

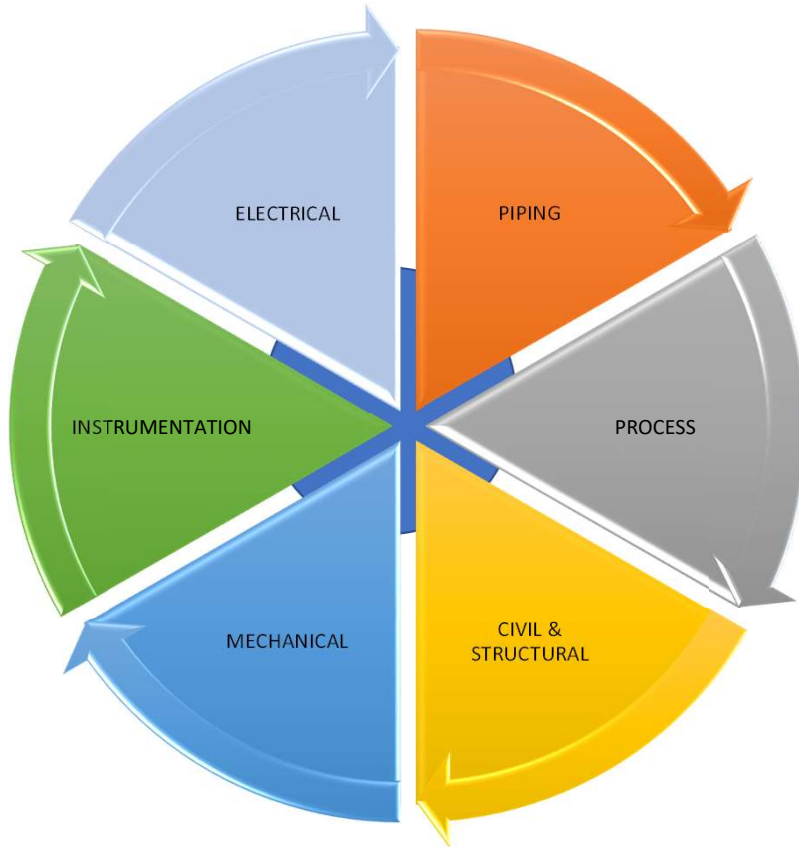


**Registered Office:**

**Unit No. 1 & 2, Parshwajyot CHS,  
Plot no. 16 & 17, Sector 5A, New Panvel,  
Navi Mumbai, India-410 206**

**Corporate Office:**

**Office No 5, H&G House, Plot No 12, Sector 11,  
CBD Belapur, Navi Mumbai – 400 614, INDIA.**



*SPEC was formed in 2016 by Our Director “Mr. Pankaj Patel having 23 Years of experience in detailed engineering.*

*Our core business consists of delivering Meticulous and timely engineering services and customer focussed approach using advanced technical automation systems.*

*Our skills includes Engineering services including Basic, FEED, Detailed Engineering, special study for Oil & Gas, Refinery, Power, Chemical Plants, Fertilizer Plants, Water, Infrastructure, Textiles plants, Steel plants and so on.*

*Our vision is customer satisfaction and to provide innovative & optimum solutions.*

*SPEC is now “SPEC Technical Services Pvt. Ltd.”.*



## OUR VALUES

- ❑ We take ownership for our actions and decisions while maintaining the best interest of our clients, community and environment.
- ❑ We cultivate and promote a culture that perpetuates a high standard of health, safety and environmental practices for our clients and staff.
- ❑ We uphold high moral principles while championing strong ethics and values for our business and community.
- ❑ We encourage and implement sustainable practices at all stages of a project, and we increase efficiency by continually raising the bar and expanding our knowledge, as well as explore new, cutting-edge technologies.
- ❑ We foster an environment of success by sharing knowledge and experience from a wide range of cultures and expertise for the collective benefit of the clients and communities in which we operate. And lastly, we motivate and inspire to achieve personal, professional and project excellence.



Mr. Rajendra Kumar Mankoji (Technical Director). He is having 40+ Years of Experience in Oil & gas Industry, Hydrocarbon, Chemical Plants, Refineries. Worked with Petrofac, UDHE , Kirloskar.



