector (OTDR)” in collaboration with Indian Institute of Technology, Chennai has been approved with a financial support of Rs 35 lakhs out of

a total project outlay of Rs 87.19 lakhs. Prototype has been developed and is under testing.

Ardee Business Services Private Ltd., Rourkela

The project of the company for “Development of 19mm dia aluminium granules cored wire and for faster wire feeder” has been approved with a financial support of Rs 70 lakhs out of a total project outlay of Rs 183.50 lakhs.

Celestial Labs Ltd., Hyderabad

The project of the company for “Development of Toxicity Prediction Module and integration with CELSUITE – A Computer Aided Drug Design Tool” has been approved with a financial support of Rs 75 lakhs out of a total project outlay of Rs 291.15 lakhs.

Zen Technologies Ltd., Secunderabad

The project of the company for “Design and Development of 6 DoF Electrical Motion Platform” has been approved with a financial support of Rs 200 lakhs out of a total project outlay of Rs 467 lakhs.

HBL NIFE Power Systems Ltd., Hyderabad

The project of the company for “Development of Tactical Digital Radio Relay” has been approved with a financial support of Rs.154 lakhs out of a total project outlay of Rs 458 lakhs.

Park Controls and Communications Ltd., Bangalore

The project of the company for “Development of Telemetry Receiver” has been approved with a financial support of Rs 125 lakhs out of a total project outlay of Rs 365.13 lakhs.

Radiant Cables Private Ltd., Hyderabad

The project of the company for “Development of (a) low loss RF cables for higher frequency

above 10 GHz, (b) database cable with fire survival, low capacitance dielectric properties, (c) Laser marked loom assemblies” has been approved with a financial support of Rs 62 lakhs out of a total project outlay of Rs 155 lakhs.

Poona Health Services Private Ltd., Pune

The project of the company for “Development of implants for knee joints” has been approved with a financial support of Rs 120 lakhs out of a total project outlay of Rs 290 lakhs.

MECHANICAL ENGINEERING

PSG Industrial Institute, Coimbatore

The Project of the company for “Development of Frequency Converter / Controller and High Frequency Submersible Motor Pump Sets For Irrigation” has been supported with a financial support of Rs. 6 lakhs out of a total Project outlay of Rs. 13 lakhs. The motor for this pump has been specifically designed, fabricated and tested at full load. The pump and controller has been designed and developed. This project is likely to create a good demand in the agricultural sector. The project has been completed.

Central Electronics Ltd., Sahibabad

The Project of the company for “Development of Digital Axle Counter” has been supported with a financial support of Rs. 70 lakhs out of a total Project outlay of Rs. 146 lakhs. Single section digital axle counter has been completed and approved by RDSO. The complete system now is being supplied to Indian Railways. The prototype of the multi section axle counter has been developed and offered to RDSO and installed at Faridabad for testing and inspection.

Parag Fans and Cooling Systems Ltd., Dewas

The Project of the company for “Development of Energy Efficient Fan System” has been supported with a financial support of Rs. 28 lakhs out of a total Project outlay of Rs. 72 lakhs. The prototype fans of 1400 and 1600 mm sizes have been designed and fabricated using the FRP. Both the fans have been tested on the conventional fan systems. The fabrication of 1400 mm fan system has been completed and tested in-house and fabrication of 1600 mm fan system has also been completed and tested in-house.

Mecpro Heavy Engineering Ltd., New Delhi

The project of the company for “Design, development and demonstration of Technology for continuous Hydrogenation system in the Fatty Acids and Oleo Chemical Plant” has been supported with a financial support of Rs.75 lakhs out of a total project cost of Rs.145 lakhs. . The project aims at developing a new continuous hydrogenation process technology to improve upon the conventional process, its process efficiency, savings in energy and consumption of vehicle catalysts and reducing the wastes generated in the process besides improving product quality and productivity. The design of equipment and system has been completed. The critical equipment for the plant has been fabricated. The project is in progress.

