

Our expertise at your service for engineering & technology solutions

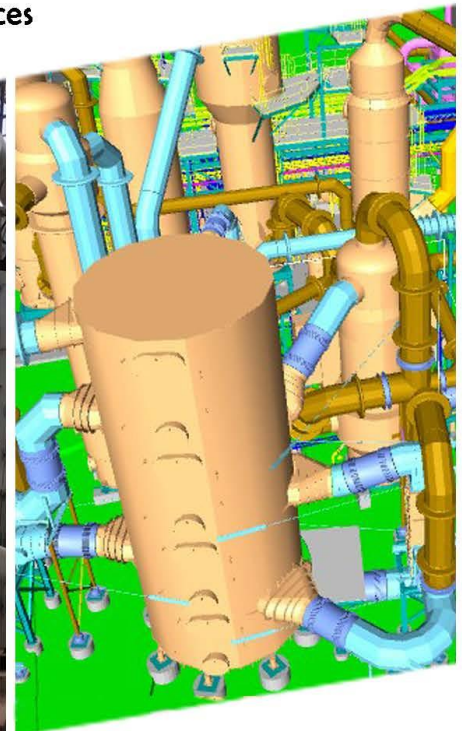
Proud to be the only Indian Company providing PMC services
for three large Acid Plant projects presently



1650 TPD Sulphuric Acid Plant,
Coromandel International Ltd., Visakhapatnam
Commissioned - August 2023



2000 TPD Sulphuric Acid Plant,
IFFCO Paradeep Unit, Paradeep
Construction nearing Completion



1500 TPD Sulphuric Acid Plant,
Paradeep Phosphates Ltd., Paradeep
In Design Stage

*Images Not Actual, Representative Purpose Only

Our Services

- * Technology, Basic & Detail Engineering
- * Bankable Feasibility Reports
- * PMC Services / Owner's Engineer

Fertilizer & Chemicals Industry

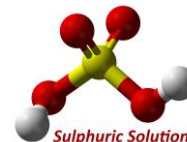
Sulphuric Acid Plants
Phosphoric Acid Concentration Units
Single Super Phosphate (SSP) Plants
Scrubbing Systems

Shiv Sulphuric Solutions (OPC) Pvt. Ltd.

Regd. Off.: B-2104, Jasmine Towers, Vasant Vihar, Thane - 400 610, India

Phone: +919920468142 | Email: services@sulphuric.biz

www.sulphuricsolutions.com | www.linkedin.com/company/shiv-sulphuric-solutions/



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Table 1 – Projects Completed by Shiv Sulphuric Solutions (OPC) Pvt. Ltd.

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Sulphur, March-April 2022 Issue Advertisement

1.1. Introduction

CONFERENCE REPORT

manpower and mobilization of personnel. After the first Covid wave, plant commissioning activities resumed with limited manpower.

Remote start-up of sulphur recovery units
Jan Willem Hennipman of Comprimo recounted how Comprimo was able to provide remote support for the start-up of sulphur recovery units during the Covid-19 pandemic when international travel came to a virtual standstill. As the usual practice of providing on-site support for operator training, plant inspection, commissioning and start-up could no longer be done "in person", other means had to be explored to be able to support the operating companies during the initial start-up of their facility. Jan discussed several start-ups that were completed during the pandemic with remote and partial remote support from the Comprimo subject matter experts. Some of the pitfalls of providing support remotely for start-ups as well as lessons learned from their experiences was shared. In addition, by using newly developed tools, Comprimo was able to provide better support to the operating companies without requiring on-site presence. The new tools enable operating companies to better train their operators for normal and upset conditions of their sulphur recovery units and provide an on-line continuous support system in which plant operation can be optimised in real time for better on-line reliability and lower emissions.

Amine systems
Chemical cleaning in gas treating systems
Ritesh Gulabani of Dow provided guidance on chemical cleaning in gas treating systems. The most widely used processes to sweeten natural gas, refinery gases, syngas, LPG and biogas use amines such as MEA, DEA and MDEA to absorb H₂S and CO₂ from sour gas streams. The removal of undesired deposits from the system during turnarounds is of paramount importance to ensure reliable and efficient operation until the next scheduled start-up. Consequently, chemical cleaning at the start-up should be considered as an integral part of the best practices for any gas treating system.

Importance of lean amine quality
Muhammad R. Tariq of Saudi Aramco presented their experience of H₂S breakthrough into the sweet gas from the acid gas removal unit of a gas plant, resulting in

gas that could not meet the treated gas H₂S spec of 4 ppm. Amine quality is a major factor to achieve treated gas spec. The gas plant team found that the issue started when the plant started to process different feed gas. The problem was correctly identified in a short, systematic and effective investigation that combined field measurements and simulations with good analysis. It was discovered that the H₂S concentration in feed gas was higher compared than the unit design, the lean amine circulation and concentration were lower than the required and the amine solution was contaminated with degradation products like DEA, MEA and TGA which impeded CO₂ uptake and increased reboiler and overhead condenser duties. The issue was subsequently successfully fixed by increasing the amine circulation rate to control the H₂S content in the treated gas, controlling the rich amine loading, controlling the amine concentration per design 50 wt% to improve the acid pickup rate, adjusting the steam rate to the stripper column to achieve the required lean loading, and using the bleed and feed method to minimize the amine degradation contaminants to <2 wt%.

Best practices
Use of refinery fuel gas in SRUs
Sulphur Recovery Engineering (SRE) has extensive experience and knowledge in the analysis of process streams including refinery fuel gas (RFG). **Dhanraj Kumar Patel** and **Ahmed Nysal** of Sulphur Recovery Engineering Inc. examined the pros and cons of using refinery fuel gas in the SRU process. RFG is an important fuel for refinery facilities. Its composition depends on various factors (crude type, unit operations etc.) but is typically made up of C2-C4 hydrocarbons, hydrogen sulphide, hydrogen, and other light components. Most facilities attempt to recover the hydrogen from this stream using various technologies. The majority of the hydrogen sulphide is also removed. When used in sulphur recovery units, RFG has its benefits and some drawbacks. RFG composition tends to fluctuate which can have costly consequences, e.g. soot in SRU converters. Knowing the composition is crucial to amine problems are not amplified in the SRUs.

Recommended responses to TGU upsets
Breadthright of SRI, or electrical sulfur from a sulphur plant tail gas unit (TGU) reactor into the downstream amine tower and amine system can be catastrophic. It can result in plugging, corrosion, emissions violations, and unplanned shutdowns, with high costs associated with equipment repair and production downtime. Although the chemistry behind how SO₂ or sulphur breakthrough occurs is relatively well known, the operational indicators associated with a breakthrough event and the proper responses are less well known and are often ignored or misunderstood. **Jan Kiebert** and **Gerard Bohme** of Sulphur Experts detailed the causes of SO₂ and sulphur breakthrough events, all of the operational indicators associated with a breakthrough event, and the recommended responses in order to quickly correct the operation and to minimize the impact on the tail gas unit equipment and operation.

Inchinerator design
Acid gas inchinerator replacement
Noor Azkale of Petrosas shared the lessons learned when new requirements for CO₂ emissions were introduced which led to a thorough analysis of the existing acid gas inchinerator (AGI) and its fitness for service. The diagnosis led to the discovery of major defects which may have arisen from incomplete combustion, flame impingement, high connection section temperature and carbon, monoxide and unburned hydrocarbon from the stack.

Despite multiple test runs and modifications, the AGI failed to meet even its intended original design and the decision was made to replace it. The root causes of the AGI underperformance from many aspects of design, operations, control and maintenance have been incorporated into the new design of the AGI.

Ceramic solutions for the SRU reaction furnace and inchinerator
Uday N. Parakkal of Blasch Precision Ceramics showcased innovative ceramic solutions for improving the operational performance and the structural reliability of the SRU reaction furnace and the inchinerator. Conventional checkered or choker rings in the reaction furnace often do not provide the desired structural integrity, resulting in compromised performance and shorter run lengths. Also, achieving the desired OD destruction in the inchinerator often poses a challenge. Operational data was shared to demonstrate how superior materials and design can be used to address these problems.

**Our expertise at your service
for engineering & technology solutions**

Some of recent process plants designed and engineered by us

1650 TPD Sulphuric Acid Plant, Work Commenced Nov 2021

2000 TPD Sulphuric Acid Plant, Work Commenced June 2021

Phosphoric Acid Concentration Unit, Commissioned Oct 2021

Sulphuric Acid Plant, Commissioned Oct 2020

New Projects - Kick-off Meeting, PMC Services / Owner's Engineer

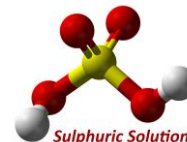
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Fertilizer & Chemicals Industry

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Shiv Sulphuric Solutions (OPC) Pvt Ltd (SSSPL) is a company founded in Dec 2016 by Shiv Shukla, after more than 30 years of working in chemicals, solar, energy & water industries EPC business, last 20 of which have been in top management in CXO roles. Registered office of company is in Mumbai.

Shiv Shukla was CEO of MECS India Office, Mumbai. MECS Inc., a company based in US with offices worldwide was formerly part of Monsanto and specializing in sulfuric acid technology, plants & equipment. Indian company was initially started as 50:50 joint venture between Monsanto Enviro-Chem Systems Inc., USA (MECS) and The Dharamsi Morarji Chemicals, India (DMCC) in 1996 and called Monsanto-DMCC. This company was doing EPC/LSTK projects to build sulphuric acid plant worldwide. MECS was part of Monsanto group and well renowned for sulphuric acid plant technology. Monsanto used to operate by providing license & technology through its world wide network of licensees. Many times its clients requested for MECS to take on LSTK projects directly. With a view to take LSTK projects, MECS had formed this joint venture company in India. Later on DMCC sold its shares to MECS and it became wholly owned subsidiary of MECS Inc., USA. Company had a team of about 50 people, mostly engineers & designers. Shiv Shukla started as a Marketing Director in 1998, having ben part of DMCC projects division which used to build sulphuric acid plants on turn-key basis.

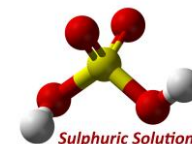
During 1998 to 2004, Shiv Shukla did marketing for these projects viz.:

- Held responsibility for marketing, sales, business development for projects & technology business.
- Secured major projects for sulfuric acid plants, and turnkey projects for phosphoric acid concentrator and fume scrubbers.
- Succeeded in diversifying company interests into phosphoric acid business/market.
- Expanded project & technology sales to companies in following countries: Philippines, Thailand, Indonesia, Saudi Arabia, South Korea, Vietnam, Democratic Republic of Congo.
- Developed network of partners & agents in these countries.

