

ENERFAC

COMPANY PRESENTATION

DESIGN. DELIVER. ASSURE.

ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 Certified



ENERFAC SOLUTIONS
CONTENTS



Introduction

A glimpse into the unique identity of our business



Our Values

The beliefs, philosophies, and principles that drive our business



Our Services

We focus on developing safe, cost-effective and value-adding services



Vision and Mission

Our organization's aspirations and the wider impact it aims to create globally



Our Culture

Our corporate culture values professional and personal aspirations



Global Presence

we emphasize long-term commitment and combine global reach and local intimacy to provide professional services



ENGINEERING & PROJECT MANAGEMENT CONSULTANT



Enerfac provides professional and technical solutions to deliver safe, cost-efficient Engineering, Procurement, Construction and Commissioning (EPC) projects to clients around the world. Our performance driven solutions are employed throughout the asset life cycle from concept to decommissioning across a wide array of industrial sectors including mining, environment and infrastructure, oil & gas, refining, chemical, petrochemical, solar, water and power sectors.

Enerfac is now competing and thriving in both domestic and global markets by combining the expertise and resources in India, Pakistan, Philippines, GCC, Europe and Americas. **Enerfac** helps companies modernize technology, turn to digital to improve operational efficiency, reduce cost and provide higher customer satisfaction to stay ahead in a fast-changing world.

VISION AND MISSION

Vision

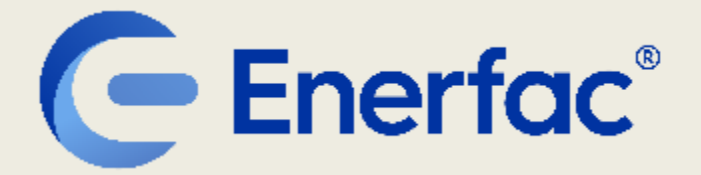
To be a global leader in providing smart solutions to a smart world by digitizing engineering

Mission

To consistently deliver smarter solutions for IT and Engineering sectors by strategic alliances and technology transfer through our sustainable business model



OUR COMPANY VALUES



Our values help to steer our business, management and team members in the right direction

Customer Centric

Customer Centric

We focus on unparalleled customer service and satisfaction by employee first approach

Safety

Safety

We strive towards a safe and secure working environment implementing highest safety standards

Integrity

Integrity

We adhere to the highest ethical principles promoting respect, honesty and fairness

OUR COMPANY VALUES

Quality

We foster to deliver value to customers with the highest quality

Sustainability

We balance economic, social, and environmental demands of this smarter world by acting responsibly

Quality

Sustainability

OUR CULTURE

A great organizational culture is the key to developing the traits necessary for business success



Transparency

We believe transparency in the workplace improves productivity, stimulate innovation and enhance employee and customer satisfaction.



Teamwork

We foster collaboration, mutual respect, and empathy to motivate our team members who deliver value to our customers.

Diversity

We believe diversity inspires creativity and empower people with numerous opportunities thereby helping them to discover how they can make an impact.

Continuous Improvement

We actively listen to ideas and feedbacks from our team members and clients to improve operational excellence.

Giving Back to Society

We find a personal sense of joy and fulfillment through our charities which make a difference to any community. We inspire to create a ripple of positive impact through our contributions.

For school and college scholarships*, please contact us at info@enerfacolutions.com

*currently we offer merit scholarships only in India

OUR CULTURE

**We're proud of our own
set of core values**

OUR SERVICES

We deliver Safe, Reliable, Secure and Cost-Effective solutions to our clients

We take a construction-led approach to design; i.e., we design with ease of construction in mind, reducing problems and costs down the line

Engineering Design



- Conceptual Design
- Front End Engineering Design
- Basic and Detailed Engineering Design
- Documentation, Drafting and As Built Services
- Safety Engineering (Fire Protection, Code Consulting, HAZOP, SIL)
- Power System Studies and Simulation

Procurement Management



- Vendor & Contractor Pre-Qualification
- Global Sourcing
- Material Requisition Preparation
- Tracking & Expediting
- Vendor Drawing & Documentation Review
- Schedule & Delivery Coordination

Construction Management

- Site Mobilization Plan
- Project Execution Plan
- Project Mobilization Plan
- Manpower / Equipment Schedule
- HSE / Quality Plan



Testing & Commissioning Consultancy

- Testing Support
- Non-Destructive Testing
- Commissioning Support
- Troubleshooting Support
- Startup Support

