

### Details of Projects supported under Technology Development and Demonstration Programme

Sl. No.	Title of the Project	Executing Agency	Collaborating Agency	Budget (Rs. in lakhs)		Status
				Total	DSIR	
<b>Chemical and Fertilizers</b>						
1	Technology Development of High Purity Calcium Cyanamide	Canpex Chemicals Pvt. Ltd., Pune		121.00	35.00	Nearing Completion
2	Development of Indigenous Technology for Phenanthrene and 9:10 Phenanthrenequinone	Castron Technologies Ltd., Dhanbad	Central Fuel Research Institute, Dhanabad	77.00	35.00	Nearing Completion
3	Development of Heat Resistant Explosives	IBP Co. Ltd., Gurgaon.	Central Mining Research Institute, Dhanbad	65.40	18.50	Nearing Completion
4	Development of Pilot Level Anaerobic Reactor to Pharmaceutical Waste	NATCO Pharma Ltd, Hyderabad	Indian Institute of Chemical Technology, Hyderabad	98.00	30.00	Nearing Completion
5	Development of Technology for Tetra Bromo Bisphenol-A (TBBA)	Solaris Chemtech Ltd., Gurgaon (Formerly BILT Chemicals Ltd.), Gurgaon		1447.00	350.00	Nearing Completion
6	Development of Carnon-di-oxide Route for the Manufacture of Barium Carbonate	TCM Ltd., Bangalore		140.00	30.00	Nearing Completion
7	Development of Stable Oil in Water Ink Emulsion, based upon Water Reducible Nigrosine Dyes for Ink Jet Computer Printers	Anirox Pigments Ltd., Calcutta (Unit at Dhanbad)		147.00	50.00	Under Progress

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8	Development of Process for manufacture of 1-Bromo-3-Chloro Propane (B.C.P.) & 1, 3-Dibromo Propane (D.B.P.) in Pilot Plant	Anu's Laboratories Ltd., Hyderabad		130.00	64.00	Under Progress
9	Development of Technology for State of Art Coal Tar Pitch and Carbon Paste	Carbon Resources Pvt. Ltd., Giridih		86.00	37.00	Under Progress
10	Development of Next Generation Amino Silicone based on hydrosilation process	Elkay Chemicals Ltd., Pune		83.00	30.00	Under Progress
11	Development of Membrane Technology for Natural gas Separation	Engineers India Ltd., Gurgaon	Indian Institute of Chemical Technology, Hyderabad	148.00	42.00	Under Progress
12	Identification, Development and Utilisation of Natural Dyes from the Forest Plants of Uttranchal	Forest Research Institute, Dehradun		61.32	25.16	Under Progress
13	Development of Azadirachtin-A from Neem Seeds Kernel	General Exports & Credits Ltd., New Delhi	Dalmia Centre for Res-earch and Development Coimbatore and Indian Institute of Chemical Technology, Hyderabad	248.97	65.00	Under Progress
14	Development of Technology for Cross linked polyurethane Dispersions	Haryana Leather Chemicals Ltd., Jind, Haryana		136.65	50.00	Under Progress
15	Development of (i) Water-based flexo inks used for absorbent stock	Organic Coatings Limited, Mumbai		91.6	25.00	Under Progress

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	(craft paper) and coated stock (art paper, etc.) and (ii) UV radiation curing inks used for coated stock and non-absorbent substrates such as PVC, polyester, etc.					
16	Coating of Chemical Process Equipment with Fluoropolymers and other High Performance Powders	Pennwalt India Ltd., Mumbai		67.05	20.00	Under Progress
<b>Drugs and Pharmaceuticals</b>						
17	Development of Process of manufacture of Pyrazinamide	Southern Petrochemical Industries Corporation Ltd., Chennai	Indian Institute of Chemical Technology, Hyderabad	520.00	219.50	Completed
18	Development of Novel Resins for use in Solid Phase Organic Synthesis and Combinatorial Chemistry	Bharavi Laboratories Pvt. Ltd., Bangalore		66.05	20.45	Nearing Completion
19	Pilot Scale Manufacture of Hyaluronic Acid Formulations	Gland Pharma Ltd., Hyderabad		139.05	46.00	Nearing Completion
20	Scaleup Process Development of Liposomal Amphotericin B, Awareness Programme & Clinical Performance Trial	Lifecare Innovations Pvt. Ltd., New Delhi		149.76	50.00	Nearing Completion
21	Development of Technology for 3-Chloromethyl- $\Delta^3$ -Cephem Ester from Pen GK	SPIC Ltd., (Pharmaceutical Division), Chennai	CECRI, Karaikudi	149.45	66.00	Nearing Completion
22	Development of Process for the manufacture of Ethyl 2-(2-aminothiazol-4-yl)-2-	M/s. Punjab Chemicals & Pharmaceuticals Ltd., Chandigarh		141.00	65.00	Under Progress