Subsequently in 2004 he was appointed as CEO of the company and had a successful innings as CEO accomplishing things such as:

- Spearheaded company restructuring and cost reduction programs to successfully return organization to full profitability.
- Succeeded in doubling turnover while significantly improving bottom-line.
- Implemented balance score card, performance management system including performance linked incentive scheme, and formal strategy planning and deployment processes.
- Performed human resource competence assessments on continuous basis, and monitored company climate via employee engagement surveys and customer satisfaction surveys.
- Instituted process mapping of all organizational processes, and quality management systems.
- Expanded company's business in following countries: Zambia, South Africa, DR Congo, Australia, Chile, Argentina, Colombia.

Engineers & designers of Indian subsidiary were deputed in US at MECS office to get trained and then work on various projects in US. Most of engineers & designers in this way have worked 2-3 years in MECS, US office.



Some of major projects which were done by this company while they were working for Monsanto-DMCC (MECS) and other organizations are listed here.

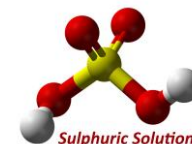
- **Some of SAP projects detail engg. completed earlier:**
 - 1,000 TPD Sulphuric Acid Regeneration Plant for Reliance Industries, Jamnagar
 - 3,400 TPD Smelter off-gas SAP, Hindalco, India (Detail Engg.)
 - 3,000 TPD SAP, Two Lion, China (Detail Engg.)
 - 600 tpd SAR, Red Lion, Motiva (Detail Engg.)
 - 1,400 TPD Smelter off-gas SAP, Hindalco, India (Detail Engg.)
 - 1,000 TPD Sulphur Burning Project in Zambia
- **Turnkey projects-SAP completed earlier:**
 - 600 Roaster Gas based SA Plant for Mopani Copper, Zambia (LSTK 15.0 million US\$)
 - 70 TPD SAP, Philippine (Engg. + Supplies, US 2.0 M)
 - Sulphur Melter, Paradeep Phosphates, India (US\$ 271 K)
 - 100 TPD [SAP](#), Saudi Arabia (T/K US\$ 3.0 M)
 - Towers, Furnace & Stack replacement for CFL, India ([Phase-I](#), [Phase-II](#))
- **Turnkey projects – Non SA completed earlier:**
 - 350 tpd Phosphoric Acid Concentrator, Paradeep Phosphates, India (US\$ 2.3 M)
 - Phosphoric acid plant - fumes scrubber for CFL (US\$ 210 K)
 - 300 tpd SA plant, Coromandel Fertilisers, India (MDEEL Scope US\$ 2.8 M)
 - 100 tpd SA plant, Congo, (US\$ 3.12 M)

Team strength grew to 70 persons by 2007. During 2007, MECS sold its EPC business company in US & India to a Spanish company called Abengoa, spA which was specializing in the development of solar thermal power projects, engineering construction of renewable energy plants such as solar power plants, bio-ethanol plants, combined cycle power plants, cogeneration power plants. Abengoa acquired Indian subsidiary of MECS Inc. in 2007 and then Indian company stopped its sulphuric acid business. Its business shifted to areas in which Abengoa was active. For almost a decade India office was active in Solar Power, Combined Cycle Power Plants. During 2016 there was a financial crisis in Abengoa. Company management was taken over by lending institutions and top management was removed. During that year Abengoa decided to close down many of its offices outside of Spain. Accordingly erstwhile MECS (EPC business group) and India office were closed and all employees were removed. With closure of India office and almost 100 people losing their jobs, we decided to start a small company back in sulphuric acid business. That is how Shiv Sulphuric Solutions was formed in Dec 2016 by taking core team from earlier MECS days. We started commercial operations in FY 2017-18 and since then we have not looked back. By now we have completed many sulphuric acid projects. However, we do not take LSTK projects and we are limiting ourselves to providing basic & detail engineering, procurement & project management services.

Shiv Sulphuric Solutions and MECS (which is part of DuPont now) ARE IN DISCUSSIONS TO WORK TOGETHER FOR SOME PROJECTS IN South America. Wherein Shiv Sulphuric Solutions will provide basic & detail engineering and MECS will supply all proprietary equipment. This will be applicable for projects upto 1,000 TPD capacity. Above that capacity MECS will use their other licensees. So Shiv Sulphuric Solutions will be playing role, which Monsanto-DMCC India office was doing earlier.

We have finished several projects for clients like:

- Atul Ltd., Valsad, Gujarat
- Amal Ltd, Ankleshwar, Gujarat
- Indorama India Pvt Ltd
- Paradeep Phosphates Ltd. Odisha
- IFFCO, Odisha
- Coromandel International Ltd. (Vizag, Ranipet, Kakinada, Udaipur, Ennore Units)



- Jordan India Fertilizers Company LLC, Jordan
- Philippine Batteries Inc., Philippines

Detail list of projects completed/on hand is given at the end of this document.

1.1.1. Registered Office:

Shiv Sulphuric Solutions (OPC) Pvt. Ltd.,

B-2104, Jasmine Towers, Vasant Vihar,

Pokhran Road No-2, Thane-400 610

Email: services@sulphuric.biz

Website: <http://www.sulphuricsolutions.com>

CIN: U74999MH2016OPC289023

GSTN: 27AAXCS9942D1ZM

PAN: AAXCS9942D

TAN: PNES51116C

1.1.2. Corporate Office:

Shiv Sulphuric Solutions (OPC) Pvt. Ltd.,

Bldg-A, Office-202, Ashoka Heights, Naikwadi,

Nr. Thane Station (West), Thane-400 602

Email: services@sulphuric.biz

Website: <http://www.sulphuricsolutions.com>

1.2. Company Financials

Our company was incorporated in Dec 2016 and started commercial operations from FY 2017-18. This company is also registered with Govt. of India - Ministry of Micro, Small & Medium Enterprises as MSME. Company has completed four year of financial audits and financial results can be provided, if required.

1.3. Services Provided

Shiv Sulphuric Solutions (OPC) Pvt. Ltd. provides consulting and engineering services for management, quality & engineering problems. Our team has an experience of 100 man-years collectively in design, engineering, EPC project execution of process plants, mostly sulphur based chemical plants.

1.3.1. Design, Engineering & Project Management Services

- Process engineering for sulphur chemicals plants like sulphuric acid, oleum, liquid SO₃, phosphoric acid concentration, gas scrubbing systems
- Detail engineering including mechanical design, fabrication drawings, piping, stress analysis, civil & structural engineering design & drawings
- Project Management services for chemical process plants

1.3.2. Management Consulting Services

- Business Process Evaluation & Re-engineering
- Financial Modelling & Simulation
- Competency Mapping & other HR processes
- Balanced Score Card implementation services
- Strategic Business Planning & Strategy Deployment Matrix implementation
- Customer Segmentation & CRM Implementation

- Data Analysis

1.3.3. Quality Consulting Services

- Identification of Quality Issues & solutions
- Benchmarking with industry practices

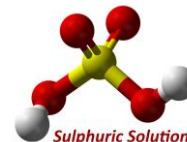
1.4. Our Team

1.4.1. Shiv Shukla, Founder & CEO

- Overall responsibility of running the organisation including process engineering, marketing, finance, HR, IT etc.
- A Chemical Engineer from IIT-BHU and MBA from School of Management , IIT-Bombay with 30+ years of experience in chemicals, fertilizer, energy, solar power, water industry EPC projects. He has been in CXO role for last 20 years and was CEO of Monsanto-DMCC (which became MECS in 2006) doing several projects for clients like Coromandel International Ltd. (then Coromandel Fertilizers Ltd.), Hindalco (Birla Copper, Dahej), Gujarat State Fertiliser Co. Ltd (GSFC), Paradeep Phosphates, EID Parry (Ennore) etc.
- He has been working in solar power & water industry since last 10 years and is well known in those industry sectors too.
- Diverse experience encompassing business development and management, business analysis and solution formulation, process improvement, program management, marketing, strategic alliance development, and relationship management within chemical engineering, energy, solar power, water & waste water treatment industry.
- Skilled in planning, administering, coordinating and executing successful business programs, with a proven track record of dramatically improving operational, technical and business infrastructures, operating stability, efficiency, and profitability.
- Collaborate with executive-level management to effectively prioritize activities and achieve defined objectives, with the ability to translate business requirements into operational solutions to achieve corporate performance goals and targets.
- Innovative thinker, persuasive communicator and skilled motivator, with a tenacious focus on objectives, an unwavering commitment to customer satisfaction and the ability to act on multiple priorities within fast-paced environments. Fluent in English, Hindi, and Marathi.
- Results-driven high-achiever, consistently producing operational solutions that contribute to revenue growth, improve business efficiencies and increase productivity levels.
- International Business Experience in following geographic areas: Australia, South Africa, Philippines, Colombia, Senegal, Indonesia, Thailand, Bangladesh, Sri Lanka, Republic of Korea, Vietnam, Egypt, Chile, United States, Spain, Middle East & Gulf countries, Zambia

1.4.2. Yathindra Shetty, Director

- Responsible for complete project execution including engineering, construction, commissioning etc.
- 40+ years of experience in sulphuric acid, phosphoric acid, phosphatic fertilizers plant EPC projects
- He is a well experienced executive in the field of Sulphuric Acid & it's related chemicals. Starting off in 1976 as a Trainee Engineer in Dharamsi Morarji Chemicals Ltd. (DMCC), he has worked in Maintenance of Sul. Acid Plant, Aluminium Sulphate (Alum), Cryolite & Aluminium Fluoride plant along with the maintenance of utilities - DG station & Pump house. In 1982 he moved to the External Project Division of the Co' as Project Engineer & subsequently as Project Manager. During this tenure, he has successfully handled various T/key Projects in India & abroad including the 300 TPD Sulphuric Acid Plant in Trivandrum for M/s Travancore Titanium Products Ltd. , 1000 TPD SA project in Vadodara for GSFC & an Alum project in Lusaka, Zambia for M/s CESL.



- He was then part of the new JV formed when this Project Division merged with Monsanto & renamed as MDEEL in 1996 and later as MEPL, a fully owned by MECS, a Monsanto Co. During this phase, he handled the 350 TPD Smelter based SA project at Kafue, Zambia for Mopani, a FQML group Co., 300 TPD SA project in Vizak for CFL & Capacity expansion of their 1000 TPD SA plant equipment. From 2007 to Jan 2016, he was part of the Abengoa group subsidiary in India in the Business Development of sustainable Energy & Water projects.
- His varied experience in different fields vis-a-vis Maintenance, Projects & Business Development makes him a valuable team member of our new Company.