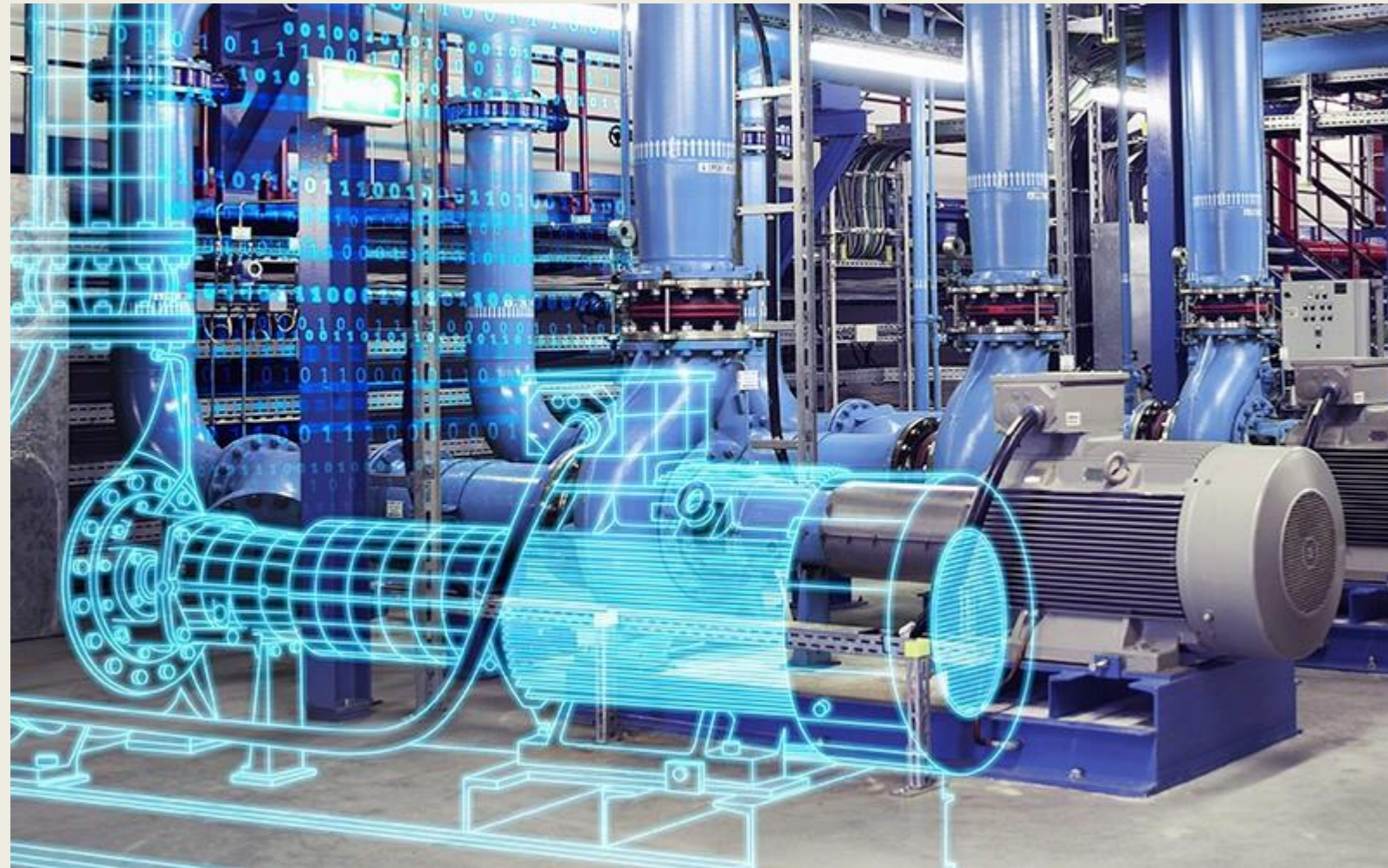


Operations & Maintenance Consultancy

- Shutdown Support
- Turn Around Support
- Chemical Cleaning and Injection Support
- Plant Maintenance Support



Engineering Disciplines



Sectors

- Process
- Architectural
- Civil
- Structural
- Mechanical
- Piping
- Fire Fighting
- HVAC
- Cathodic & Anodic Protection
- Electrical
- Instrumentation
- Analyzer
- Telecommunication
- IIOT, Cloud, Artificial Intelligence, Digital Engineering, Data Analytics
- Geographic Information Systems (GIS)
- Oil & Gas (Onshore and Offshore)
- Refinery, Chemical & Petrochemical
- Iron & Steel, Mining & Infrastructure
- Solar, Water and Power

Process



Basic, Detailed Engineering & As Built Services

Process Description and Design Basis

Process Specifications and Datasheets

Heat and Material Balance

Process Flow Diagram (PFD)

Piping and Instrument Diagram (P&ID)

Cause and Effect Diagram

Line Designation Table

Mixers and Agitators Design Verification

Equipment Sizing and Hydraulic Calculations

Flare System Design (PSV, Equipment Blow Down, Flare Headers, etc.,)

Flare Stack Radiation & Dispersion Analysis (API 521 Standard)

Process De-bottlenecking and Optimizing Studies

Thermal Rating of TEMA Type Exchanger

Heat Exchanger Performance Analysis

Blow Down Assessment Studies (Adiabatic and Non-Adiabatic)

Hydrate Inhibitor Dosage Calculations

CFD Simulation of Fluidized Bed Reactors

Process Flow Assurance



Basic, Detailed Engineering & As Built Services

Flow Assurance for Multiphase Flow Analysis

Two, Three and Internal Distribution Separation Analysis

Modelling of Pipeline Thermal Behavior

Steady State and Transient Simulations for Multiphase Pipeline Flow

Hydrate Mitigation Philosophy and Inhibitor Tracking

Wax Management Philosophy

Single- and Two-Phase Line Sizing

Multi Phase Pipeline Dynamic Analysis

Steady State and Transient Analysis

Liquid Management, Slugging Evaluation and Mitigation

Liquid Pipeline Transient Analysis (Pressure Surge and Surge Relief Valve)