Rajesh Katkar- Piping Head (18+ years Experience). Experience in the field of Piping Design in Oil & Gas, Water Treatment, Chemical Plants, Refineries. Worked with V.K.Engineering, Hindustan Dorr Oliver Ltd, Vatech Wabag Ltd.



Mr. Pranab Nag-Civil & Structural Head ( 35+ years Experience) : Having Sound knowledge in the field of Structural Design and Analysis like Pipe Racks, Structural Connections, Static and Dynamic Foundation Design. Worked with Jacobs, HS LIAO, Birla Technical Services, M.N.Dastoor.



Mr. Bhushan Ahire E&T HOD (40 Years of Experience) : He is having 40+ Years of Experience in Oil & gas Industry for Electrical & telcom Detailing of experience in the field of Oil & Gas, Hydrocarbon, Chemical Plants, Refineries. Worked with Jacobs, APG, Al Bahar Jacorossi Engineering & Contracting Company, Kent Overseas Limited Etc.

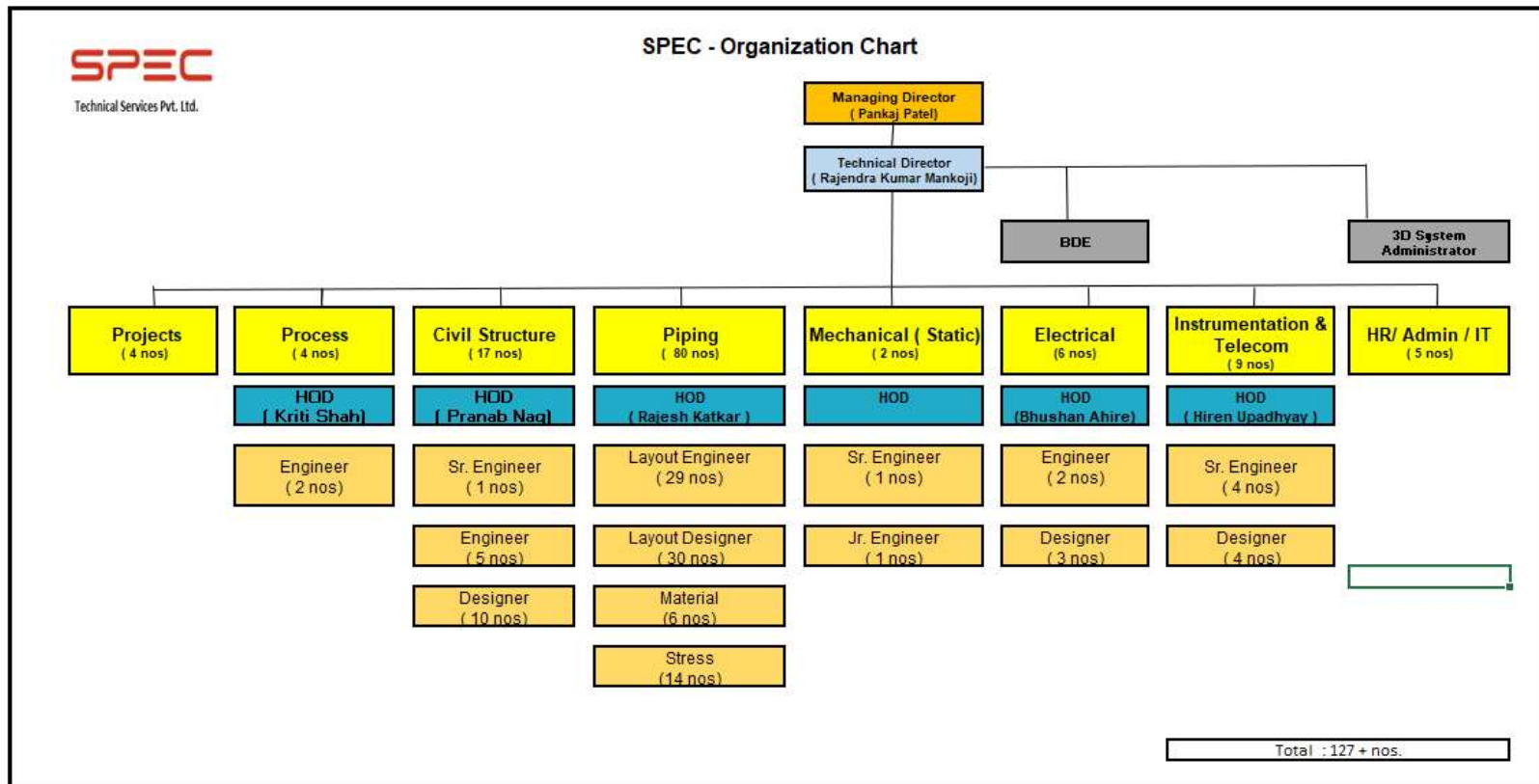


Mr. Hiren Upadhyay Instrumentation HOD (40 Years of Experience) : He is having 40+ Years of Experience in Oil & gas Industry for Instrumentation Detailing of experience in the field of Oil & Gas, Hydrocarbon, Chemical Plants, Refineries. Worked with CCEL, Petrofac, KBR, Reliance Industries Ltd., Bechtel, Chemtex etc.

## **CORE COMPETENCY**

- ☐ Multi Disciplinary detail engineering
- ☐ Proposal Engineering
- ☐ Development of 3D Model on latest software
- ☐ Analysis competency in Piping Stress, FEA, Ansys
- ☐ Designing, Drafting & 3D Modelling
- ☐ Revamp Projects using 3D laser scan data