1.4.3. Shrinivas Sapre, Director

- Responsible for engineering drawings, cost estimation, procurement, site work, commissioning etc.
- 40+ years experience in sulphuric acid, phosphoric acid EPC projects
- Has varied experience in design, detail engineering, estimation & procurement, site work, commissioning etc. in several projects.
- He is also a managing trustee and principal of a technical school teaching draughtsmanship to students running several ITI courses.

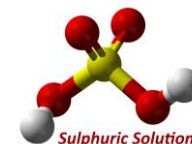
1.4.4. Our Designers

- We have designers in our company who are responsible for design & drawings of various mechanical equipment etc.

1.5. Our Associates

1.5.1. NG Engineers

- NG Engineers are our associate for drawing and drafting requirements for various purposes like process drawings, detail drawings for vessels, ducts, bricklining, piping drawings.
- Their founder has been working with us on various sulphuric acid projects and successfully completed several projects.
- They are supporting our company in terms of doing drawing work for various purposes.



1.6. Resume of Key Personal

Resume of our key persons is given below:

1.6.1. Shiv Shukla, Founder & CEO

- Diverse experience encompassing business development and management, business analysis and solution formulation, process improvement, program management, marketing, strategic alliance development, and relationship management within chemical engineering, energy, solar power, water & waste water treatment industry.
- Skilled in planning, administering, coordinating and executing successful business programs, with a proven track record of dramatically improving operational, technical and business infrastructures, operating stability, efficiency, and profitability.
- Collaborate with executive-level management to effectively prioritize activities and achieve defined objectives, with the ability to translate business requirements into operational solutions to achieve corporate performance goals and targets.
- Innovative thinker, persuasive communicator and skilled motivator, with a tenacious focus on objectives, an unwavering commitment to customer satisfaction and the ability to act on multiple priorities within fast-paced environments. Fluent in English, Hindi, and Marathi.
- Results-driven high-achiever, consistently producing operational solutions that contribute to revenue growth, improve business efficiencies and increase productivity levels.
- International Business Experience in following geographic areas: Australia, South Africa, Philippines, Colombia, Senegal, Indonesia, Thailand, Bangladesh, Sri Lanka, Republic of Korea, Vietnam, Egypt, Chile, United States, Spain, Middle East & Gulf countries, Zambia

Professional Experience

VA Tech Wabag Ltd., Chennai, India July 2015 to July 2016

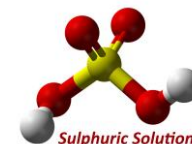
A company in water business providing EPC solutions and O&M services for water treatment, waste water treatment, industrial effluent treatment, sea water reverse osmosis plants

Head – Sales & Marketing

- Held responsibility for Sales, Business Development and Proposal functions of the EPC and the O&M businesses. Reported to Group CEO & Managing Director. Handled a team of 130 people and achieved order intake of about INR 50 billion in 2015-16.
- Responsibilities included:
 - To provide Strategic Leadership for acquiring new business, developing Key accounts for EPC, O & M, Spares & Consumables business; such that the targets for order booking and margin are achieved according to business plan and sustain good customer relations for repeat orders.
 - To motivate and enable seamless interface between different teams engaged in Sales, Proposal and Marketing with objective of achieving order booking targets with prescribed margins.
 - To ensure smooth transfer of orders by the sales team to projects team for execution and support projects team
 - To ensure Team Motivation, Development and Retention
- Joined the Company at the nick of time when the realignment was initiated in the Company. Played a valuable role in integrating the Sales, Business Development and Proposal functions of both the EPC and the O&M businesses, which were hitherto operated separately, in the newly created One Wabag entity.
- Made valuable contributions to the India Cluster Leadership Council, of which I was a permanent invitee. The CRM module came into shape and action under my leadership. Being a spontaneous public speaker, represented Wabag in quite a few national level conferences, with aplomb.

Abengoa SA, India Office March 1998 to July 2015

Abeinsa and Abengoa Solar, are 100% Indian subsidiaries of Abengoa, Spain, specializing in the development of solar thermal power projects, engineering construction of renewable energy plants such as solar power plants, bio-



ethanol plants, combined cycle power plants, cogeneration power plants. www.abengoa.com, www.abengoasolar.com, <http://www.abeinsa.com/>

Abengoa acquired Indian subsidiary of MECS Inc. (www.mecsglobal.com) in 2007, which was formerly part of Monsanto and specializing in sulfuric acid technology, plants & equipment. Indian company was initially started as joint venture between Monsanto and Dharamsi Morarji Chemicals (DMCC) and later on owned 100% by US company MECS Inc. which is now part of Du Pont.

President – (Business Development – India & NC), Abengoa SA, India Office (2007 – July 2015)

- Responsible for strategy, business development of Abengoa companies in India & SAARC countries for power, solar energy, water & environment business.
- Identification of business opportunities in the different regions, suited to Abengoa's portfolio of products in power, solar energy, water business and with the potential for participation in tender processes.
- Responsible for identifying and establishing collaboration agreements with sales agents; local partners for collaborating in tenders; as well as potential partners for specific opportunities.
- Participation as speakers at seminars and conferences to promote the Abengoa brand in target markets.
- Non-executive director in supervisory role on the board of Abeinsa Business Development Pvt. Ltd.
- Development of partnerships, joint ventures with companies for execution of combined cycle power plant EPC, development of solar thermal power projects in India, Middle East, South East Asian countries
- Liaison with government and regulatory authorities for development of policies, regulations facilitating development of solar thermal projects in these countries
- Online Links :
 - Energize Awards 2013 Video <https://youtu.be/ckQdfvWQmSc>
 - Energize Awards 2014 Video <https://youtu.be/leFd1DLJN1w>
 - <http://energize-awards.com/gallery2014/paneldiscussion/index.htm>
 - <http://social.csptoday.com/emerging-markets/abengoa-plans-move-forward-india>
 - <http://beta.csptoday.com/emerging-markets/30-minutes-shiv-shukla-president-ceo-abener-engineering-pvt>

MECS Inc., Mumbai, India 1998 to 2007

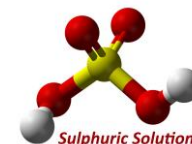
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Chief Executive Officer / Managing Director (2004 – 2007)

- Spearheaded company restructuring and cost reduction programs to successfully return organization to full profitability.
- Succeeded in doubling turnover while significantly improving bottom-line.
- Implemented balance score card, performance management system including performance linked incentive scheme, and formal strategy planning and deployment processes.
- Performed human resource competence assessments on continuous basis, and monitored company climate via employee engagement surveys and customer satisfaction surveys.
- Instituted process mapping of all organizational processes, and quality management systems.
- Expanded company's business in following countries: Zambia, South Africa, DR Congo, Australia, Chile, Argentina, Colombia.
- Online Interview : <http://www.itbhuglobal.org/chronicle/archives/2007/06/>

Marketing Director (1998 – 2004)

- Held responsibility for marketing, sales, business development for projects & technology business.
- Secured major projects for sulfuric acid plants, and turnkey projects for phosphoric acid concentrator and fume scrubbers.



- Succeeded in diversifying company interests into phosphoric acid business/market.
- Expanded project & technology sales to companies in following countries: Philippines, Thailand, Indonesia, Saudi Arabia, South Korea, Vietnam, Democratic Republic of Congo.
- Developed network of partners & agents in these countries.

Poseidon Engineering Pvt. Ltd., Mumbai, India 1992 to 1997

A company specializing in the engineering and construction of sulphuric acid and related sulphur chemicals plants.

Project Manager / Design Engineer

- Managed projects throughout entire lifecycle, encompassing process design, detailed engineering design and drawing preparation for process flows, diagrams, material and energy balances, P&I diagrams, equipment sizing and specifications, detailed preparations of equipment drawings, plant layout, and piping drawings.
- Developed Recycle Gas Process for sulfuric acid plant, and handled number of sulfuric acid, chlorosulphonic acid, and SSP projects
- Handled equipment procurement of various equipment, plant commissioning and troubleshooting.
- Performed analysis of waste heat boiler system for tube leakage for Coromandel Fertilizers Ltd., and plant operation analysis for Industries Du Chimiques, Darou, Senegal.

The Dharamsi Morarji Chemical Co. Ltd., Mumbai, India 1989 to 1992

A company specializing in the manufacture of sulphuric acid, single superphosphate and sulphur based specialty chemicals

Design Engineer / Process Engineer

- Held responsibility for design engineering, plant commissioning and troubleshooting.
- Served as project engineer and process engineer; designed over 30 sulfuric acid plants, liquid SO₃, oleum, chlorosulphonic acid plants, and SSP plants.
- Handled number of sulfuric acid, oleum and SSP projects.
- Participated in all aspects of process design of sulfuric acid and oleum plants, including basic process engineering, equipment specifications and sizing, preparation of material energy balances, flow diagrams, P&I diagrams, procurement of equipment and instruments, and plant commissioning and troubleshooting.
- Played integral role in installing CAD system for design and drawing work.
- Developed number of software packages for in-house use, including package for design and simulation of plants producing sulfuric acid, oleum, liquid SO₃, and chlorosulphonic acid.

Bharat Petroleum Corporation Ltd., Mumbai, India 1986 to 1989

An oil company with refinery located in Mumbai

Plant Operations Engineer / Process Engineer

- Worked in a refinery Aromatics Complex consisting of Feed Preparation, Catalytic Reforming, Aromatics Unit for Benzene & Toluene, Nitrogen Plant, Hexane and SBP Solvent Units. Complex had strength of about 60 operators working in 3 shifts under Plant Operations Officer.
- Major Process Equipment handled include Distillation Columns, Liquid-Liquid Extraction Columns, Catalytic Reforming Reactors, Various Heat-Exchangers and Condensers, High Speed Condensing Steam Turbines, High Speed Centrifugal Compressors, Positive Displacement Compressors, Fired Heaters & Furnaces etc. For process control purpose the complex had DCS system and supervisory computer control systems.
- Received letter of appreciation for firefighting during a major fire in Aromatics Tank farm area in Nov 1988 and working in the team for subsequent reconstruction and start up of Aromatics Unit.