Oil and Gas Gathering Station Design and Modeling

Pipeline Benchmark Case Analysis

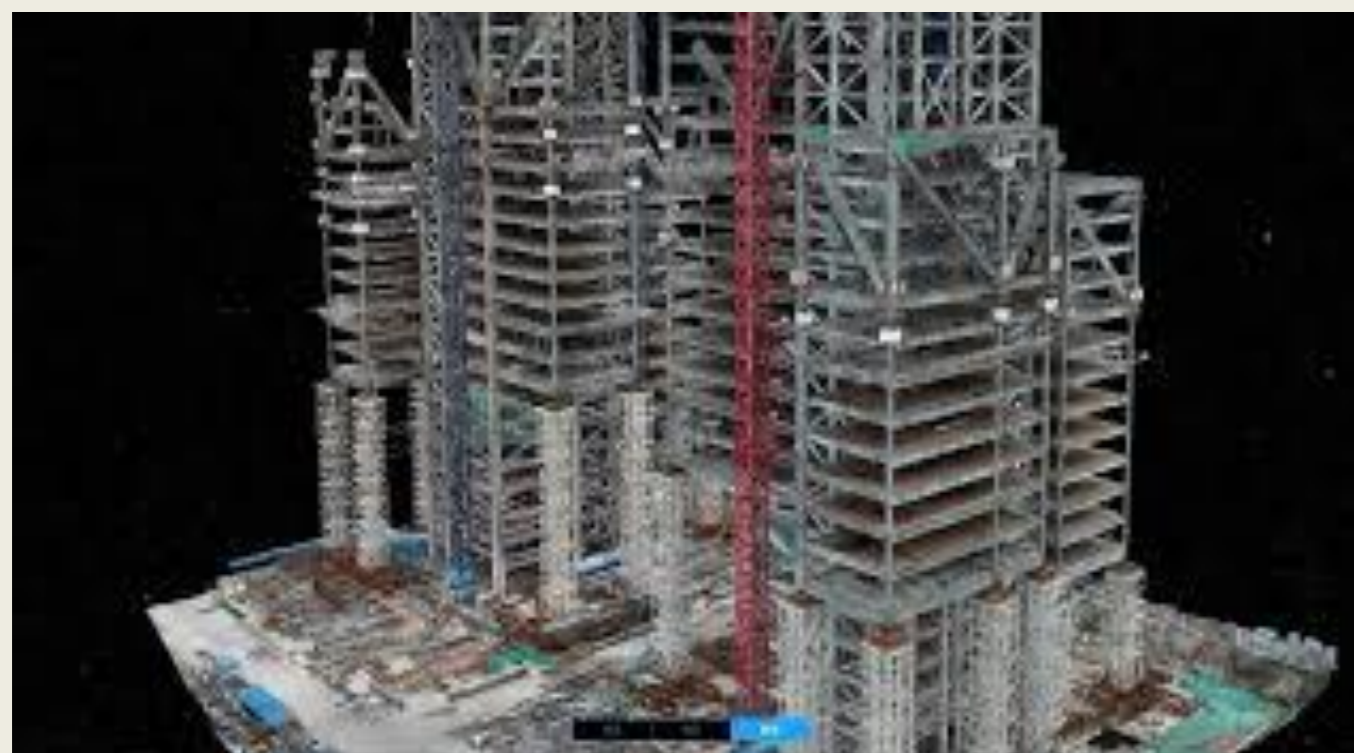
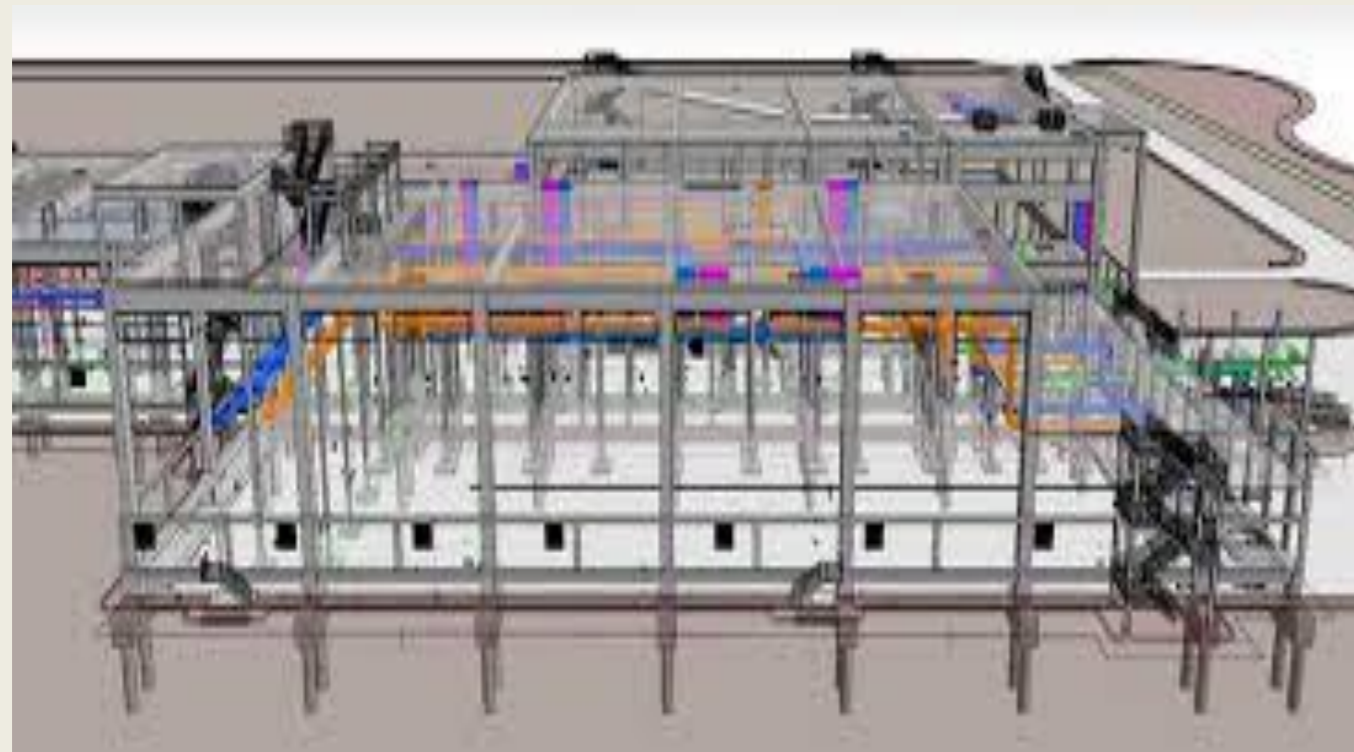
Pumps Circuits Dynamic Design and Analysis