## SPEC ORGANIZATION CHART



## KEY PERSONS

Mr. PANKAJ PATEL  
**MANAGING DIRECTOR**

**Mob: +91 7021493867**

**Email:**  
**pankajpatel@specengineer.com**

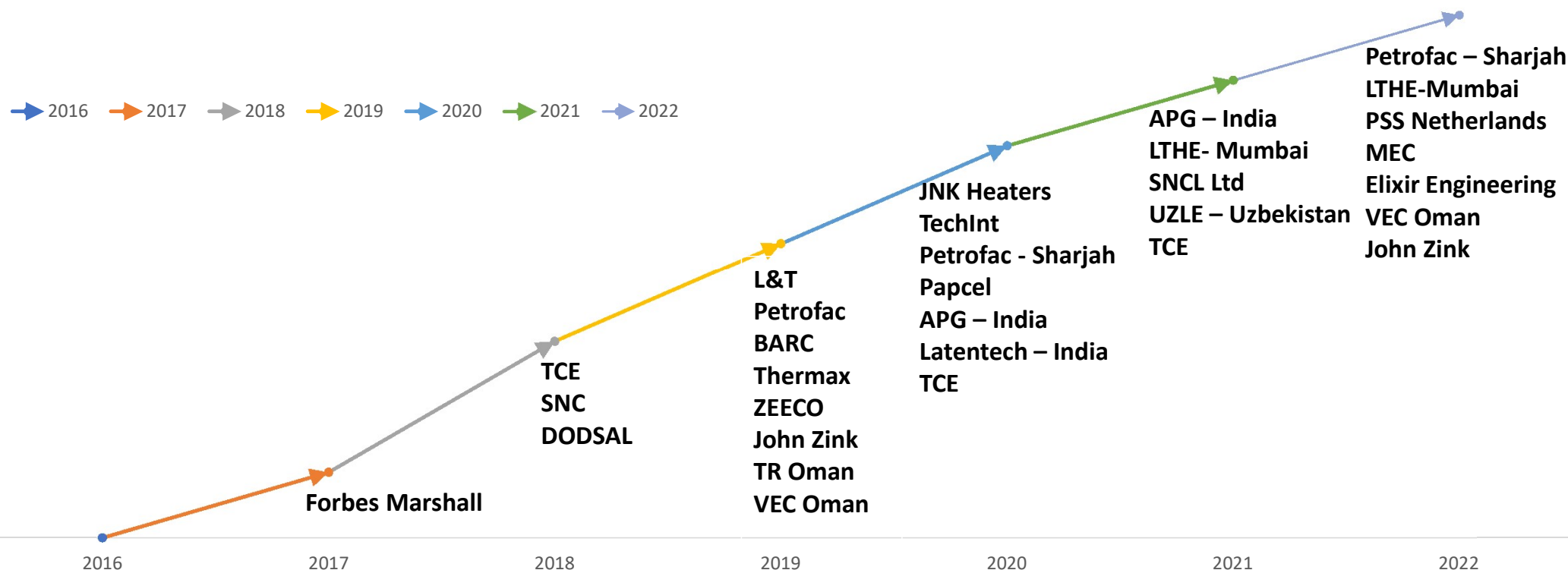


Mr. RAJENDRA KUMAR MANKOJI  
**TECHNICAL DIRECTOR**

**Mob: +91 9960200375**

**Email :**  
**rajendra.kumar@specengineer.com**

## KEY - CLIENTS





## **PROCESS ENGINEERING**

### **□ PROCESS DESIGN**

- Process simulation,
- Heat and Mass balance
- PFDs & P&IDs
- Process design and datasheets
- Cause and Effect diagram.

### **□ PROCESS & UTILITY EQUIPMENT DESIGN**

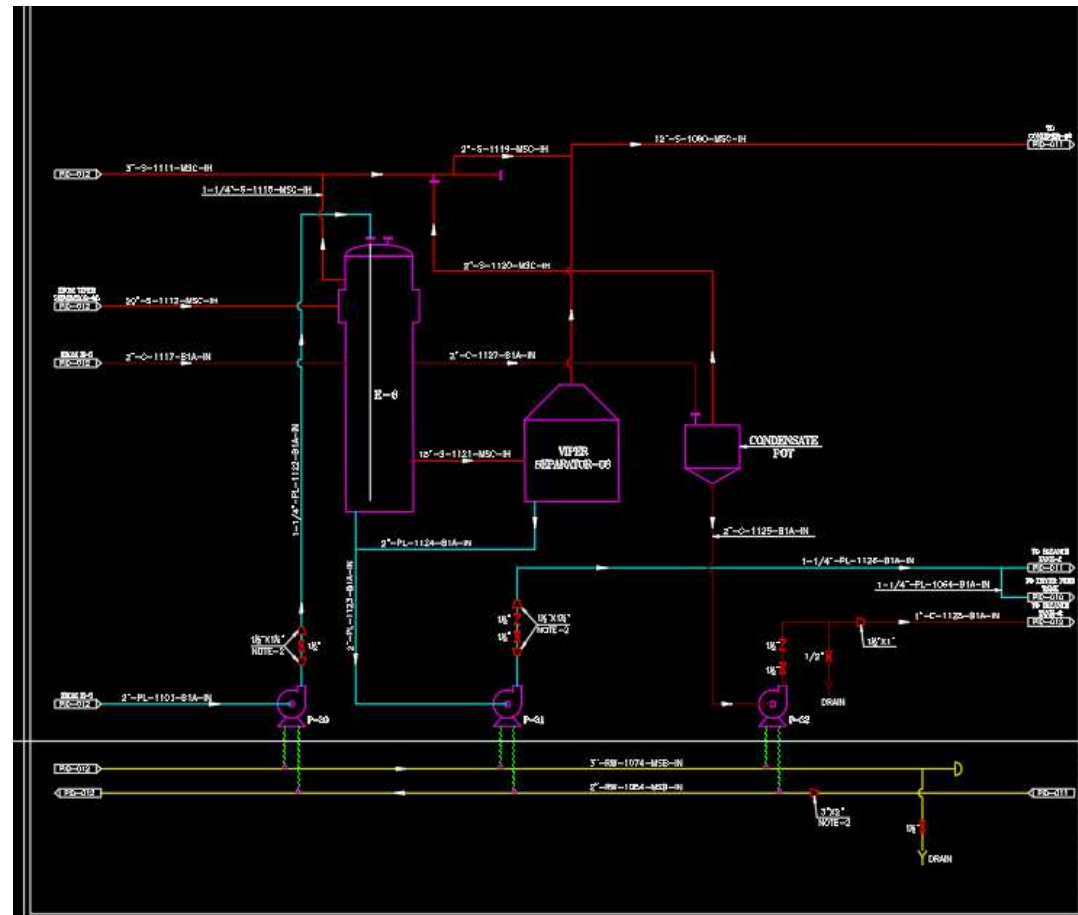
- Utility Summary,
- UFD, Equipment Design and Data sheets.