Education And Training

Master Of Business Administration (MBA), 2004

School Of Management, IIT-Bombay, Mumbai, India

Bachelor Of Technology (B. Tech.) in Chemical Engineering, 1986

IIT-BHU, Varanasi, India

Certifications

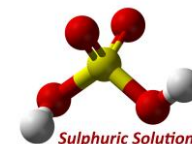
- Machine Learning by Stanford University on Coursera. Certificate earned on March 12, 2017 [Certificate Link](#)

Publications / Presentations

- Regularly appear in various solar energy, water & environment, power conferences for giving speeches, panel discussions, presentations, moderating panel discussions
- Panel discussion at EMPower Workshop on Large Scale Solar Power in Asia, New Delhi, India during April 2010
- Paper presented at Renewable Energy Conference, New Delhi, India during March 2010
- “Business model amongst successful emerging technologies: Economics for power generation”, panel discussion at 3rd Renewable Energy India 2009 Expo, New Delhi, India.
- “Concentrated Solar Thermal Power for India”, presented at Second Annual Conference on Solar Power in India 2009, New Delhi, India.
- “Managing in turbulent times – Manufacturing & Engineering Industry”, presented at 16th National Convention of IMCI (The Institute of Management Consultants of India) 2009, Mumbai, India.
- “Update on Sulphuric Acid Outlook in India”, presented at Sulphur 2005, Moscow, Russia.
- “Sulphuric Acid Plants – Outlook in India”, presented at Sulphur 2004, Barcelona, Spain.
- “Coromandel Acid Plant Revamping Phase-II”, presented at Sulphur 2002, Vienna, Austria.
- “Increased energy recovery in a Sulphuric Acid plant by heat recovery system (HRS)” presented at IFA Technical Conference 2002, Chennai, India.
- “Revamping at Coromandel Acid Plant” presented at Sulphur 2001, Marrakech, Morocco.
- “Lowest Emissions at Lowest Cost! A Complete Sulphuric Acid Plant Concept Using Gas Recycling” presented at Sulphur 1996, Vancouver, Canada.
- “A New Look Acid Plant - Sans Gas Heat Exchangers”, co-authored for presentation at Sulphur’95, Abu Dhabi.
- “Improved Product Mix design to Produce Liquid SO₃” co-authored for presentation at Sulphur 1994, Tampa, USA
- “An Integrated Process for manufacturing Chlorosulphonic Acid and Liquid SO₃” presented atACHEMA ’94, Frankfurt, Germany.
- “A Comprehensive CAD System for Sulphur Chemicals Industry”, presented at Sulphur 1993, Hamburg, Germany.
- “New Orientations for Indian Sulphuric Acid Industry”, published in British “Sulphur” Journal, July 1992.

Technical Skills

- Expertise in MS-Office, FrontPage, Database SQL, Delphi, AutoLISP, C++, php, JavaScript
- Created min-ERP software integrating timesheet, cost estimation, document management, finance budgeting and control, attendance and leave monitoring, automated acknowledgement of leave/attendance application, approvals etc.
- Created a design & simulation software for sulphuric acid plant & equipment and developed a website <http://www.sulphuricsolutions.com/> for the sale of this software.



1.6.2. Yathindra Shetty, Director

Career Summary

- Mechanical Engineer (B.E.-Mech) from Bangalore University
- 6 years in Maintenance of Chemical Plants
- 2 years in Project Site Management of Sulphuric Acid & SSP Plant Projects
- 25 years plus in Project Execution of mainly Sulphuric Acid & SSP Plant Projects
- 2 years plus in Business Development of Solar Thermal Projects
- 3 years plus in Business Development of Water, Waste Water & Environment projects

Work Experience from Nov 2007 till Jan 2017

Company: Abengoa India (Abengoa group of companies, an international provider of world class EPC solutions in renewable energy sector.)

- Designation: Head – Projects / V.P. Business Development

Key Responsibilities:

- 1 Identifying & Follow – up on business proposals
- 2 Techno-commercial reviews
- 3 Client Interaction
- 4 Project Co-ordination, Control & Monitoring of scheduled deliverables & receivables
- 5 Management reviews

Work Experience from June 1996 to Nov 2007

Company: MECS Enterprises (A 100% subsidiary of Enviro-Chem Systems, St. Louis, USA and a global supplier of Sulphuric Acid Plant process design, engineering & supplies.

- Designation: General Manager – Projects

Key Achievements:

- 1 Repeat Projects from Customers
- 2 Completion of 5 Acid plant projects for the same Client – Coromandel International between 2003 – 2010 at Vizag, India
- 3 Completion of 2 Projects for same Client – Hind lever Chemicals (now known as TATA Chemicals) between 1999 – 2000 at Haldia, India.
- 4 Completion of 3 Projects for same Client – Hindalco Industries between 1996 –2000, at Dahej, India.

Work Experience from June 1976 to Nov 1996

Company: Dharamsi Morarji Chemical Co. Ltd. (A pioneering & prominent player in the Sulphuric Acid & Fertiliser Industry with plants at 4 locations in India)

- Designation: Maintenance Engineer & later Project Engineer

Key Responsibilities Handled:

As Maintenance engineer:-

- Routine & Preventive Maintenance
- Spares & Inventory Budgets

As Project Engineer:-

- Client Interaction
- Project Scheduling
- Project Co-ordination
- Project Procurement
- Project Management

Key Achievements:

- Successful Completion of 350 Tpd Sulphuric Acid plant project for Travancore Titanium in the State of Kerala, India on a LSTK basis within schedule.
- Initiated and achieved Project scope change approval for nearly 1% of Project price

Educational Qualifications

- Bachelor of Engineering (BE Mech), Bangalore University (1975)

Programs Attended:

- Pump maintenance program conducted at KSB
- Basic Finance training conducted in-house
- Basic Primavera training on Project scheduling conducted in-house
- Awareness course in ISO 9001, 14001, SA 8000 & OHSAS

1.6.3. Shrinivas Sapre, Director

Career Summary:

- More than 43 years' experience in sulphuric acid, phosphoric acid EPC projects
- 5 years' experience as Estimation & Procurement
- 28 years' experience as Mechanical Engineer.
- 15 years of site experience; supervision for erection of specialty chemical plants.
- Preparation of documentation procedures and implementation of same for project execution.
- Responsible for engineering drawings, cost estimation, procurement, site work, commissioning etc.
- Has varied experience in design, detail engineering, estimation & procurement, site work, commissioning etc. in several projects.
- He is also a managing trustee and principal of a technical school teaching draughtsmanship to students running several ITI courses.

Technical Summary:

Design Skills

- Ability to understand the client project documents and define the scope of work for a particular team.
- Ability to understand plot plan, P&ID and other client information.
- Ability to review project specifications, design instructions & guides as per project.
- Gone through various relevant codes & standards used for Vessel & Duct.
- Basic knowledge of Vessel material standards.
- Proficient in checking of Plant Layout, Equipment Layout, Vessel, Duct & MTO.
- Ability to perform manual vessel and duct MTO.
- Basic knowledge of Duct stress analysis.
- Design and detail engineering of Radial Heat Exchanger .
- Standardization including preparation of specification and drawings for various items for Sulphuric Acid plants. And Single Super Phosphate
- Detail engineering of Brick lined for various equipment in chemical plants.
- Ability to check vendor drawings and specifications.
- Knowledge of piping material standard.

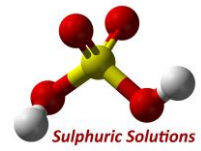
Interpersonal Skills

- Ability to effectively communicate & interact with other departments and vendors
- Ability to effectively lead a team to achieve certain goals.
- Work planning with priority to complete the project as per schedule time.

Software skills

- Autodesk **Autocad** used for 2D Drawings.
- MS - Office. (Word, Excel, PowerPoint)

Recognition Awards Received



Educational Qualifications:

- Diploma of Mechanical Engineering in 1974 from Karad Poly Technic, Maharashtra
- Certificate course in "Auto CAD" from Mumbai

1.6.4. Vinayak Cheulkar, General Manager

- Experienced Piping / Mechanical Engineer with 20+ years of rich experience in Area lead Engineer, Piping design, pipe support design, support list preparation, piping 3D model review, Checking of Piping isometric drawing, BOM, specifications, etc.
- Recently worked as Piping Area lead In Jacobs Engineering India Pvt. Ltd.
- Worked as mechanical/Piping lead in Solar Power Plant project for IIT-B Delhi, with CCP technology (Cylindrical Parabolic Collector). Played a key role in Solar Collector Assembly, Piping design, equipment design, and preparation of specification for mechanical/piping items.
- Played a lead role in Solar power project; piping design and support design, piping isometrics review & approval etc..
- Good mix of knowledge & application with which successfully completed engineering assignment in the USA (in April 2006 & July 2007).
- Awarded with 'Best achievement award for the year' while worked on project for Madras Fertilizers Ltd. Played a key role in inspection and supervision.
- Attended A.S.M.E. Pressure Vessel design course in California, U.S.A.
- Played a key role in project co-ordination, inspection and site management for project of Sulphuric acid Plant in Rawabi, Saudi Arabia.
- Experience in Equipment Design, equipment drawing and 3D model review, Inspection of process equipment, Estimation, Technical Bid Evaluations, Project Planning, Fabrication & Erection activities.

High Levels of customer orientation, Strong technical knowledge, ability to execute effectively and efficiently, good team work are my key strengths.

Software Skills and certification:

- PDMS- piping design, modeling
- CAESAR - for Piping stress analysis
- Bentley Auto Pipe – for Piping & Ducting stress analysis
- Cype- for structural design (pipe support design)
- NavisWorks Freedom – 3D model review
- AutoCAD – Drawing drafting related
- MS-Office – for general documents, calculations, creating macro file, spread sheets.
- Primavera and MS- Project - for Planning and Expedition
- PVElite and Compress - Pressure vessel Design
- A.S.M.E. Pressure Vessel design in California, U.S.A.

Quality Skill

- Process Maps, Checklists, Formats, Schedule tracking.

Education

- Diploma in Mechanical Engineering: Board of Technical Examination, Mumbai (1991)

Experience:

1. JACOBS Engineering

(February 2017 to June 2018)

Designation: Area Lead Engineer – Piping

1. Worked on Asian Paint project

Key Achievements under Projects Executed

- Played a Piping Lead engineer role- piping and support.
- Project planning, co-ordination with clients, vendor and project team and monitor progress.

- 3D Model review, Review Piping isometrics, Piping layout, BOM, etc.
- Involve in PDMS, guidance to designers and engineers for automation of PDMS command resolving technical queries.