Compressors Circuits Dynamic Design and Analysis

Operating Strategies, Philosophies and Procedures

Production Optimization and Operational Expenditure (OPEX) Minimization

Architectural, Civil & Structural



Basic, Detailed Engineering & As Built Services

Building Information Modeling (BIM)

Building Layout, Floor Plan, Elevation and Section Details

Building Foundation Plan and Details

Building Floor Slab Plan and Details

Building Roof Framing Plans

Door and Window Schedule and Details

Interior and Exterior Finish Schedule and Details

Design Calculations of Civil Structures

Civil and Structural Calculations

Roads and Paving Plan

Sewer and Drainage Plan

Composite Underground Facilities Plan

Electrical and Instrument Cable Duct and Trench Plan

Storm Sewer Manhole Schedule / Details

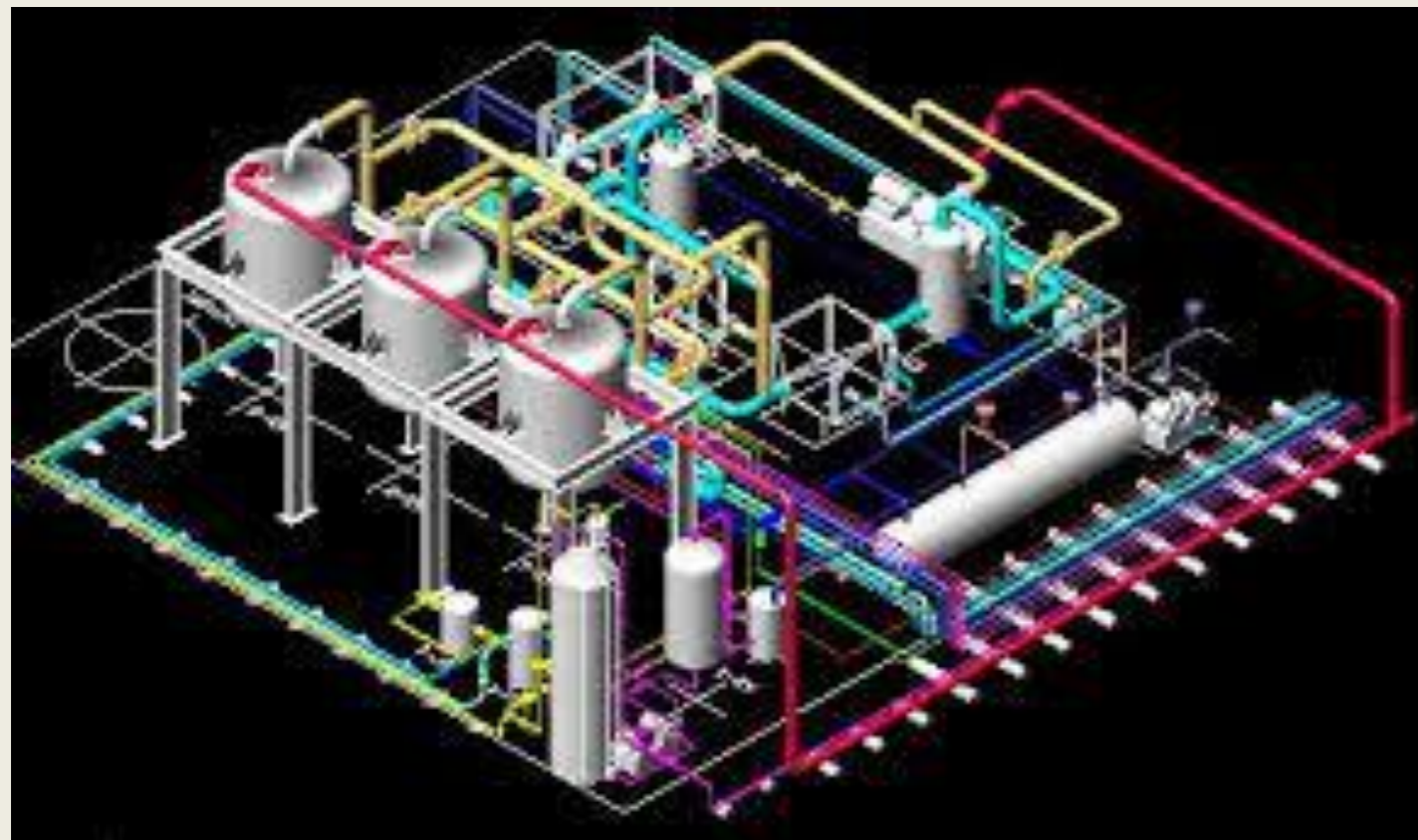
Foundation Layout Plan for Equipment and Structures