### **□ PROCESS PLANT UPGRADATION**

- Revamp / Brown field projects.

### **□ HAZOP STUDY**

- HAZOP study of overall plant and packages.



## **PIPING ENGINEERING**

- ☐ Piping – Material & specification
- ☐ Stress Analysis
- ☐ Engineering Drawings – Piping  
GAD & Isometrics
- ☐ MTO
- ☐ 3D Modelling



## **PIPING DESIGN**

### **□ ENGINEERING DRAWINGS**

- Plot Plan
- Equipment Layouts
- Piping GAD & Layouts
- Isometrics
- Pipe Support Standards & Schedule
- Tie in List & Packages
- As Built Drawings

### **□ PIPING - STRESS ENGINEERING**

- Static Stress Analysis
- Dynamic Stress Analysis
- Transient Analysis
- GRE Pipe Stress Analysis
- CAESAR II

## **MECHANICAL ENGINEERING**

- ☐ Design of Static Equipments such as tanks, vessel, reactors, Columns, etc.
- ☒ ~~Design of Rotary Equipments such as Pumps, Compressor, etc.~~
- ☐ Static Equipment Fabrication drawings.
- ☐ FEA Analysis (Ansys)

## **CIVIL & STRUCTURAL ENGINEERING**

- ☐ Design and detailing of:-Equipment supporting structures (RCC & structural steel), pipe racks structural steel and foundations, (modular or in-situ pipe rack), equipment foundation, substation /control room structures, dykes/ retaining walls
- ☐ Specials support & ware house design
- ☐ Pipe rack design & steel structure design

## **INSTRUMENTATION ENGINEERING**

- ☐ Preparation of Instrument design basis & define overall control philosophy
- ☐ Specifications of controls system & field instrument for Plant & Package equipments
- ☐ Preparation of Data Sheet and Sizing calculations for control valves, orifice plates & PSV
- ☐ Input / output listing for DCS and prepare specifications for DCS, PLC, and ESD

Engineering

- ☐ Control room engineering including design & layout

**Office Infrastructure Availability**

Sr. no.	Description	Inventory	Remark
1	Desktops	137	
2	Laptop	15	
3	Monitors	160	
4	Server	3	
5	Printer & Scanner	2	
6	Colour Printer	2	
7	Colour Printer	2	
7	B&W Laser Printer	3	
8	Generator	2	
9	Internet Connection	4	

Sr. no.	Unit	Area - Sq. Ft.	Seating Capacity	Remark
1	Panvel - Office 1 & 2	792	28	Including 1 Conference
2	Panvel - Office 5 & 6	990	36	
3	Belapur - Office 5A	1392	29	Including 1 Conference
4	Belapur - Office 4A	365	22	
5	Belapur - Office 2	500	22	Including 1 Meeting Room
6	Belapur - Office 8A	500	25	Including 1 Meeting Room

## **SUCCESSFULLY COMPLETED PROJECTS...**

- ❑ **KNPC** (Forbes Marshall Pvt. Ltd.)
  - Steam Tracing Design & Detailed Engineering.
  - KNPC Contra Tracing – Design & Detailed Engineering.
- ❑ **Bhilosa Textiles** (Forbes Marshall Pvt. Ltd.)
  - Design & Engineering of Steam & Condensate Recovery System.
- ❑ **IOCL Mathura** (Forbes Marshall Pvt. Ltd.)
  - Design & Engineering of Steam & Condensate Recovery System.
- ❑ **Tata Consulting Engineer – Mumbai**
  - Piping and Equipment Modelling using PDMS.
  - Fire Fighting System Design for Commercial towers -14 floors, 4 towers.
- ❑ **SNC Lavalin – Mumbai.**
  - 3D Modelling in CADworx.
  - Preparation of Piping Material Specification.
- ❑ **Hydac India Ltd. (JSW Pvt. Ltd.) – Mumbai.**
  - Detail Engineering of interconnecting Piping.
- ❑ **Shaan Lube Equipment Pvt Ltd. (JSW Pvt. Ltd.) – Mumbai**
  - Detail Engineering of interconnecting Piping of equipment.
- ❑ **BARC –Mumbai.**
  - 3D Modelling of Mechanical components.
- ❑ **Petrofac –Mumbai.**
  - MTO activity
  - Modelling in PDMS.