2. **Abeinsa Engineering Pvt. Ltd.** (ISO-9001, ISO-14001, OHSAS-18001, SA-8000)

Part of Abengoa group of companies, a world class EPC solutions provider in renewable energy sector (June 2012 to Jan 2016)

Designation: Lead (Principal) Engineer – Piping

Major project executed -

1. 100MW(t) Solar Thermal Power Plant for Ashalim, Israel :
2. Solar Thermal Power Plant Atacama-1

Key Achievements under Projects Executed

- Played a Lead engineer role for solar field piping and support.
- Project planning, co-ordinate with team and monitor progress.
- 3D Model review, Review and approval of Piping isometrics, Piping layout, BOM, etc.
- Thermal Expansion calculation Pipe support design and Preparation support list etc.
- Preparations of macro file in excel to speed up the task.

3. **Abener Engineering Pvt. Ltd.** (ISO-9001, ISO-14001, OHSAS-18001, SA-8000)

Part of Abengoa group of companies, a world class EPC solutions provider in renewable energy sector (October 2007 to May 2012)

Designation: Lead (Principal) Engineer – Mechanical

Major project executed-

1. 3MW(t) Solar Thermal Power Plant IITB in Delhi, India: (first time in Asia)
2. Studied Solar Power Plant 50 MW with CCP technology for Abengoa Solar, Sevilla

Key Achievements -

- Played a lead mechanical engineer role for solar field assembly, piping and support.
- Executed Thermal Expansion calculation, Isometric review, Pipe support design.
- Project planning and co-ordinate with team and monitor progress.
- Solar field inspection, erection supervision and Commissioning. Defined the inspection parameter and major check points of the solar collector assembly.

4. **Monsanto - DMCC Enviro-Tech & Engineering Ltd.** (March 1998 – September 2007)

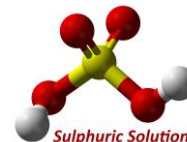
Designation: Lead (Principal) Engineer – Vessel & Piping / Deputy Manager E & P / Project Engineer

Major projects Executed

1. Reliance Refinery, Jamnagar: 1000 MTPD Sulfuric Spent Acid Regeneration Plant.
2. Madras Fertilizers Limited – Replacement of Urea Prill Tower Fans
3. Coromandel Fertilizers, Vizag: 300 and 1400 MTPD Sulfuric Acid Plant.
4. National Company for Sulfur Products (Rawabi), Saudi Arabia: 100 MTPD Sulfuric Acid Plant.

Key Achievements

- Received 'Best achievement award for the year' on project for Madras Fertilizers Ltd. Played a key role in inspection and supervision.
- In Reliance project - Successfully completed the equipment design activity within speculated time while deputed to St. Louis, United States (USA) for twice.
- Performed high pressure and temperature ducting stress analysis in AutoPIPE for sulphuric acid plant.
- Played a key role in project co-ordination, inspection and site management for project of Sulphuric acid Plant in Rawabi, Saudi Arabia. Assist in Estimation and procurement activities. Developed and standardized the Equipment cost estimation calculation sheet to speed up the task,



5. Puma Engineering & Consultants Ltd. (August 1994 to September 1997)
Sage International / Puma Engineering & Consultants Ltd. (July 1992 – July 1994)

Designation: Production Supervisor / Estimation & Inspection Engineer

Key Achievements

- Dealing in Estimation & procurement and supervision of fabrication activities of equipments viz. Towers, Heat Exchangers, Pressure Vessels, Storage Tanks, piping etc. for, Chemical plants, Refineries, Water Treatment Plant, Fertilizer Companies, Power plants like N.T.P.C., B.A.R.C., Reliance , etc:
- Co- ordination with clients, vendors, third party inspection agencies.
- Assisted the Production Manager in manpower management and project planning.

1.6.5. Bikas Mahaty, General Manager

A professional with 34 years of experience in Project Management, Erection & Commissioning, Maintenance Management, Quality Management System and Systems Implementation.

Currently designated as Head of Department –Proposal for Asia and Middle East with Abeinsa Business Development India, in EPC, CSP-PV Integrated, Cogeneration Combined Cycle, Desalination, Waste Water Treatment Process, and Bio Fuel.

Managing projects with cross-functional skills & ensuring on-time deliverables.

Possess strong skills in multi locational project planning, monitoring project progress.

Project scheduling, adept at implementing effective preventive & predictive maintenance system, condition monitoring as well as conducting reliability study.

Proficient in handling execution of projects including erection and commissioning of equipment's, testing and inspection and liaising with approving authorities.

Demonstrated team management and relationship management skills with the ability to lead cross-cultural teams.

An effective communicator with good presentation, negotiation and relationship skills

ORGANISATIONAL EXPERIENCE

Feb'23- Present Shiv Sulphuric Solutions., Thane GM Projects

Key area: Proposal Preparation, Estimation and execution of EPC projects etc.

Dec'18-Jan'20 Pinnacle Engineering Pvt Ltd., Pune DGM Projects

Key area: Proposal Preparation, Estimation and execution of EPC projects

Jun'06-Sept Abengoa India Pvt. Ltd., Mumbai, India Head Proposals

Key Result Areas:

Project Proposal for Cogenerations, Combined Cycle, CSP, PV Solar, Water Treatment, Desalination, Waste water treatment, Biofuel etc.

Handled the Project Proposal for 100 MW solar power project in Kaxu Solar, South Africa, along with Solar Detail Engineering and Procurement Assistances from, Seville, Spain, Head office of Abeinsa, Spain

Functioned as a Project Manager for with co-ordination with Engineering team (Including Civil, electrical, Instrumentation, piping etc. and procurement through strong vendor management system

Handled ISO 9001:2008 certification too

Highlights

In Project Management:

Making use of PMP code and practices for project management and monitoring etc.

Use of Primavera P6.1 for scheduling of activities, and resources etc.

Preparing MIS reports for project status review with S curve on regular interval.

Assisting project estimation up to – 5 % to + 10 % accuracy.

Qualitative / quantitative Risk analysis for project feasibility Assisting Budgets for Project Cash flow and cost variance (Budget control), invoicing and expediting for payment etc.

Preparing project closure report, scope change order request etc.

In Project Procurement Management:

Preparing procurement plan as per project schedule requirement

Estimations for projects up to -5 to +10% accuracy.

Assisting in preparation of cash flow and variance statement accounts for project
Review specification and drawing documents for floating enquiry / tender etc.
Procurement status report preparation and presentation etc during project review.
Arranging inspection, dispatch clearance and expediting etc.
Vendor development and evaluation etc.
Arranged necessary assistance for logistic for project consignment.
In Project Quality and GHG Management:
Preparation of quality plan, quality objectives, Operating practices, work instructions and check sheets etc .
Necessary for ISO Certifications.
Conduct internal audits and arranged necessary external audit etc.
Preparation of Non conformity report as per ISO standard, ISO Standard awareness training, annual audit plan etc.
Preparing GHG Inventory of office, commuter survey etc.
TPM coordinator.
In Plant Maintenance services:
Involved in carrying out Shutdown jobs planning for the major stoppages with complete resources i.e., manpower, tools, material, services, budget etc. using MAXIMO – MS Project interface.
Continuous improvement plan, CSI, conducting training program for multitasking skill development etc.
Implementation of Reliance Maintenance System for petroleum business
Defining need of maintenance using inspection function
Ensuring optimum work order through inspection;
Getting the orders approved as per plan and executing them
Monitoring of complete work order cycle and KPI of the maintenance functions.
Involved in regular publishing of all Retail outlets performance and status of maintenance system through Daily Rack up meeting
Implementing Modern Maintenance Project i.e., Inspection, Planning, Scheduling, Executing and Improvement functions at RIL, petroleum business through Area manager maintenance

August '03 – Jun '06 Phillips Carbon Pvt. Ltd, Palej, Gujarat Senior Manager (Project)

Major Contributions:

Handled the project of Carbon Black Manufacturing plant consisting of 12 MW co- generation power plant, export of power to GSEB, Gujarat
Co-ordination with consultant for detail engineering, procurement assistance, monitoring and control of process SPI, CPI, execution of project erection and commissioning etc.
Operation & Maintenance of Power plant, DG set of 1 MW ,6600 v
Implementation of improvement plan of the plant.
Estimation of 30 MW Co-generation plants for future expansion etc.
Major contribution in design improvement in expansion bellows of hot air line to reactor etc.
Highlights:
Carried project and implementation of CDM projects, Palej and over hauling Recuperator heat exchangers.
Supply of the component has been carried out by developing part in-house and part outsourcing.

March '96 – August '03 Alexandria Carbon Black limited, Amreya, Egypt Manager- Project.

Major Contributions

Estimation of green field projects, layout plan for Carbon Black project.
Arranged Kick off meeting with details engineering consultant for clarifying technical scope etc.
Co-coordinating different disciplines for review and approval of the project specification and finally arranged necessary specification and material indenting for procurement etc.
Arranged reply of technical queries of supplied and contractor etc.
Resolved issues between engineering and procurement functions etc.
Assisting procurement team by participating in vendor development and approval etc.
Supervised construction and erection function of project.
Conduct weekly project review meeting for updating progress.

Arranged necessary resources for timely compilations of project.
Product validation by analysis production function of executed project (Guarantee/ warrantee points).
Assisting for preparing as build drawing/ documents and project closure etc.
Handled preventive, predictive maintenance and condition monitoring of petrochemical equipment's

Purview: Rotating equipment's, blowers, compressors, pumps, hazardous gas handling bag filters, pneumatic conveying, PLC control continuous process carbon blank handling equipment's like palletizer, process tanks & vessel for CBFS, LSHS, LDO, HSD, Boilers and high-pressure steam used in process, high pressure petrochemical (Inflammable) and steam piping, fire hydrant system for complete plant, high temperature Recuperator and reactors, high pressure pumps for petrochemical handling.

January '95 – March'96 National Rayon Corporation, Mohane. Dy. Manager (Engineering).

Major Contributions:

Handled expansion project of phase II encompassing equipment Installation, Commissioning, Fabrication, Erection, Troubleshooting and maintenance reduction methodology for reverse osmosis process for Alkali
Involved in Mechanical maintenance of Rotary Compressor, Pumps, Chillers, Chlorine Condenser, Hydrogen compressor, HCL acid furnaces, Alkali Cell house, Salt Handling and Maintenance House consisting of 180 technicians etc.

February '92 – December'94 Hi-Tech Carbon, Renukoot (Indian Rayon Industries' Division). Sr. Executive (Mechanical Maintenance).

Major Contributions;

Handled preventive, predictive maintenance and condition monitoring of petrochemical equipment's

July '89 – Febraury'92 Phillips Carbon Black Ltd, Durgapur (Executive-Mechanical Maintenance).