Pipe Support Foundation Plans and Details

Pipe Rack Steel Structure Plan / Location Plan

Data Center Design

Mechanical & Piping



- Basic, Detailed Engineering & As Built Services

- Piping Material Specification

- Piping Plan and Profile

- Isometric Drawings

- Pipe Support Details

- Tie in Details

- Hydrotest Diagram

- Piping Section Details

- Pipe Trench and Support Details

- Nozzle Orientation for Drums, Columns and Tanks

- Plot Plans, Equipment Layouts and 2D Piping GA Drawings

- 2D and 3D Modelling

- Stress Analysis

- Datasheet for Piping and Piping Components

- Vendor Package Review

- Structural Modeling of Offshore Structures, Jackets, FLNG, FPSO, etc.,

- Equipment Datasheet

- Piping MTO

Fire Fighting and Fire Protection



Basic, Detailed Engineering & As Built Services

Fire Fighting Design Calculations

Fire Water Piping Layout

Sprinkler System Layout

Piping Isometrics

Deluge Valve Details

Alarm Check Details

Fire Alarm System Layout

Fire Alarm Riser Diagram

Fire Alarm System Details

Fire Water Tie in Details

FM200 Fire Suppression System, CO2 Suppression System, NOVEC 1230

Sprinkler System & Fire Pumps Design Calculations

HCIS and Professional Engineer Attestation and Approvals

HVAC



Basic, Detailed Engineering & As Built Services

HVAC General Notes, Legends and Abbreviations

HVAC Equipment Layout Plan and Schedule

HVAC Sections and Details

HVAC Layout

Equipment Schedule

HVAC Calculations

Air Flow Diagram

Control Diagram

HVAC Air Distribution and Balancing

HVAC Shutdown Scheme with Fire Alarm

HVAC Sequence of Operations

HVAC Section and Details

HVAC Equipment Datasheets

HVAC Material Take Off

HVAC Installation and Miscellaneous Details

Instrumentation & Control



Basic, Detailed Engineering & As Built Services

Instrument Design Basis

Instrument Index

DCS, RTU, SCADA, MODBUS RS485, ESD & PLC IO Lists

Instrument Location Plan

Instrument Loop Diagram

Instrument Specification Sheet

Junction Box Termination / Wiring

Marshalling Cabinet Termination / Wiring

System Cabinet Termination / Wiring

Panel Layout Drawings

Instrument Hookup Drawing

IO Wiring Diagram

Instrument Cable and Conduit Schedule

Power Distribution Wiring

Instrument Cable / Conduit / Tray Layout

Typical Installation Details

Instrument Air Manifold Layout

Instrumentation & Control



Basic, Detailed Engineering & As Built Services

Instrument Air Tubing Layout

Instrument Grounding Plan and Details

Logic Diagram

Cause and Effect Diagram

Control Philosophy

Control Wiring for MCC

Air Distribution Diagram

Foundation Fieldbus Segment Diagram

Modbus Interface and Mapping List

Functional Design Specification

Panel Load Calculations

Panel Heat Load Calculations

Bill of Materials / Material Take Off

Instrument Installation Schedule

Name Plate Schedule

System Architecture

Instrumentation & Control



Design Engineering, Supply, Panel Assembly and T&C

PLC / ESD / RTU / SCADA / HMI:

Siemens, Schneider, Allen Bradley, ABB, Emerson, Yokogawa, GE, Sofrel, Motorola

DCS: GE Mark VIe, ABB 800xA, Yokogawa Centum CS 3000/VP, Emerson DeltaV & Ovation™, Honeywell Experion

Protocols, Codes and Standards:

API, ANSI, ASME, ASTM, EN, FCI, ISO, IEC, IP, ISA, NEC, NEMA, NFPA, NACE, PIP, RAL, SIL, HART, Fieldbus, Incoterms, SABIC, SAUDI ARAMCO, SEC, ADNOC, SHELL etc.