## **SUCCESSFULLY COMPLETED PROJECTS...**

- ☐ **KKR Bose -Mumbai**
  - Compressor Packages: Piping and Equipment Modelling using PDMS: 3 skids
- ☐ **RD Engineering -Mumbai**
  - TR Powder capacity expansion, Haldia – Detail engineering design of 2 skids.
- ☐ **Samarth Erectors – Navi Mumbai.**
  - Design and Fabrication drawings of structure.
  - Design and Fabrication drawings of Pipe rack.
  - As built of Structure at TAPS.
- ☐ **Zeeco -Mumbai**
  - PDMS Modelling of Incinerator package.
  - Stress analysis of critical lines.
  - Shop Drawings/Fabrication drawings.
  - CADworx Modelling
- ☐ **John Zink -Mumbai**
  - Stress analysis of critical lines.
- ☐ **GSDK- Varanasi: Starch Derivative Production Plant**
  - P&ID, PFD, 3D Modell.
  - Plot Plan, Piping Layout.
  - As-built Activity.
- ☐ **Fabtech Projects & Engineers Ltd - INDIA**
  - Fabrication Drawings of Pipe Rack – 650 Tonnage

## SUCCESSFULLY COMPLETED PROJECTS...

### ❑ **THERMAX -Pune**

- 3D Modelling of Flue Gas Desulphurizing project on E3D.

### ❑ **Shaan Lube Equipment Pvt Ltd. – Mumbai**

- RPL (Roll Pass Lubrication System).

### ❑ **Samarth Erectors – Navi Mumbai.**

- JELL Pharma - Structure detailing.

### ❑ **TCE -Mumbai**

- Stress analysis of critical lines.
- 3D Modelling on E3D ( DEWA Project)
- Fire Fighting System Design

### ❑ **Shriram Cottrell Pvt. Ltd -Mumbai**

- Assam Biorefinery.
- Rajasthan Refinery.

### ❑ **APG -Mumbai**

Piping Stress support Activity - Aker Power Gas- India (BR9 Expansion Project - IOCL - Barauni Refinery)

#### **Summary:**

- Selection of type of support.
- Primary & Secondary Supporting Tags.
- Suggestions for Civil Pipe Support & Special Support.
- Design of Civil & Special Support.

### ❑ **3D Modelling on E3D- Latentech ( Netherland Based Project)**

#### **(Laser Scan Model)**

- **Summary:**
- 3D Modelling on Laser Scan Modell.
- Preparation of General Arrangement Drawing.
- Preparation of Isometrics Drawings

## SUCCESSFULLY COMPLETED PROJECTS...

### ☐ **LTHE –Mumbai Phase 1**

Unit: PTA-PIA

- **Summary:**
- Equipment Layout
- Tie In Sketches & Point Schedule
- Study piping routing in auto cad for existing.
- Provide load data drawing.
- Study piping of new facility in SP3D.
- Extract Manual Piping BOM for the existing facility.
- Extract isometrics for stress analysis.
- Consolidated piping BOM for new & existing facility.
- Specialty BOM
- Work Volume (ID, IM, Insulation BOM, Painting BOM), UG BOM, Fire Water BOM, Support BOM for costing
- Stress Analysis
- SP3D Model as per RIL specification

### ☐ **LTHE –Mumbai Phase 1**

Unit: PX-MX

- **Summary:**
- Equipment Layout
- Tie In Sketches & Point Schedule (775+ Tie-Ins)
- Study piping routing in auto cad for existing.
- Provide load data drawing.
- Study piping of new facility in SP3D.
- Extract Manual Piping BOM for the existing facility.
- Extract isometrics for stress analysis.
- Consolidated piping BOM for new & existing facility.
- Specialty BOM
- Work Volume (ID, IM, Insulation BOM, Painting BOM), UG BOM, Fire Water BOM, Support BOM for costing
- Stress Analysis
- SP3D Model as per RIL specification