Major Contributions:

Handled preventive, predictive maintenance and condition monitoring of petrochemical equipment's

July '87 – July'89 Kumardhubi Fireclay and Silica Works, Dhanbad (Mechanical Engineer).

Major Contributions:

Handled preventive, predictive maintenance and condition monitoring of High Aluminum Bricks for Steel Plants, equipment's Rotating Shaft Kiln, Rotary Kiln, Crusher, Ball and Rod Mills, Mixers, Hydraulic, Screw Press, Furnaces and Quality Control etc., blowers, compressors, pumps.

ACADEMIC DETAILS

B. S. Engg (Mechanical) from B.I.T. Sindri, India with 1st Class in 1987.

Diploma in Supply chain Management from CII, Chennai (4 semester course) in Year 2007.

Executive MBA Program in Financial Risk and Investment Management (EFRIM)- from Indian Institute of Management, Calcutta

Piping Engineering – from CAD Centre, Indian Institute of Technology, Bombay

1.6.6. Rupesh Thakur, Manager

- 23+ years of Experience in Design Engineering.
- Recently Worked on Wad al Shamal project for Saudi Electricity by ABENER at Saudi Arabia. Extensive experience in detail engineering and PDMS/Auto plant modeling for Piping and Equipment's of solar power plant, Sulfuric acid plants (Sulfur burning base, spent acid recovery & Gas base), Phosphoric acid plant, Ethanol plant, and molten salt power plant.
- Worked on deputation for 6 months to ABENGOA head quarter Seville, SPAIN, on real project (Atacama and Norte III for Utility services.)
- Worked on deputation for 6 months to ABENCS, St Louis, USA as an Asst. Engineer-piping on real project (PCS-Sulfuric acid project, ABIL -Ethanol project, Solar power pilot plant)
- Worked on deputation for 6 months for Reliance site at Jamnagar, Gujarat and MNRE at Gwalpahari, Gurgaon.

Site Experience: -

- More than 4 years of site supervision experience for fabrication & erection of Birla Copper, HINDALCO at Dahej, CIL(Coromandel) at Vizag, RELIANCS at Jamnagar and MNRE at Gwalpahari, Gurgaon.
- The job involved was day to day site fabrication & erection of piping activity & resolve site problems.
- Wad Al Shamal-Saudi Arabia, - for as build and Modification in model as per site.
- Ability to effectively lead a team to achieve certain goals.
- Responsible for all piping day to day activities for design engineering.
- Involved on day-to-day basis with the designers during progress and review and checking the same before delivery to clients.
- Guiding to designers and draftsmen for piping related (safety, accessibility, and maintenance) activities.
- Knowledge of various relevant codes & standards used for piping.
- Ability to understand the client project documents and define the scope of work for a discipline.
- Proficient in checking of piping layouts, Isometrics, rack piping, MTO, vendor drawing.
- Ability to Developed plot plan, Equipment layout as per process requirements, Study & finalizing piping routing, prepare piping general arrangement plans, rack piping, Sectional views, Isometrics, Piping support layouts,
- Preparing 3D modeling of Spec-Gen / Piping / Equipment / Structure in Bentley Auto-Plant.
- Orientation. Reviewing & approving vender drawings. 3D Spec-Gen, Isometric & MTO.
- Ability to effectively communicate & interact with other departments.
- AVEVA PDMS for 3D modeling.
- Bentley Auto-Plant 3D Spec- Gen used for 3D modeling.
- Bentley Auto-Plant used for 3D modeling.
- Proficient in Navisworks used for 3D model review.
- Autodesk AutoCAD R13/R14/ 2000 to 2021 used for 2D Drawings.
- Basic knowledge of Microsoft base PDS/E3D used for 3D modeling.
- MS - Office. (Word, Excel, PowerPoint)

- Received **Treasure Chest Award** from Abencs Engineering, office, **St. Louis, USA**, in the month **of July 2008**, recognized for their excellent contributions on the ABI / ABIL and PCS projects. Also gained a significant amount of intensive 3D piping design and project team interface experience.
- Received ARM (AEPL Recognition of the Month) Award in the month of Aug 2008 for Improvement of piping study Layout & Hazop study by using data from previous project.
- Monsanto-DMCC on the 10th Anniversary presents 'Long Service Award'.

Work Experience:

Company: Shiv Sulphuric Solutions Pvt. Ltd.

(Shiv Sulphuric Solutions Pvt Ltd. provides consulting and engineering services for management, quality & engineering problems.) (5th May 2019 to present)

Designation: Manager - Engineering

Projects:

1. Coromandel International Ltd, Visakhapatnam. Ranipet, Kakinada, Udiapur.
2. Paradeep Phosphate Ltd, Paradeep, Odisha
3. Indian Farmers Fertiliser Cooperative (IFFCO) Ltd, Paradeep.
4. Abu Zaabal Fertilizers and Chemicals Co. (Kalubia, EGYPT)
5. Atul Ltd, Atul, Gujarat
6. Indorama Ltd, Haldia, Chennai,

Key Responsibility:

- Preparing and reviewing engineering drawing and documents as per company design criteria, client requirement.
- PMC Services provided.
- Participate 30%, 60%, 90% Model review in Technip office at Chennai and Tkis at Mumbai.

Company: ABENER Engineering Pvt. Ltd.

(Abener Eng. is a part of ABENGOA group of companies, an international provider of world class EPC solutions in renewable energy sector)

(6th Mar 2018 to 5th Apr 2019)

Designation: 3D model in charge / Senior Designer (Responsible for 3d model design at site Turaif, Saudi Arabia)

Projects:

1. Wad Al Shamal – Saudi Electricity Company at Turaif, Saudi Arabia.

Key Responsibilities:

- Modeling civil and Structural, Electrical cable trays and Hvac ducting design as per company design criteria, client requirement and as build.
- As build piping modeling

Company: Jacobs Engineering India Pvt. Ltd.

(21st Jan 2017 to 30th Jun 2017)

Designation: Sr. Piping Checker

Project: Decorative Paint Plant-APL, Mysuru.

Key Responsibilities:

- Preparation piping design as per company design criteria, client requirement.
- Checking of Isometrics as per P & ID and Layout

Company: New Horizon Engineering Pvt. Ltd.

(3 May 2016 to 30 Oct 2016)

Designation: Sr. Piping Checker

Projects:

Gas Skid Design (USA base Company)

Key Responsibilities:

- Checking of Isometrics as per P & ID, Company design criteria, client requirement.
- Piperack piping

Company: ABEINSA Engineering Pvt. Ltd.

(ABEINSA Engineering Pvt. Ltd. is a part of ABENGOA group of companies, an international provider of world class EPC solutions in renewable energy sector.)

(1st June 2012 to 31 Dec 2015)

Designation: Senior Designer – Piping-PDMS

Projects & Key Responsibility:

- Part of Combined cycle power plant for Dead Sea Works – Israel.
- Part of largest renewable energy project Shams 1- Abu Dhabi.
- Solana AI. Removal System – USA
- Part of Bio-ethanol plant for Hugoton CIP - USA
- Solana Ullage System – of a Concentrated Solar Power Plant – USA.
- Part of Solar thermal power for Mojave – USA
- Part of Tower Thermo Solar Technology - Atacama-1 CSP – Latin America.
- Part of 924MW plant for Norte III - Mexico

- Worked on deputation for 6 Months to ABENGOA Head quarter Seville, Spain, for CSP Atacama and Norte III Project.
- Checking Isometrics and Piping Layouts and nozzle Orientation drawings.
- Prepared All Utilities Sys. Designing as per company design criteria, client requirement and prepared piping support Detail drawings.

- Successfully doing piping spec. in Auto Plant Spec-generation application.

Company: Abener Engineering Pvt. Ltd.

(Abener Engg. is a part of ABENGOA group of companies, an international provider of world class EPC solutions in renewable energy sector)

(Nov. 2007 to May 2012)

Designation: – Asst. Engineer – Piping-Auto pant

Projects & Key Responsibility:

1. 3MW solar thermal power plant for MNRE at Gurgaon – India.
 - Prepared piping designing as per company design criteria, client requirement.
 - Successfully doing piping spec in Auto Plant Spec-generation application.
 - Checking the 3D Spec-gen entries Auto Plant Spec-generation application.
 - Efficiently doing extraction of isometrics GA extraction, & 2D presentations, On Auto Plant.
 - Checking piping Isometrics, General arrangement drawings & MTO.
 - Deputed at site. The job involved was day to day site fabrication & erection of piping activity & resolve site problems
2. Manufacturing facility for tower structure at Vadodara – India.
3. Kingamyambo Musonoi Tailings Mines Project – Katanga Drc.
(Engineering design for 900 tpd acid & 100 tpd liquid SO₂ plant)
 - Prepared 3D Modeling of Spec-Gen / Piping in Bentley Auto-Plant
 - Piping layouts / Isometric checking with the help of 3D model in Navisworks & P& I.D.
4. ESSAR Oil Vadinar Refinery Project – Vadinar (India) Essar Refinery - 350 TPD SAR, Detailed Engineering
 - Checking Auto plant smart P. & I D.

Company: MECS Enterprises Pvt. Ltd. (Formerly Monsanto DMCC Engg.)

- MECS INC, a Company based in US, MEPL was an EPC company performing LSTK & Detail Engineering projects in Sulfuric acid business. This company was taken over by Abengoa group of companies forming Abencs Engineering Pvt. Ltd. (AEPL) in November 2007
- (March 2004 to October 2007)
- Designation: Lead Designer – Piping-Auto plant

Projects & Key Responsibility:

1. Reliance (JERP) Jamnagar Export Refinery Project – Jamnagar (India)
 - As a Lead Designer for this project, handling the day to day activities like coordination with designers, project Engineers / managers & the client for smooth progress of the piping activity.
 - Checking the piping spec entries in the Auto Plant Spec-Gen application.