HAZOP, SIL Studies, Functional Safety Assessment, SRS

Enerfac has TUV and Exida Certified Functional Safety Engineers and Experts to accomplish Safety Audits, HAZOP and SIL studies helping clients operate safely around the world through its global offices !

Analyzer



Basic, Detailed Engineering & As Built Services

Analyzer Data Sheet

Sample Line List

Dew Point Calculations

Fast Loop and Lag Time Calculations

Analyzer Cabinet Power Distribution Wiring

Analyzer Cabinet and Shelter GA Drawings

Pre-Conditioning and Sample Conditioning Systems Drawings

Sample Conditioning System Schematics

Sample Probe Drawings

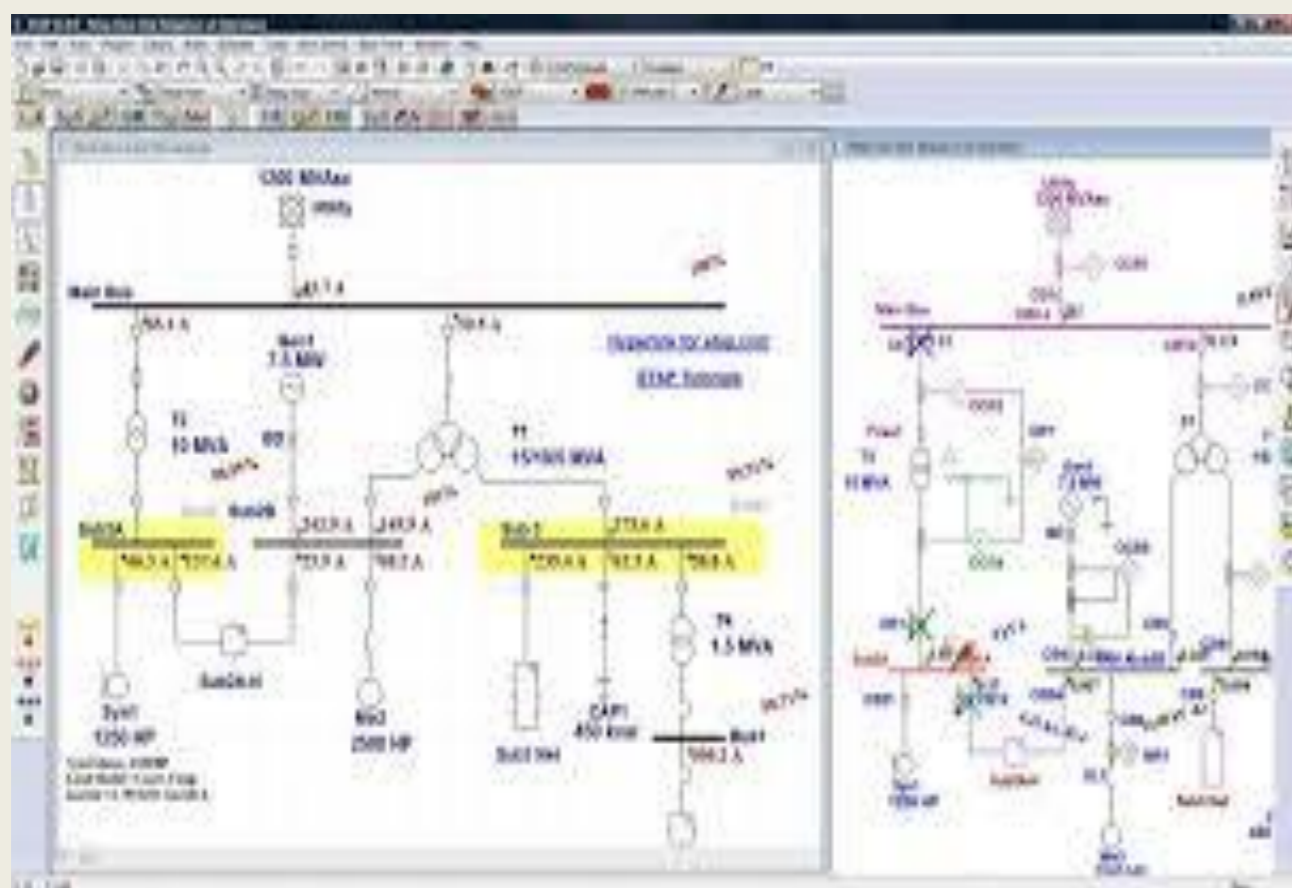
Analyzer Cabinet / Shelter Grounding Plan and Details