## **SUCCESSFULLY COMPLETED PROJECTS...**

### ☐ **GHCL –Gujarat**

#### **RBC ( Refined Bicarbonate Plant)**

- Detailed Engineering Services
- For below discipline:**
- Process Engineering.
- Mechanical Engineering.
- Civil Engineering.
- Piping Engineering.

### ☐ **Sadhana Nitrochem Chemical Ltd –( SNCL)**

#### **PARA AMENO PHENOL PLANT**

- Detailed Engineering Services
- Summary:**
- 3D Modelling of Equipments.
- Issue of Equipment Layout and Isometrics.

### ☐ **TCE –Mumbai**

- **Hassyan 120 MIGD SWRO Desalination Plant.**
  - **Stress Analysis for BPCL Plant**
  - **2G Ethenol**
  - **Stress Analysis for Smart CHEM Technologies.**

### ☐ **Hamon**

#### **Cooling Tower Systems**

- Detailed Engineering Services for cooling tower area.

## SUCCESSFULLY COMPLETED PROJECTS...

### □ **LTHE – Mumbai – Phase 2 (60% & 90% Modell)**

Unit: PX-MX (No. of Lines 1000+)

- **Summary:**
- Equipment Layout
- Tie In Sketches & Point Schedule (775+ Tie-Ins)
- Study piping routing in auto cad for existing.
- Provide load data drawing.
- Study piping of new facility in SP3D.
- Extract Manual Piping BOM for the existing facility.
- Extract isometrics for stress analysis.
- Consolidated piping BOM for new & existing facility.
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- Work Volume (ID, IM, Insulation BOM, Painting BOM), UG BOM, Fire Water BOM, Support BOM for costing
- Stress Analysis
- SP3D Model as per RIL specification

### □ **LTHE – Mumbai – Phase 2 (60% & 90% Modell)**

Unit: PX-MX (No. of Lines 1000+)

- **Summary:**
- Equipment Layout
- Tie In Sketches & Point Schedule (775+ Tie-Ins)
- Study piping routing in auto cad for existing.
- Provide load data drawing.
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- Specialty BOM
- Work Volume (ID, IM, Insulation BOM, Painting BOM), UG BOM, Fire Water BOM, Support BOM for costing
- Stress Analysis
- SP3D Model as per RIL specification

## **SUCCESSFULLY COMPLETED PROJECTS...**

### ☐ **Utility Engineering - Uzbekistan**

Safety Studies Boysun GAS GPP

- **Summary:**
- Escape, Evacuation and Rescue Analysis Philosophy and Study
- Fire and Gas Detection Philosophy
- Noise Mapping Study and Philosophy
- Hazardous Area Classification
- Escape route and Safety Equipment Layout & Safety Signage Layout
- Vapor Cloud Explosion Study
- Reliability, Availability and Maintainability (RAM) Study
- Material Handling Study
- Review Report Project Design Requirements

## ON GOING PROJECTS...

### ☐ **Petrofac - Sharjah**

Engineering Services - ETP

- **Summary:**
- Piping Engineering
- Civil & Structural Engineering
- Electrical Engineering
- Instrumentation Engineering.
- Telecom Engineering.
- SP3D & Tekla Modelling

### ☐ **Petrofac – Sharjah**

Engineering Services – Merum Project

- **Summary:**
- Plot Plan
- Proposal MTO
- Interconnecting P&ID's
- Underground Composite drawings
- EPC Manhours

### ☐ **VEC - Oman**

Engineering Services – Hanaya As-build project

- **Summary:**
- Update Master Drawing (With RLMU)
- Update Master Drawing (With out RLMU)
- As-build in PDMS/E3D (Isometrics Drawing)
- As-build INTOOLS (Instrument Tags)

## Our Valuable Clients...





# Thank You

## “Committed to Customer Satisfaction”