- Prepared piping layout using Auto Plant/Navisworks applications.
 - Coordination with the other departments (Mechanical, Civil, Instrumentation, Project groups etc.) for various interdepartmental activities.
 - Participating in 90% model review with client (Reliance) at St. Louis (USA), understanding the client requirement and guiding the designers for incorporating the changes as per the client requirement.
 - Participated in the construction activity of the plant.
 - Checking of line routing and instruments as per PID and Isometrics on site, solving problem on site.
2. Mopani Industries Ltd. (Zambia)
 - Prepared of Piping Layout with Isometric, Civil & Pipe Support Drawing. Prepared 3D Modeling on Auto-Plant
 - Prepared PFD & P & ID drawings, Checking piping MTO.
 3. Coromandel Fertilizer Ltd. 300TPD. (Vizag, India)
 - Prepared of Piping Layout with Isometric, Civil & Pipe Support details, Prepared 3D Modeling on Auto-Plant, Prepared PFD & P & ID drawings checking piping MTO
 4. Kingamyambo Musonoi Tailings Mines Project- Katanga DRC.
 - Piping layout extracting form 3D Model, Checking PFD & P & ID drawings and Isometric checking.
 5. Foskor Pyt Ltd. (South Africa)
 - Prepared of Piping Layout, Isometric, Civil & Pipe Support details, Prepared 3D Modeling on Auto-Plant
 - Prepared PFD & P & ID drawings, Prepared, checking piping MTO.
 6. Heng-I Chemicals Company Ltd. – Taiwan
 - Prepared Piping Layout using Auto PLANT/NAVISWORKS applications, Isometric checking.
 7. Hindalco FSA Recovery Industries.
 - Prepared of Piping Layout, Isometric, Prepared PFD & P & ID drawings.
 8. Two Lions, (China)
 - Prepared of Piping Layout, Prepared Sectional Elevation drawings, Isometric, Piping support detail Drawings, 3D Modeling on Auto-Plant.

Company: Monsanto-DMCC Enviro Tech & Engineering Ltd.

Consultant of Sulfuric acid, Single super phosphate, Industrial Alum and a wide range of specialty chemicals.
(April 1997 to March2004)

Designation: Designer.

Projects & Key Responsibility:

- Hind Lever Ltd., Haldia (India)
 - Prepared PFD & P & ID drawings.
 - Prepared Piping Layout and Isometric. And supports details.
- Birla Copper 1400TPD Sap. (Dahej, India)
- Hindalco Industries Ltd. 3000TPD Sap., (Dahej, India)
- Rawabi , Riyadh, (KSA)
- Shalina Laboratories Pvt. Ltd., DRC, (South Africa)
- Coromandel Fertilizer Ltd. Vizak, (India)
- Paradeep Phosphate Ltd. Phosphoric Concentration & Melter Section., Paradeep (India)
- Philippines Batteries Industries.
- Nirma Pvt. Ltd.
 - Prepared Equipment Drawings, Piping Layouts, Sectional Elevation drawings, Isometric. Piping support

detail Drawing, Piping MTO.

- Prepared Equipment Detail Drawing.
- Prepared Brick Lining Drawing

Educational Qualifications:

- PDMS 3D [2012] from Employer, Training given by AVIVA.
- Bentley's Auto Plant [2004] from Employer, Training given by BENTLEY.
- Diploma Piping Drafting & Designing [2001] from Industrial Engineering Institute-Thane.
- Diploma Mechanical Draftsman course [1993] from Kohinoor Technical Institute-Thane.
- AutoCAD Course [1994] from Vinayak Computer – Kalyan.
- SSC [1990] from High School & Junior College, Khardi

1.7. Project References

Some of major projects which were done by our key personnel while they were working for Monsanto-DMCC (MECS) and other organizations are listed here.

- **Some of SAP projects detail engg. completed earlier:**
 - 1,000 TPD Sulphuric Acid Regeneration Plant for Reliance Industries, Jamnagar
 - 3,400 TPD Smelter off-gas SAP, Hindalco, India (Detail Engg.)
 - 3,000 TPD SAP, Two Lion, China (Detail Engg.)
 - 600 tpd SAR, Red Lion, Motiva (Detail Engg.)
 - 1,400 TPD Smelter off-gas SAP, Hindalco, India (Detail Engg.)
 - 1,000 TPD Sulphur Burning Project in Zambia
 - Tail Gas Scrubber for Foskor Ltd, South Africa
- **Turnkey projects-SAP completed earlier:**
 - 600 Roaster Gas based SA Plant for Mopani Copper, Zambia
 - 70 TPD SAP, Philippine
 - Sulphur Melter, Paradeep Phosphates, India
 - 100 TPD [SAP](#), Saudi Arabia
 - Towers, Furnace & Stack replacement for CFL, India ([Phase-I](#), [Phase-II](#))
- **Turnkey/Engineering projects – Non SA completed earlier:**
 - 300 Single Super Phosphate (SSP) Plant for Hind Lever Chemicals Ltd, India
 - 350 tpd Phosphoric Acid Concentrator, Paradeep Phosphates, India
 - Phosphoric acid plant - Fumes scrubber for CFL
 - 300 tpd SA plant, Coromandel Fertilisers, India
 - 100 tpd SA plant, Congo

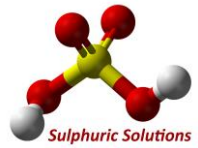
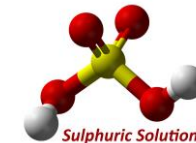


Table 1 – Projects Completed by Shiv Sulphuric Solutions (OPC) Pvt. Ltd.

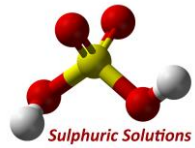
Client	Order Date	Project	Scope of Work	Status
Coromandel International Ltd, Kakinada	29-04-2017	SA Storage Tank Engineering	Design & Detail Engineering	Completed
Jordan India Fertilizer Company LLC (JIFCO), Jordan	11-06-2017	4,500 TPD SA Plant Troubleshooting	Plant Performance Evaluation, Visit & report	Completed
Coromandel International Ltd, Kakinada	21-10-2017	PA tank Breathing System Analysis	Design & Detail Engineering	Completed
Coromandel International Ltd, Vizag	04-11-2017	SA Storage Tank & Pipeline Engineering	Design & Detail Engineering	Completed
Amal Ltd., Ankleswar, Gujarat	20-12-2017	SA Plant Revamping to 140 tpd	Plant Assessment, Simulation for revamping, basic engineering, cost estimation & detail engineering including SS 304 H Convertor	Completed
Atul Ltd., Atul, Valsad, Gujarat	23-12-2017	SA Plant Revamping to 200 tpd	Plant Assessment, Simulation for revamping, basic engineering, cost estimation & detail engineering	Completed
Coromandel International Ltd, Kakinada	28-12-2017	PA Day Tank Engineering	Design & Detail Engineering	Completed
Tata Chemicals Ltd., Haldia	30-03-2018	SAP#1 Study Report	Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed



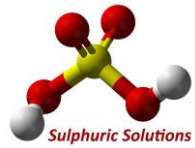
Client	Order Date	Project	Scope of Work	Status
Grasim Industries Ltd, Vilayat	02-04-2018	Feasibility study and conceptual design	Feasibility study to burn H ₂ S gases and use in SA Plant. Process simulation, basic feasibility, conceptual engineering, cost estimation, economic analysis	Completed
Philippine Batteries Inc.	21-05-2018	Supply of Sulphur Spray Burner	Supply	Completed
Coromandel International Ltd, Ranipet	30-07-2018	SA Plant Re-startup Study	Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed
Coromandel International Ltd, Vizag	01-08-2018	SAP-1 Revamping to 1700 TPD capacity	Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed
Coromandel International Ltd, Vizag	25-09-2018	New SAP Feasibility Study	Feasibility study for new SA Plant of 1,600 TPD capacity & 2,000 TPD capacity SA Plant. Process simulation, basic feasibility, conceptual engineering, cost estimation, economic analysis	Completed
Philippine Batteries Inc.	26-09-2018	Supply of Equipment Spares	Supply	Completed
Coromandel International Ltd, Ennore	25-09-2018	SAP-1 Improvement Study	Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed
Tata Chemicals Ltd., Haldia	30-03-2018	SAP-1 Study Report	Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed
Grasim Industries Ltd, Vilayat	02-04-2018	Feasibility study and conceptual design	Feasibility study to burn H ₂ S gases and use in SA Plant. Process simulation, basic feasibility, conceptual engineering, cost estimation, economic analysis	Completed



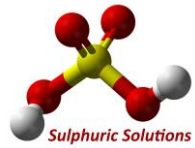
Client	Order Date	Project	Scope of Work	Status
Philippine Batteries Inc.	21-05-2018	Supply of Sulphur Spray Burner	Supply	Completed
Coromandel International Ltd, Ranipet	30-07-2018	SA Plant Re-startup Study	Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed
Coromandel International Ltd, Vizag	29-01-2018	SAP-1 Revamping to 1700 TPD capacity	Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed
Coromandel International Ltd, Vizag	04-02-2019	New Sulphuric Acid Plant Feasibility Study	Feasibility study for new SA Plant of 1,600 TPD capacity & 2,000 TPD capacity SA Plant. Process simulation, basic feasibility, conceptual engineering, cost estimation, economic analysis	Completed
Philippine Batteries Inc.	26-09-2018	Supply of Equipment Spares	Supply	Completed
Coromandel International Ltd, Ennore	25-09-2018	SAP-1 Improvement Study	400 TPD SA Plant Assessment, Simulation for revamping, basic engineering & project cost estimation	Completed
IRC Agrochemicals Pvt. Ltd.	19-01-2019	Design & fabrication Drawings of Stacks (3 Nos.)	Detail engineering for plant stacks	Completed
Indorama India Pvt. Ltd.	07-02-2019	Engineering for revamping SA Plant-1 to 600 TPD & SA Plant-2 to 350 TPD	Basic & Detail engineering for revamping of two sulphuric acid plants 600 TPD & 350 TPD capacity	Completed
Philippine Batteries Inc.	09-03-2019	Supply of Mortar Powder & Solution	70 TPD SA Plant – Supply of equipment/components	Completed



