Protech Consultants PVT. LTD.
173 (Old # 77/1), T.T.K.Road, Alwarpet, Chennai 600 018, INDIA
Tel : 00 - 91 - 44 - 2499 0416, 2499 4873, Fax : 00 - 91 - 44 - 2499 2167
prasad@md2.vsnl.net.in, protechconsultants@airtelbroadband.in
sales@protechchennai.com

Protech Consultants

Practicing Innovations leads to success

Organization Objectives

PROTECH CONSULTANTS PRIVATE LIMITED (PROTECH) is a reputed Project Engineering Consultancy Company carrying out Engineering and Consultancy Services to the Chemical Industry in India and abroad. Established in 1986 and with its office in Chennai, it has contributed in good measure to improvement in performance and increased competitiveness of many of the key players in the Indian Chemical Industry. Late Sri C.P.Saranathan, a well known personality and the former Senior Vice President of Chemplast Sanmar Ltd., Mettur Dam, was a Founder Director. Protech Consultants grew from strength to strength under his valuable guidance, expertise and vision.

In the post economic reform period in the Indian business scene, the Indian Chemical Industry has faced pressure on margins due to drop in end product prices (with increased domestic and International competition) and increased input material costs. Improving global competitiveness is paramount for survival and continued profitability. PROTECH offers highly specialized expert services to effect substantial cost improvements through Process changes, Product changes, Process development, reduction in fixed cost per unit through expansion of existing facilities, effective utilization of waste streams / by products, etc. PROTECH helps Clients stay agile and respond better to latest technological developments and help them to achieve excellence.
Whether you are planning a completely new process plant or contemplating an expansion / modernization / revamp of your existing production facilities, PROTECH offers its service in the fields of Pre-investment Studies, Basic and Detailed Engineering, Project Management, Procurement Assistance, Construction and Commissioning Assistance to ensure effective project completion within stipulated time and cost, and actualizing projects results.

We maintain an excellent after sales service to our clients. We periodically interact with our clients and provide any assistance required by them from time to time for the assignment completed. We represent our clients in a professional manner, adhering to our profession's codes of ethics while maintaining excellent working relationships.

Environment management has assumed increasing importance over the last decade and the Chemical Industry in particular has been under tremendous pressure from Pollution control boards, NGOs, people of nearby residential areas to continuously improve effluent treatment and reduce pollutant load. PROTECH has the necessary expertise to help plants solve their waste management problems.

PROTECH also offers turnkey supply of special systems to the Inorganic and Organic chemical industry.

Digitization of engineering drawings is another area of special focus.

PROTECH is approved by CCOE, Nagpur as a competent Agency to carry out inspection of Storage Tanks and mountings under SMPV and Petroleum Rules.

Our multi disciplinary perspective can point the way to significant savings, by helping companies to:

- Optimize operational efficiency
- Reduce risk & liability
- Reduce or eliminate regulatory fees, fines & penalties.

Pre-Investment Studies

The corporate sector has to be very selective in choice of project before investment of capital. The project must be financially viable, technically sound and have a market for the projects that are envisaged. In order to help company management to arrive at the right decision, PROTECH carries out feasibility studies and preparation of project reports, selection and evaluation of processes and technology.

Protech offers the following services for projects in the planning stage

- Location Study
- Selection of Technology
- Project viability studies
- Estimation of Plant costs
- Preparation of detailed project report
- Assistance in obtaining statutory & government approvals

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Basic Engineering

Over the years, Protech has developed Basic Engineering expertise in many areas. PROTECH has a team of experienced Process Engineers who are capable of carrying out basic design of process plants from pilot plant level by close interaction with the technologies involved in process development.Following are the list of works done under Basic Engineering:

Process

- Process Description
- Specification of raw materials and utilities.
- Specification of finished product and co-product and their capacities.
- Details of effluent generated in the plant and their treatment to meet the emission standards as per statutory requirement.
- Process Flow diagram with over all mass balance data.
- Preliminary Piping & Instrumentation diagram (P&ID) for process section and utilities.
- Process control and interlock description
- Utility consumption data
- Valve Classification
- Valve List

Mechanical

- Equipment list

Piping

- Basic piping specification
- Piping Line List

Instrumentation

- Preliminary Instrument Summary.
- Preliminary Input / Output (I/O) list for DCS

Electrical

- Preliminary Electrical Consumer List

Project Engineering

- Project schedule bar chart
- Potential Vendor list

Detail Engineering

Process

- Upgradation and finalization of P & I Diagrams
- Instrument process data sheet.
- Preparation of Operation Manual.
- Carrying out Hazop Studies for addressing safety related issues of the plant.

Mechanical

- Preparation of equipment layout drawings – Plan & Elevation.
- Preparation of mechanical data sheet for all fabricated equipment such as Vessels, Tanks, Heat Exchangers etc. (NOT FABRICATION DRAWINGS)
- Preparation of specification sheet for bought out items like pumps, valves, blowers, conveyors etc.
- Verification and approval of vendor's fabrication drawings for fabricated equipment
- Verification and approval of vendor's documents / drawings for package units.
- Preparation of specification and schedule for mechanical erection of equipment for tender purpose.

Piping

- Piping layouts – Plan & elevation (including all process and utility service lines).
- Isometric drawings for Pipes equal to and larger than 50 NB size (for all process and utility service lines).
- Piping supports – standard spec. drawings only
- Piping support list and location (in Isometric or Plan)
- Piping Bill of Material.
- Preparation of specification & schedule for piping erection for tender purpose.
- Preparation of insulation specification and schedule for tender purpose.
- Preparation of painting specification and schedule for tender purpose

Instrumentation

- Final Instrument Summary.
- Instrument data sheet for all the field instruments.
- Instrument Loop schematics
- Instrument Layout and recommended cable tray routing drawing (within battery limit)
- Instrument installation drawing
- Interlock description (if any)
- List of alarm points with settings and ranges
- Instrument cable / wiring schedule
- Material take-off for instrument cables, cable trays, tray supports etc.
- Material take-off for field instrument installation hardware.
- I / O List.
- Specification for DCS / PLC system.