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	methoxyiminoacetate and 2-formylamino-4-thazole acetic acid ethyl ester in Pilot Plant					
23	Development of Active Pharmaceutical Ingredients (API), API Intermediates and Metal Acetylacetonates	M/s. SMS Pharmaceuticals Ltd., Hyderabad	Indian Institute of Chemical Technology (IICT), Hyderabad and Indian Institute of Technology Guwahati, Guwahati	475.00	135.00	Under Progress
24	Development of an Improved Tilting Disc Heart Valve Prosthesis	TTK Healthcare Ltd., Bangalore	Sree Chitra Tirunal Institute for Medical Sciences and Technology, (SCTIMST), Trivandrum	90.42	40.00	Under Progress
<b>Electrical, Electronics and Communication</b>						
25	Development of hand held optical test equipment	Aiswarya Telecom Pvt Ltd, Hyderabad		20.00	5.00	Completed
26	RAMDARS-Coal dry Beneficial system	Ardee Business Services Pvt. Ltd., Vishakhapatnam		147.30	70.00	Completed
27	Development of Metal Halide Lamps Including ARC Tube And Electronic Control Gear	Autopal Industries Ltd., Jaipur		145.00	50.00	Completed
28	Development Voice Enabled Web	Innovative Communications System Ltd., Hyderabad		51.14	13.50	Completed
29	Innovative Microelectronic Packaging Technology for Automobile Under Hood Applications	Karnataka Hybrid Microdevices Ltd., Bangalore		101.00	38.00	Completed
30	Setting up a pilot plant for production of Cellulose Silica	Punjab Agro Industries Corporation, Chandigarh		210.00	100.00	Completed

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	Lignin and Protein Rich Food for Human Consumption from Rice Straw					
31	Development of Miniature DC/DC Convertor for Line Cards	S M Creative Electronics Ltd., Gurgaon		28.60	10.00	Completed
32	Development of Technology For Production of Single Chip Telephone ICs and Telephone Instruments Based on Single Chip Telephone ICs	Semiconductor Complex Ltd., Chandigarh	Bharati Telecom Ltd., New Delhi	89.00	35.00	Completed
33	Development of Bilingual Pager based on ASIC	Semiconductor Complex Ltd., Chandigarh and S M Electronics & Services Ltd., New Delhi (Now Known as S M Telesys Ltd).		94.90	40.00	Completed
34	Design & Development of ADSL (Asymmetric Digital Subscriber Line)	United Telecoms Ltd., Bangalore		127.00	55.00	Completed
35	Development of ATM Access Multiplexer	United Telecoms Ltd., Bangalore		134.90	40.50	Completed
36	Development of Computerised Braille Transcription Systems for automatic and speeded transcription of English and Indian language texts.	Webel Mediatronics Ltd., Kolkata	Jadavpur University, Kolkata	32.00	16.00	Completed
37	Development of Hybrid Electric Vehicle With Vector Controlled Induction Motor for Propulsion	Ashok Leyland Ltd., Chennai	Electronics Research Development Centre of India, Thiruvananthapuram	134.00	45.00	Nearing Completion