Priya Klay Pvt. Ltd., New Delhi

The project of the company for “Developing a manufacturing system at par with international technologies for production of large diameters (600-1000 mm) and long stoneware / vitrified pipes of 1.5 to 2.5 meters” has been supported with a financial support of Rs.60 lakhs out of a total project cost of Rs.148 lakhs. This involves design,

prototype development and fabrication of pipe extruder, pipe-trimming attachment, and pipe handling units, pan mill and electric control panels. Specifications and engineering designs for extruder and the pan mill have been completed. The castings for shafts, gearbox housing and other components have been fabricated. Sub-assembly design details for extruder and other equipments have been finalized and procured. The project is in progress.

Process Pumps Engineering (India) Ltd., Bangalore

The Project of the company for “Development of Energy Efficient Pumps” has been supported with a financial support of Rs.14.50 lakhs out of a total Project outlay of Rs.48.00 lakhs. The project involves Design of impeller vane profile, modelling the above designed impeller by 3-D modelling packages like Pro-E/Unigraphics, Making the prototypes by using in-house conventional methods. The project is under progress.

Bull Machines Pvt. Ltd., Coimbatore

The project of the company for “Design, Development & Demonstration of Innovative Equipments for improved organic manure from municipal solid waste at a pilot scale” has been supported with a financial support of Rs.85 lakhs out of total project cost of Rs.195.85 lakhs. The project is under progress.

METALLURGY

Fluidtherm Technology Pvt. Ltd., Chennai

The project of the company for “Developing a Novel Heat Treatment Furnace” has been supported with a financial support of Rs.50 lakhs out of the total project cost of Rs.149.30 lakhs. For design and development of a versatile heat treatment / carburising furnace,

which will combine the advantages of both batch, sealed quench furnaces and continuous conveyor belt furnaces. The fabrication of the furnace has been completed and trials are being taken up.

Orient Software Pvt. Ltd., Bangalore

The project of the company for “Development of system for aiding in the intelligent computer aided design for casting” in collaboration with Indian Institute of Science, Bangalore has been supported with a financial support of Rs. 25 lakhs out of a total Project outlay of Rs. 53.68 lakhs. The project is to develop a unique software that would greatly facilitate the designers for designing components which are amenable for development using casting process.

Sankar Sealing Systems (P) Ltd., Chennai

The project of the company for “Development and Indigenising of Asbestos Free Cylinder Head Gaskets for TATA Indica Diesel Cars” has been supported with a financial support of Rs. 22 lakhs out of a total Project outlay of Rs. 69.70 lakhs. For the project, the graphite sheets are being manufactured and supplied by ARC-I, Hyderabad, to Sankar Sealing Systems (P) Ltd., who in turn is developing the gaskets. The gaskets made from these sheets are under testing.

Tamilnadu Zari Ltd., Kancheepuram

The project of the company for “Establishment of a Technology Demonstration Facility for Super Fine Wire Drawing of Silver Alloy for ZARI Application” in association with NFTDC, Hyderabad has been supported with a financial support of Rs. 19 lakhs out of a total Project outlay of Rs. 69.96 lakhs. The technology and the design of the stands has been provided by NFTDC. NFTDC has also fabricated the stand and has transferred the

same to Tamilnadu Zari for trials and for training of manpower.

MISCELLANEOUS

Maharashtra State Seeds Corporation Ltd. (MSSCL), Akola and National Chemical Laboratory (NCL), Pune

The project for “Development and Testing of Mini Dry HCL Gas Cotton Seed Delinting Plant” had been supported with a financial support of Rs.31 lakhs out of total project cost of Rs.93 lakhs. The fabrication of the plant is completed. The delinted seeds are under test marketing.

Bharat Heavy Electricals Ltd. (Ceramic Business Unit), Bangalore and National Chemical Laboratory, Pune

The project for “Design and manufacture of prototype Ceramic Filtration Unit for production of safe domestic drinking water” has been supported with a financial support of Rs.70 lakhs out of the total project cost of Rs.149 lakhs. The work involving optimisation of the testing procedure and the process parameters for fabrication of support membrane has been completed.