Analyzer Cabinet / Shelter Heat Load Calculation

Bill of Materials

Name Plate Schedule

Electrical – LV, MV, HV, EHV



Basic, Detailed Engineering & As Built Services

Electrical Design Basis

Single Line Diagram

Equipment Layout

Electrical Cable Schedule

Electrical Cable Tray Layout

Grounding / Earthing Calculations

Grounding Layout and Details

Electrical Cable and Breaker Sizing

Capacitor Bank Sizing and Drawings

Cable Trench and Duct Bank Drawings

Receptacle and Wiring Layout

Electrical Area Classification Drawings

Power Distribution Wiring and Layout

Cathodic Protection Layout and Details

Electrical Tie-in and Shutdown Details

Electrical Heat Tracing Details

Lighting Calculations and Layout Details

Typical Installation Details

Electrical Substation Overhead Transmission Lines Underground Cables



Basic, Detailed Engineering & As Built Services

Substation Equipment Layout Plan & Section Details

Main and Relay Metering One Line Diagram

Grounding System Design Calculations and Layout

Substation Raceway & Cabling Plan and Details

Control Building Equipment Layout & Section Details

Substation Outdoor Equipment Arrangement Plan & Section Details

Substation Outdoor Lighting / Power Layout & Section Details

Building Power / Lighting Plan and details

Indoor / Outdoor Lighting Calculations

Power Cable and Conduit Schedule

AC/DC Aux. One Line Diagram and Panel Board Schedules

Battery and Battery Chargers Calculations

Station Service Transformers Design Calculations

Lightning and Shielding System Design

UG Cable Sizing and Ampacity Calculations

Cable Sizing Calculations including Sheath Sizing Calculations

Short Circuit Calculations and Circuit Breaker Selection

Transmission Line Route Map

Electrical – Protection & Control



Basic, Detailed Engineering & As Built Services

CT VT Sizing

Protection Logic Diagram

AC, DC, AMI One Line Diagram

Control Logics for ACSE, ACCS, ABTS , etc.,

Point Lists (TFR, DSM, SOE, SCADA)