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38	Development of Flame Retardant Low Smoke material for wire and cables for sheathing applications	Farcom Cable Systems Pvt. Ltd., Bangalore	Central Power Research Institute, Bangalore	104.50	50.00	Nearing Completion
39	Design, Development and Trial and Testing of Mak World Tracker	Mak Controls and Systems (P) Ltd., Coimbatore		253.88	92.00	Nearing Completion
40	Design & Development of Indigenous Pacemaker Based on Single Chip and The Programming Unit	Semiconductor Complex Ltd., Chandigarh and Shree Pacetronix Ltd., Indore		90.00	4000	Nearing Completion
41	Development of Fully Automatic High Speed Blood Chemistry Analyser, Model XL-100	Transasia Biomedicals Ltd., Mumbai		226.00	90.00	Nearing Completion
42	Development of Digital Voice cum Fax Logger	Abacus softech Ltd, New Delhi		215.00	75.00	Under Progress
43	Development of Optical Test & Measuring Equipments (Optical Talk set, Optical variable attenuator, Optical Power Meter-Type A).	Aishwarya Telecom Pvt.. Ltd., Hyderabad.		43.80	18.00	Under Progress
44	Development of Learning Content Management System with an Intelligent Authoring Tool	APTECH Ltd, Mumbai	Indian Institute of Information Technology, Allahabad	260.00	60.00	Under Progress
45	Development of SUPERGEN Image Intensifier tube	BEL Optronics Devices Limited, Pune		353.00	71.00	Under Progress
46	Design and manufacture of prototype ceramic membrane filtration unit for production of safe domestic drinking water	Bharat Heavy Electricals Ltd., Electro Percellain Division, Bangalore		149.00	69.50	Under Progress

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47	Development of ASIC based Electronic Energy Meter	Bharat Heavy Electricals Ltd., Bangalore and Semiconductor Complex Ltd., Chandigarh	National Chemical Laboratory, Pune	46.00	23.00	Under Progress
48	Development of Digital Axle Counter	Central Electronics Ltd, Sahibabad		146.00	70.00	Under Progress
49	Development of STM-1 based Customer Premises Equipment (CPE)	Coral Telecom Limited, Noida		227.00	80.00	Under Progress
50	Development of technology for manufacture of Composite Insulator for application in 132 KV, 220KB & 400KV electrical power T&D lines	Goldstone Teleservices Ltd, Secunderabad		467.00	200.00	Under Progress
51	Development of Fraud Management and Control Centre	MIC Electronics Ltd, Hyderabad		76.00	33.00	Under Progress
52	Development of High Energy Density Valve regulated Lead acid batteries	NED Energy Limited, Hyderabad		121.00	46.00	Under Progress
53	Development of CASH	Pan India Electromech Pvt Ltd, Gurgaon		18.00	8.00	Under Progress
54	Design, development and manufacture of 5 3/4 Digit & 6 3/4 Digit Multimeters	Rishabh Instruments Private Ltd., Nashik		135.70	55.00	Under Progress
55	Development of Radar Level Gauging System	SB Electro- Mech-anical (P) Ltd., Pune		34.62	16.49	Under Progress
56	Development of CTI (Computer Telephony Integration) based Call Center Software.	Sm Telesys Ltd (SMTL), Noida	Atal Bihari Vajpayee Indian Institute of Information Technology and Management (ABV-IITM), Gwalior	85.00	30.00	Under Progress