MATA Foundation, New Delhi and CFTRI, Mysore

The project for “Integrated pilot demonstration plant for fruit processing” has been supported with a financial support of Rs.100 lakhs out of the total project cost of Rs.319.79 lakhs. North-Eastern states grow a variety of quality fruits namely oranges, pineapples, passion fruits etc. Machinery based on CFTRI’s technology has been delivered on site and the erection and commissioning of the same is underway.

1.3 Customs Duty Exemption Certificate

In pursuance to Customs Notification No.50/96 Customs dated July 23, 1996 for Customs Duty Exemption on components, consumables, equipments etc. used in R&D projects supported by Government, 8 Customs Duty Exemption certificates for nearly Rs. 86.49 lakhs worth of components and consumables under three technology development projects supported under Technology Development and Demonstration Programme of DSIR have been issued.

2. TECHNOPRENEUR PROMOTION PROGRAMME (TePP)

Department of Scientific and Industrial Research (DSIR) under its Technology Development and Innovation Programme of TPDU Scheme and Technology Information Forecasting and Assessment Council (TIFAC) of Department of Science and Technology (DST) jointly operate “Technopreneur Promotion Programme (TePP)”. TePP endeavour to tap the vast innovative potential of the citizens of India. Financial support is provided to individual innovators having original ideas to convert them into working models, prototypes etc. It is expected that ten new projects would be supported during the whole financial year of 2005-2006 by DSIR. The details of the completed, on-going and approved projects supported under TePP during the year under report are given in **Annexure 7**.

3. OTHER ACTIVITIES

DSIR participated in a number of exhibitions to showcase the strengths and capabilities of

R&D projects supported under TDDP and TePP .

- “TECHNICHE 2005” at Indian Institute of Technology Guwahati, North Guwahati (Assam) from 2nd – 4th September, 2005
- “Technology Bazar” at FAPCCI, Hyderabad on 27th August, 2005
- “Pride of India-Science Expo 2006” during Indian Science Congress at Hyderabad from 3rd – 7th January, 2006.

The aim of these exhibitions was to disseminate information on DSIR activities to its clientele. Apart from TDDP (earlier PATSER) supported companies, a number of innovators supported under TePP scheme exhibited their achievements with the help of prototype/models, charts etc. during the exhibitions.

4 EXPECTED OUTPUTS AND BENEFITS

The completed technology development projects supported have resulted in significant technological and commercial returns to the industries concerned such as cost reduction, higher quality, improved products and processes as well as foreign exchange savings, while building up the R&D capabilities of the industrial units. The on-going projects are expected to result in high commercial / societal impact and will lead to commercialisation and utilisation of ‘state of the art’ technologies. There have been useful interactions and linkages with other concerned Government departments, National Research Organisations and users during evaluation, approval and implementation of various projects supported under the scheme.



Pilot Plant for Development of Next Generation Amino Silicon Based on Hydrosilation Technology



*Pilot Plant for Development of Azodirachitin-A
Technical from Neem Seeds Kernel & its formulations*



Robot for Fire Fighting
(Supported by DSIR/TePP)



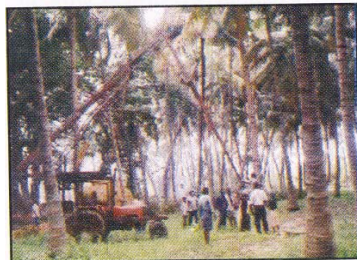
Solar Water Heater
(Supported by DSIR/TePP)



Energy Efficient Oil Expeller Machine
(Supported by DSIR/TePP)



Motorcycle Driven Plough
(Supported by DSIR/TePP)



Coconut harvester
(Supported by TIFAC/TePP)



ZADD clamping for the



Quick & Consistent



Dr. R.A. Mashelkar, Secretary, DSIR releasing the TePP publication entitled 'CREATIVE INDIA' during 93rd Session of ISC at Hyderabad (3rd January 2006)



Secretary, DSIR with Women Entrepreneurs at Creative India Pavilion, ANGRAU, Hyderabad



View of 93rd ISC Award Ceremony : TePP Pavilion got 1st Prize in the Most Innovative Exhibit Category