Electrical

- Electrical consumer list
- Preparation of Single line diagram
- Motor location drawings.
- Cable / Cable tray routing drawings
- Preparation of specification for electrical equipment, PCC, MCC. Panels, Push Button station, LT cables etc
- BOQ for cable, cable tray and earthing
- Design of lighting system
- Design of earthing and lightning protection system
- Preparation of Electrical Tender
- Floating of Electrical Tender, including terms & conditions to various vendors and preparation of bid analysis for electrical installation work.

Civil Engineering

- Preparation of Plot plan.
- Preparation of foundation layout and load data drawings for civil design purpose.
- Detailed Civil Drawings for plant buildings, utility area, drains, equipment foundation, pipe / cable racks etc.
- Preparation of Bill of Quantities for cement, concrete & steel.
- Preparation of Civil Tender.
- Floating of Civil Tender, including terms & conditions to various vendors and preparation of bid analysis for civil construction work.

Procurement Assistance

- Preparation of enquiry specification and forwarding it to vendors as per approved vendor list.
- Evaluation of bids technically and obtaining necessary technical clarifications from vendors, wherever required.
- Bid evaluation and preparation of technical recommendation for order placement.

Project Management

The effectiveness of managing a project is actualisation of the project deliverables in time and within the original budgetary cost. The overrun on cost and time can be very debilitating and can kill a project at the start itself. Experience in project management and use of modern monitoring and control techniques, good appreciation of technology, knowledge of the fabrication market, right vendor selection and excellent co-ordination between different activities like civil, electrical, mechanical, etc. are needed for effective project management. The directors of PROTECH have long experience in project implementation and assisted by a team of able engineers can take over the responsibility for project execution for any company. The project management of the company will have the strength of an experienced team standing by them as it is not possible for a conventional manufacturing organization to afford a full fledged project management team whose services may not be required once the project is commissioned.

Construction and Commissioning Assistance

Experienced Mechanical & Piping Engineers are available for supervision of Erection & Precommissioning activities and fully experienced process engineers are available for supervision of start-up & commissioning of the plant and also to provide valuable guidance to the Client's operating staff during the occurence of any troubleshooting.

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Infrastructure and Facilities

PROTECH is centrally located in Chennai with an area of 3000 square feet of well furnished and equipped engineering office and has all latest communication facilities.

PROTECH employs internationally accepted codes and standards in their engineering and follows modern Project management techniques.

Following are the facilities available.

- Engineering Workstations with latest software & attached devices like high speed thermal plotters and scanners.
- Office computing is done through a highly efficient LAN system with dedicated HP servers and a backbone of fiber optics.
- Connectivity to the internet through a high speed broad band network which helps the company to communicate and provide technical support very efficiently.
- Engineering drawings prepared in Autocad Release 2010.
- Library housing the latest technical journals and engineering books.

Protech has

- About 25,000 Process / Project Engineering Hours per annum.
- About 20,000 Mechanical Engineering Hours per annum.
- About 35,000 Piping Engineering / drafting Hours per annum.
- About 7,000 Electrical Engineering Hours per annum.
- About 20,000 Civil Engineering Hours per annum.

Background of Key Personnel

Mr. P.N. Srinivasan, Director

Mr. P.N. Srinivasan, Director is a Chemical Engineer with 40 years experience in Chemical Industries. He worked with M/s DCW Ltd, a leading manufacturer of Caustic/Chlorine, Trichlorethylene and other chemicals, from the project implementation stage and has wide experience in Project Execution, Installation and Commissioning.

Mr. R. Narasimhan, Director

Mr. R. Narasimhan, Director is a Chemical Engineer with 35 years Industrial experience. He worked with M/s. DCW Limited, in their Caustic Chlorine Plant at Sahupuram, Tamil Nadu where he gained operating experience in Caustic/Chlorine and related plants. He later joined M/s. Mico Farms Chemicals Ltd., which was manufacturing technical grade pesticides and formulations, implemented the Project and served them for 20 years.

Dr. N. Rangaprasad, Director

Dr. N. Rangaprasad, Director is a Chemical Engineer with Post Graduate Degree from Indian Institute of Science, Bangalore and Doctorate from University of Oklahama, USA with over 30 years experience in Plant & Process Design and Supervision of Erection and Commissioning of several medium and large scale chemical process plants. He has specialized in developing engineering concepts for various projects.

Mr.S.Paramesh, General Manager – Mechanical

S.Paramesh is a mechanical engineer who has been in the field of detail engineering of chemical & process plants since 1986. He has exposure in the fields of project engineering, procurement assistance, inspection, construction supervision & pre-commissioning activities. He has specialized in the areas of plant layout & piping.

Mr.V.S.Mohanarangan, General Manager – Piping

V.S.Mohanarangan is a piping engineer and has more than 27 years of experience in engineering of complex piping systems. His main specialization includes piping design of Chlorine Di-Oxide plants and also of caustic evaporation & flaking units. He has supervised the erection of equipment & piping systems for several chemical plants.

Mr. R.Venkatkrishna, Manager – Process

R.Venkatkrishna is a Chemical Engineer from National Institute of Technology (NIT), Trichy and a post graduate in Business Administration from Loyola Institute of Business Administration (LIBA), Chennai. He has over 5 years of experience in the areas of industrial & edible salt, caustic soda and other chemical projects. He has specialized in the areas of project management & formulation of process design concepts

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