

# SATTVA EngiTech Pvt Ltd

Assured quality services for Engineering and Technological needs



## **INTRODUCTION**

SATTVA EngiTech is a Private Limited Company working towards excellence in the Engineering and Technological Services and believes in pursuing business through innovation and technology. Our team comprises of highly motivated specialist with several years of rich and varied industry experience. Our aim is to be a leader in the industry by providing value added products, services to increase profitability of clients.

SATTVA EngiTech is here to provide quality products and services that exceed the expectations of our esteemed customers. Our services are customer focused and greatly respect the trust that they have in us. Creativity and innovation along with honesty, integrity and business ethics are guided traits. We believe in long term relationships with our customers and strive to serve excellence in Engineering and Technological services to our customers at every opportunity.



### **ENGINEERING SERVICES**

Engineering design and support services right from concept development to execution and capitalization

- ✓ Conceptual Engineering Feasibility studies, option screening, technology selection and risk-assessments.
- ✓ Front End Engineering Design (FEED) Multi-discipline FEED packages including detailed design bid support.
- **Detailed Design Engineering Comprehensive Detailed Design engineering** services and/or Project Management Consultancy services.

# SIMULATION AND TRANSIENT ANALYSIS

- Steady State simulation
- Dynamic/Engineering simulation
- Expertise in Operator Training Simulator for following ➤ Oil & Gas : Wellhead and CPP
  - ≻ Refinery & Petrochemicals
    - CDU and VDU

Isomerization

- FCC Unit
- Lube Refinerv Hvdrocracker unit

Naphtha Cracker

- XFII
- CCR
- PSA
- Gas Cracker

Modelling of real time process systems, to understand, simulate transient concerns and signifying solutions.

Study of thermo-hydrodynamic and fluid behavior of Pipeline transportation systems.



# LAYOUTS



Plant Layout

Development of overall plot plan to identify the space requirement.

Equipment Layout

Development of equipment layout based on PFD/ P&ID's, statutory requirements, maintenance requirements.

✓ Piping Layout

Development of piping layouts based on equipment layout, P&ID's, vendor data, ergonomics, HFE requirements.

Piping Materials

Development of piping specifications, datasheets, MTO's, Material Requisitions, Technical Evaluations, Vendor Document Review.

# PIPING STRESS ANALYSIS & SUPPORT DESIGN

- Piping stress analysis to meet International and National code requirements.
- Troubleshooting of existing plant piping such as pump misalignments, vibration.
- Preparation of IBR approval packages.
- ✓ Design of pipe supports.
- Development of datasheet/ specifications of special supports such as spring hangers.





### **3D MODELING**

- ✓ 3D modelling using of entire plant
- Model reviews with client.
- ✓ Piping isometric generation from 3D model.
- $\checkmark \quad {\sf MTD} \ {\sf extraction} \ {\sf from} \ {\sf 3D} \ {\sf Model}.$
- $\checkmark$  Interface management with all disciplines.
- $\checkmark$  Constructability review and planning.

### SAFETY STUDIES

Safety studies for following

- ✓ Process Safety Management
  - o PSM Workshop
  - $\circ$  PSM Gap Assessment
  - $\circ$  PSM Implementation
- $\checkmark$  Brainstorming sessions and workshops
  - $\circ~$  HAZOP / What if analysis
  - o HAZID
  - o LOPA
  - o IPF/SIL
  - o QRA
- $\checkmark$  Sizing of safety system
- Safeguarding philosophy
- $\checkmark$  Vent, flare network modelling
- Dispersion and radiations studies
- $\checkmark$  Surge analysis
- Firewater network



# EXISTING SYSTEM TROUBLESHOOTING / DEBOTTLENECKING



### Troubleshooting studies

- Design data acquisition and re-verification
- Site verification and collecting site data
- $\checkmark$  Root cause analysis
- $\checkmark$  Benchmarking and providing optimum solution

### Debottleneck studies

- Performance monitoring of Plant or unit operation, Identifying Gaps and recommendations for Gap closure
- Identifying the bottleneck and providing optimum solutions for debottlenecking

## TRAININGS

Various hands-on-trainings comprising case studies for junior engineers as well as experienced professionals for following modules

- $\checkmark$  Basic process simulation software training
- $\checkmark$  Advance process simulation software training
- $\checkmark$  Specialized software trainings for
  - $\circ\,$  Thermal design of exchangers
  - $_{\odot}\,$  Vent/Flare network
- $\checkmark$  Industry specific Troubleshooting Training



WHY SATTVA ENGITECH?

We have hands on experience of services that we are offering. We possess all the technical competence and capabilities required for design and engineering all process plants / systems. We strive for meeting customer requirements within agreed timeline. Our approach is to do it right at first and target for achieving error free deliverables. We endeavor to achieve excellence in everything. We have talent to conceive, grow, develop and deliver complete solution to specific technical glitches in process plants.

We undertake development of Conceptual Engineering, Front End Engineering Design, Detailed Design Engineering and Project Management services. We also provide assistance in procurement, verification of construction and commissioning.

### **INDUSTRIES WE CATER**

 $\checkmark$  Oil and Gas

✓ Refineries

✓ Chemicals

- ✓ Petrochemicals
- ✓ Pipeline Distribution and Network
- ✓ Specialty Chemicals
- ✓ Polymer

Pharmaceuticals

✓ Power

Looking forward to working with your esteemed organization as a solution provider to enhance profitability.

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