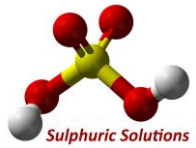
Client	Order Date	Project	Scope of Work	Status
Coromandel International Ltd., Udaipur	03-05-2019	Plant site visit for SSP Scrubbing System Design & Engineering	1,000 TPD SSP Plant Operations Assessment	Completed
IFFCO Paradeep Unit, Paradeep	13-03-2019	Plant site visit for SAP	2 X 3,500 TPD Sulphuric Acid Plant Operations Assessment & Troubleshooting	Completed
Birla Cellulosic. Kosamba	14-06-2019	Plant site visit for SAP	300 TPD Sulphuric Acid Plant Operations Assessment & Troubleshooting	Completed
Coromandel International Ltd., Udaipur	21-08-2019	SSP Scrubber Engineering	1000 TPD SSP Plant Basic & Engineering, Procurement Services, Project management Services for Scrubbing System	Completed
Coromandel International Ltd., Ranipet	06-09-2019	Ranipet SA Plant Restart-up Basic Engineering	100 TPD SA Plant (including Tail Gas Scrubber) Basic & Engineering, Procurement Services, Project management Services	Completed
Coromandel International Ltd., Ranipet	19-11-2019	Ranipet SA Plant Restart-up Detail Engineering	100 TPD SA Plant Basic & Engineering, Procurement Services, Project management Services	Completed
Coromandel International Ltd., Ranipet	05-12-2019	Ranipet SA Plant Construction Supervision	100 TPD SA Plant Basic & Engineering, Procurement Services, Project management Services, Site work supervision services	Completed
Coromandel International Ltd, Vizag	13-12-2019	Phosphoric Acid Evaporator System Engineering	Basic & Detail Engineering of 250 TPD Phosphoric Acid Evaporator Unit & Fluosilicic Acid Recovery Unit	Completed
Paradeep Phosphates Ltd., Paradeep	02-12-2019	Engineering & Improvement Study of SA Plants	2 X 1000 TPD SA Plant: Engineering Services for SA Plants Improvement, Study & Report	Completed



Client	Order Date	Project	Scope of Work	Status
Amal Products Ltd.	01-02-2020	Revamping of SA Plant to 140 TPD	Basic & Detail engineering for revamping SA plant to 140 TPD	Completed
Coromandel International Ltd, Kakinada	24-06-2020	Phosphoric Acid Unloading & pumping System	Detail engineering including storage tank design, piping for unloading of phosphoric acid and pumping to plant	Completed
Mirash Industries Ltd, Dahej	07-08-2020	200 TPD SA Plant revamping to 300 TPD	Revamping & debottlenecking study to increase sulphuric acid plant capacity to 300 TPD	Completed
Paradeep Phosphates Ltd., Paradeep	16-12-2020	Feasibility Report for new Sulphuric Acid Plant	Bankable Feasibility Report for a new Sulphuric Acid Plant including cost estimation & financial analysis	Completed
Coromandel International Ltd., Visakhapatnam	July 2021	Engineering Services for new 1500 TPD Sulphuric Acid Plant	Preparation of tender documents, evaluation of bids for technology, basic engineering & detail engineering	Completed
Paradeep Phosphates Ltd., Paradeep	June 2021	Feasibility Report for a new Sulphuric Acid Plant	Bankable Feasibility Report for a new Sulphuric Acid Plant including cost estimation & financial analysis	Completed
Atul Ltd., Atul, Valsad, Gujarat	March 2021	Alkali Scrubbing System for SO ₂ removal from tail gas of 2,00 TPD SA Plant	Complete design, basic engineering, cost estimation & detail engineering	Completed
Indian Farmers Fertiliser Co-operative Ltd, Paradeep, Odisha, India	June 2021	PMC Services for new 2,000 TPD Sulphuric Acid Plant	PMC Services, acting as Owner's Engineer to advise Owner for basic & detail engineering, approval of all engineering documents/drawings, evaluation of LSTK bids and advising during project execution	Completed
Coromandel International Ltd., Visakhapatnam, India	Nov 2021	PMC Services for new 1,500 TPD Sulphuric Acid Plant	PMC Services, acting as Owner's Engineer to advise Owner for basic & detail engineering, approval of all engineering documents/drawings and advising during project execution	Completed



Client	Order Date	Project	Scope of Work	Status
Coromandel International Ltd., Visakhapatnam, India	Dec 2021	Sulphur Melting System new 1,650 TPD Sulphuric Acid Plant	Basic engineering for Sulphur Melting System for new sulphuric acid plant including approval of all detail engineering documents/drawings and advising during project execution	Completed
Coromandel International Ltd., Visakhapatnam, India	Feb 2022	Tail Gas Scrubber Design for new 1,650 TPD Sulphuric Acid Plant	Basic engineering for Tail Gas Scrubber, approval of all detail engineering documents/drawings and advising during project execution	Completed
Coromandel International Ltd., Ranipet	Feb 2022	SSP Scrubber Engineering	800 TPD SSP Plant Basic & Engineering, Procurement Services, Project management Services for Scrubbing System	On Hold
Jordan India Fertilizer Company LLC (JIFCO), Jordan	Feb 2022	4,500 TPD SA Plant Troubleshooting	Plant Performance Assessment, Inspection during shutdown, Evaluation & report	Completed
Indian Farmers Fertiliser Co-operative Ltd, Paradeep, Odisha, India	June 2022	PMC Services for replacement of SAP-1 Furnace, Boiler, Acid Towers of 3,500 TPD Sulphuric Acid Plant	PMC Services, acting as Owner's Engineer to advise Owner for basic & detail engineering, approval of all engineering documents/drawings, evaluation of LSTK bids and advising during project execution	On Hold
Paradeep Phosphates Ltd., Paradeep, Odisha, India	July 2022	PMC Services for new 1,500 TPD Sulphuric Acid Plant	PMC Services, acting as Owner's Engineer to advise Owner for basic & detail engineering, approval of all engineering documents/drawings and advising during project execution	Under Construction
Indian Farmers Fertiliser Co-operative Ltd, Paradeep, Odisha, India	March 2023	Troubleshooting of SAP-1 Air Blower of 3,500 TPD Sulphuric Acid Plant	Troubleshooting of 3,500 TPD Sulphuric Acid Plant (SAP-1) Operations of air blower	Completed
Indian Farmers Fertiliser Co-operative Ltd, Paradeep, Odisha, India	March 2023	Troubleshooting of Phosphoric Acid Plant Reactor	Troubleshooting of Phosphoric Acid Plant Reactor to reduce operating temperature	Completed



Abu Zaabal Fertiliser Company, Kaluba, Egypt	March 2023	Basic& Detail Engineering of Tail Gas Scrubber for Sulphuric Acid Plants Unit-6 & Unit-7	Basic& Detail Engineering of Tail gas Scrubbing plant to remove SO2 from sulphuric acid unit-6 & unit-7 outlet gases from FAT	In Progress
Paradeep Phosphates Ltd., Paradeep, Odisha, India	April 2024	Tail Gas Scrubber Design for new 1,500 TPD Sulphuric Acid Plant	Basic & Detail engineering for Tail Gas Scrubber for new 1500 TPD Sulphuric Acid Plant and advising during project execution	Completed
Coromandel International Ltd., Kakinada	May 2024	Engineering Services for new 2000 TPD Sulphuric Acid Plant	Preparation of equipment enquiry specifications for new 2,000 TPD Sulphuric Acid Plant	Completed
Coromandel International Ltd., Kakinada, India	May 2024	PMC Services for new 2,000 TPD Sulphuric Acid Plant	PMC Services, acting as Owner's Engineer to advise Owner for basic & detail engineering, approval of all engineering documents/drawings and advising during project execution	In Progress
Coromandel International Ltd., Kakinada, India	May 2024	Sulphur Melting System new 2,000 TPD Sulphuric Acid Plant	Basic engineering for Sulphur Melting System for new sulphuric acid plant including approval of all detail engineering documents/drawings and advising during project execution	In Progress
Coromandel International Ltd, Kakinada, India	May 2024	Phosphoric Acid Evaporator System Engineering	Basic & Detail Engineering of 350 TPD Phosphoric Acid Evaporator Unit & Fluosilicic Acid Recovery Unit	In Progress
Coromandel International Ltd., Kakinada, India	May 2024	Tail Gas Scrubber Design for new 2,000 TPD Sulphuric Acid Plant	Basic engineering for Tail Gas Scrubber, approval of all detail engineering documents/drawings and advising during project execution	In Progress



1.8. Our Client References for Feedback

Following clients for whom we have done projects can be contacted/visited for feedback about our services.

1. Coromandel International Ltd., Andhra Pradesh : We have done projects for their units at Visakhapatnam, Kakindada, Ennore, Ranipet, Udaipur etc.
2. Atul Ltd., Atul, Valsad, Gujarat
3. Amal Ltd., Ankleswar, Gujarat
4. Jordan India Fertilizers Company LLC, Jordan
5. Indorama India Pvt. Ltd. (Earlier Tata Chemicals Ltd), Haldia, West Bengal
6. Paradeep Phosphates Ltd, Paradeep, Odisha
7. Indian Farmers Fertiliser Co-operative Ltd., Paradeep, Odisha

1.9. Some Pictures of Our Projects Completed



STAINLESS STEEL CONVERTOR FOR SULPHURIC ACID PLANT

By Shiv Sulphuric Solutions (OPC) Pvt. Ltd.
Client: Amal Ltd., Coimbatore



STAINLESS STEEL CONVERTOR FOR SULPHURIC ACID PLANT



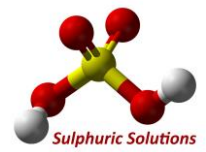
HEAT EXCHANGER FOR SULPHURIC ACID PLANT





230 TPD Phosphoric Acid Evaporators and Fluosilicic Acid Recovery Unit





Sulphur Magazine, March – April 2022 Issue

1	
2	CONFERENCE REPORT
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4	
5	manpower and mobilisation of personnel. After the first Covid wave, plant commissioning activities resumed with limited manpower.
6	
7	Remote start-up of sulphur recovery units
8	Jan Willem Hennipman of Comprimo recounted how Comprimo was able to provide remote support for the start-up of sulphur recovery units during the Covid-19 pandemic when international travel came to a virtual standstill. As the usual practice of providing on-site support for operator training, plant inspection, commissioning and start-up could no longer be done "in person", other means had to be explored to be able to support the operating companies during the initial startup of their facility.
9	Jan discussed several start-ups that were completed during the pandemic with remote and partial remote support from the Comprimo support matter experts. Some of the pitfalls of providing support remotely for start-ups as well as lessons learned from their experiences was shared. In addition, by using newly developed tools, Comprimo was able to provide better support to the operating companies without requiring on-site presence. The new tools enable operating companies to better train their operators for normal and upset conditions of their sulphur recovery units and provide an on-line continuous support system in which plant operation can be optimised in real time for better on-line reliability and lower emissions.
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Our expertise at your service for engineering & technology solutions

Some of recent process plants designed and engineered by us



- Our Services**
- * Technology, Basic & Detail Engineering
 - * Bankable Feasibility Reports
 - * PMC Services / Owner's Engineer
- Fertilizer & Chemicals Industry**
- Sulphuric Acid Plants
 - Phosphoric Acid Concentration Units
 - Single Super Phosphate (SSP) Plants
 - Scrubbing Systems

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Simplified sulphur recovery
COVER FEATURE 4
Integrated acid plant design
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