Interlocking Table / Logic Diagram

Protection Relay Settings

Protective Devices Coordination Studies & Selectivity Analysis

Protection and Control Schematics

Protection Panel List

Protection Relay List

Design Review & Interfacing of Control and Protection Panels

Cable Schedule and BOQ for LV Control & CT/VT Cables, Meters, etc.,

Technical Support for Erection, Testing & Commissioning

Telecommunication



Basic, Detailed Engineering & As Built Services

Functional Design Specification

Overall Block Diagram

GA and Cabinet Drawings

Logical and Wiring Diagram

Rack Face Elevation

FOC Allocation Diagram

Equipment Profile

Cable and Trench Layout

FOC Schematic Diagram

Copper Cable Schematic Diagram

UTP Cable Distribution

CATV Outlet Drawings

Grounding System Plan and Details

Horizontal Cableway Plan

Public Address System Plan and Details

MIS System Plan and Details

Reverse Engineering 3D Printing & 3D Laser Scanning



● Enerfac can help solve your problems of not having old drawings and documents

Engineering & As Built Services

Engineering Surveys & Feasibility Reports

3D Laser Scanning

3D Probing

CT Scanning

Intelligent Modeling

Scan to CAD & BIM Modeling

3D to 2D Drawings

3D Printing

Drone Surveys

Inspection Reports

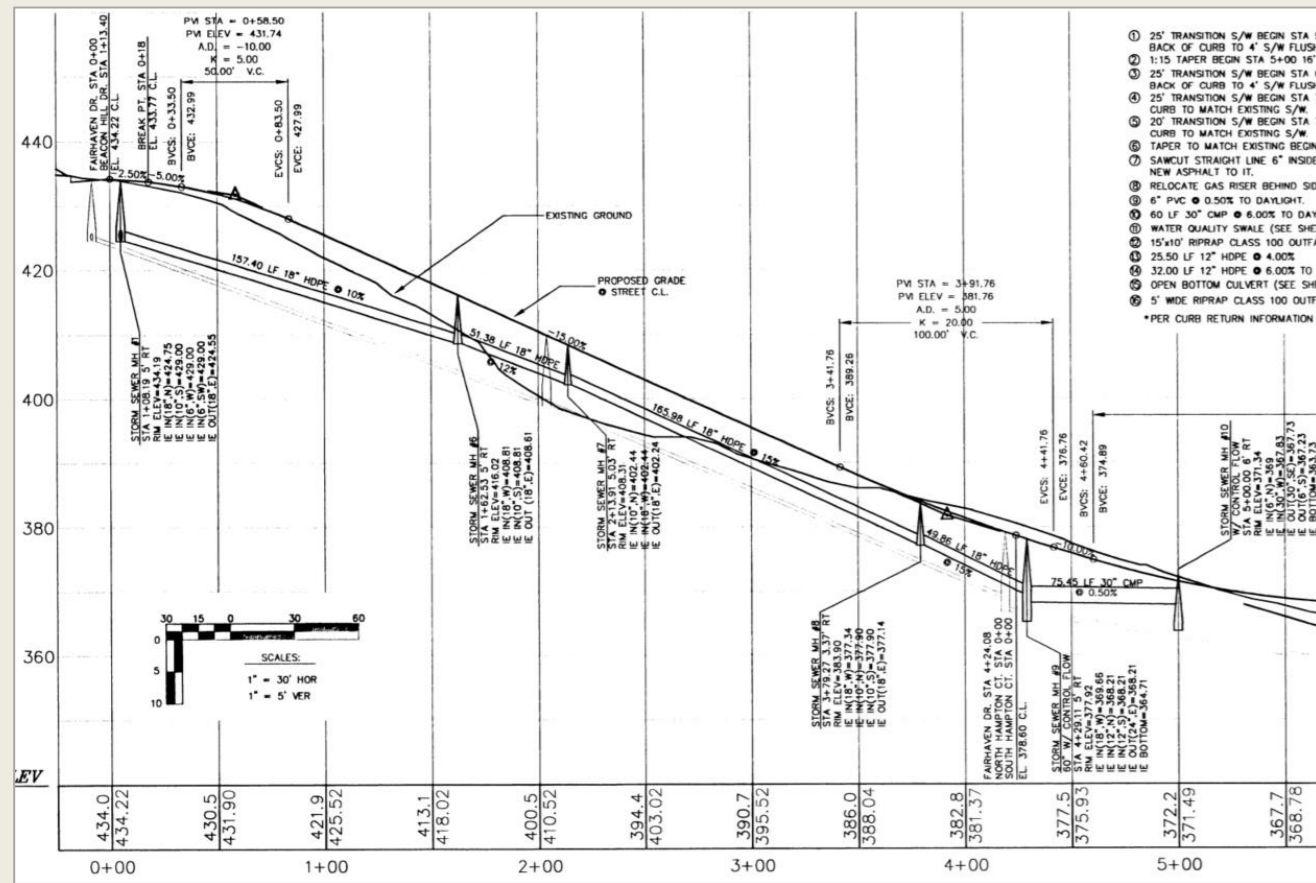
General Arrangement / Shop Drawings

Software:

PolyWorks, Solid Edge, IDA Pro, Hex Rays, Point2CAD

Geographic Information Systems (GIS)

Geographic Information Systems (GIS) store, analyze, and visualize data for geographic positions on Earth's surface



- Engineering Services
- Reviewing As Built Drawings
- Utility Mapping
- Reviewing Vicinity Map , Station value , XY Coordinates
- Spatial Analysis and Data Science
- Imagery and Remote Sensing
- 3D Visualization and Data Analytics
- Georeferencing
- Data Management
- Storm & Sewer Water Lines
- Potable Water Lines
- Gas Pipelines
- Electrical Cables
- Manholes & Fire Hydrants

Software:

ArcGIS Online, ArcGIS Pro, ArcGIS Enterprise

Process

Design Software:

MS Office, AutoCAD, MicroStation, SmartPlant P&ID, Oracle Database Management, Smart Sketch, AutoPLANT P&ID, PIPENET, AVEVA SimSci PRO/II

EHAZOP / SAFOP

Safety Analysis (SAFAN), System Security and Operability Analysis (SYSOP), Operator Task Analysis (OPTAN)

Architectural, Civil & Structural

Design Software:

MS Office, AutoCAD, MicroStation, SmartPlant, Tekla, PDMS, PDS, STAAD Pro, Navisworks, Autodesk Revit, SketchUp, ETABS

Mechanical, Piping & Fire Fighting

Design Software:

MS Office, AutoCAD, MicroStation, SP3D, Caesar II, E3D/PDMS, AutoPLANT 3D, AutoCAD Plant 3D, Autodesk Inventor, AMETank, HASS, Elite Fire Sprinkler

Instrumentation & Control

Design Software:

MS Office, AutoCAD, MicroStation, SmartPlant Instrumentation, PDS 3D, Navisworks, CONVAL, Siemens TIA Portal, Siemens WinCC, Allen Bradley RSLogix, FactoryTalk View®, Schneider Unity Pro, Vijeo Citect, Vijeo Designer

Electrical

Design Engineering, Supply, Panel Assembly and T&C

MCC / Switchgear / Power Distribution Panel

Design Software:

MS Office, AutoCAD, MicroStation, SmartPlant Electrical, ETAP, EMTP, DlgSILENT, PSCAD, HOMER Pro, Pvsyst, DIALux, S1 Agile, EnverVista, PCM600, PSSE, MATLAB, Simulink, CDEGS, PLS-CADD, ASPEN Line Database

EHAZOP / SAFOP

Safety Analysis (SAFAN), System Security and Operability Analysis (SYSOP), Operator Task Analysis (OPTAN)

“If people like you, they’ll listen to you, but if they trust you, they’ll do business with you.”

CONRAD HILTON



Global Presence



We have successfully partnered with few strategic companies to strengthen our own unique portfolio in delivering services and products globally. Leveraging the abilities of our technical experts and alliances allow us to create business value, reduce risk and address customer needs together.



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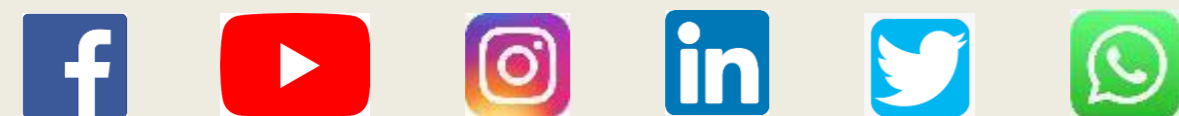
USA, Oman,
Bahrain & Qatar

ALLIANCE PARTNERS

GET IN TOUCH WITH US



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Kindly refer us for the best
in industry service.



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THANK YOU

LET'S CONNECT TODAY !