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57	Development of Optical Pickup for CD Mechanism	Trident Industries Ltd., New Delhi	Central Scientific Instruments Organisation, Chandigarh	128.00	40.00	Under Progress
<b>Mechanical Engineering</b>						
58	Development of P.C. based CNC Machining system	Ace Designers Pvt. Ltd., Bangalore	Central Manufacturing Technology Institute, Bangalore	99.13	35	Completed
59	Development of cast crank shafts for high power engine	Bharat Earth Movers Ltd., Bangalore	Indian Institute of Science, Bangalore	67.00	27.00	Completed
60	Technology Development & Demonstration of Continuous Hydrogenation System for Fatty acids and Oleo Chemicals plants	Mecpro Heavy Engg. Ltd., New Delhi		145.00	30.00	Completed
61	Development of Low Cost Gas Turbine (LCGT) generator set of 500 KW power class, with multi fuel capability (biogas, piped natural gas and diesel fuel)	Turbotech Precision Engineering Pvt. Ltd., Bangalore	National Aerospace Laboratories, Bangalore	361	87.37	Completed
62	Design and Development of Load Cells	Atcom Technologies Ltd., Mumbai		149.00	68.00	Nearing Completion
63	Improved Technology for the manufacture of Automotive Wheel Discs for Cars	Steel Strip Wheel Ltd., Chandigarh		130.60	50.00	Nearing Completion
64	Technology Development of Microbalance of 200gm. Capacity with 1mg accuracy	Bharat Earth Movers Ltd., Bangalore		76.30	28.50	Under Progress
65	Development of Twin Casing Fly Ash Slurry Pump	Bharat Pumps and Compressors Ltd., Allahabad		60	25	Under Progress



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66	Development of Aluminium Cylinders for liquefied Gases	Klas Tech. Ventures Ltd., Bangalore		140.00	60.00	Under Progress
67	Development and Demonstration of eco-friendly and efficient edible oil	Mecpro Heavy Engg. Ltd., New Delhi		120.00	50.00	Under Progress
68	Development of Frequency Converter/ Controller and High Frequency Submersible Motor Pump Sets For Irrigation	P S G Industrial Institute, Coimbatore		13	6	Under Progress
69	Development of Energy Efficient Fan System	Parag Fans And Cooling Systems Ltd., Dewas		72	28	Under Progress
70	Development of Technology and equipment for production of large diameter long stoneware / vitrified clay pipe	Priya Klay Pvt. Ltd., New Delhi		148.00	60.00	Under Progress
	<b>Metallurgy</b>					
71	Developing a Novel Heat Treatment Furnace	Fluidtherm Technology Pvt. Ltd., Chennai		149.3	50	Under Progress
72	Recovery of Gallium from Sodium Aluminate Liquor	National Aluminium Co. Ltd., Bhubaneswar		1277	217	Under Progress
73	Development of system for aiding in the intelligent computer aided design for casting	Orient Software Pvt. Ltd., Bangalore	Indian Institute of Science, Bangalore	53.68	25	Under Progress
74	Development and Indigenising of Asbestos Free Cylinder Head Gaskets for TATA Indica Diesel Cars	Sankar Sealing Systems (P) Ltd., Chennai	ARC-I, Hyderabad	69.7	27	Under Progress

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75	Establishment of a Technology Demonstration Facility for Super Fine Wire Drawing of Silver Alloy for ZARI Application	Tamilnadu Zari Ltd., Kancheepuram	NFTDC, Hyderabad	69.96	19	Under Progress
<b>Miscellaneous</b>						
76	Studies on Gainful Utilization of Marble Waste.	Central Building Research Institute, Roorkee and Central Power Research Institute, Bangalore		11.50	11.50	Completed
77	Integrated Pilot Demonstration Plant for Spice Processing.	MATA Foundation, New Delhi	Regional Research Laboratory, Thiruvananthapuram	135.55	60.00	Completed
78	Design and Manufacture of Prototype Ceramic Filtration Unit for production of safe domestic drinking water	Bharat Heavy Electricals Ltd., (CBU), Bangalore	National Chemical Laboratory, Pune	149.00	69.50	Under Progress
79	Development and Testing of Mini Dry HCL Gas Cotton Seed Delinting Plant.	Maharashtra State Seeds Corporation Ltd., Akola	National Chemical Laboratory, Pune	93.00	31.00	Under Progress
80	Integrated pilot demonstration plant for fruit processing unit	MATA Foundation, New Delhi	Central Food Technological Research Institute, Mysore	319.79	100.00	Under Progress
81	Construction of a 750 Mt. Demonstration Test Road Stretch using Marble Slurry Dust (MSD) in KOTELA Village of Rajsamand district.	Rajasthan Government, Udaipur Chamber of Commerce & Industry, Udaipur	Central Road Research Institute, New Delhi	19.38	9.00	Under Progress