



Sustainable & Innovative  
Engineering Solutions

# CONTROLBITES SAFETY CONSULTING LLP

## COMPANY BROCHURE

## CONTACT INFORMATION

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[www.controlbites.com](http://www.controlbites.com)

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+91 80 49581027

### CORE SECTORS

#### DOMAINS



#### OIL & GAS



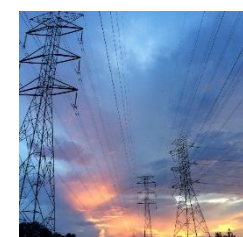
#### REFINERY



#### CHEMICALS



#### BUILDING MANAGEMENT



#### POWER



#### WATER MANAGEMENT



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# CONTROLBITES SAFETY CONSULTING LLP

CONCEPT TO  
COMMISSIONING SCOTRS

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### DOMAINS



**GAS PROCESSING  
LNG**



**GAS STORAGE  
LNG TANKS**



**SUSTAINABLE  
PRODUCTS  
(GASOLINE,  
NAPHTHA, ETC.)**



**RECYCLABLES -  
PLASTICS**



**RECYCLABLES -  
BATTERIES**



**WASTE WATER  
TREATMENT (WTP)**



CONTROLBITES  
SAFETY CONSULTING LLP

Sustainable & innovative Engineering Solutions

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CONTROLBITES  
SAFETY CONSULTING LLP

# COMPANY INTRODUCTION

Sustainable & innovative Engineering Solutions

## ABOUT US

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We are a team of experienced engineering consultants who provide top-notch services to our clients.

Our expertise includes the complete gamut of Engineering Services (process, mechanical, piping, civil & structural, electrical, instrumentation, and telecom), as well as Project Management Consultancy, Project Management Services, Supply Chain Management, and Construction Support Services.

We are committed to delivering innovative and practical solutions tailored to your needs.

Our extensive knowledge and state-of-the-art tools and techniques enable us to help you achieve your business goals and drive growth.

Contact us today to learn more about our services and how we can assist you.

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CONTROLBITES  
SAFETY CONSULTING LLP

Sustainable & innovative Engineering Solutions

# COMPANY

## HSE POLICY

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### **Health, Safety and Environment (HSE policy)**

At Controlbites, we are committed to protecting the health, safety and environment (HSE) of our employees, clients, contractors, and the communities in which we operate.

#### **Our Commitments:**

- Comply with all applicable health, safety, environmental, and legal requirements.
- Provide safe and healthy working conditions for all personnel.
- Prevent incidents, injuries, and occupational illnesses through proactive risk management.
- Protect the environment by minimizing waste, emissions, and resource consumption.
- Ensure security of personnel, assets, and information.
- Promote a culture of safety awareness, accountability, and continuous improvement.
- This policy is communicated to all employees and stakeholders, and its effectiveness is periodically reviewed by management.

K.S. SRINIVASAN  
(Founder & CEO)

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# COMPANY QUALITY STATEMENT



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## QUALITY STATEMENT

We are committed to delivering high-quality engineering solutions by leveraging advanced technologies and exceeding customer expectations in quality, safety, and timely completion. We believe in continuous improvement through effective leadership, teamwork, and close coordination with all stakeholders. Our goal is to maintain our position as the preferred global engineering service provider with a proven track record.

## QUALITY OBJECTIVES

- Continuously develop the core competencies of all our employees through awareness, teamwork, and training.
- Ensure adherence to international safety standards and promote safe practices.
- Adopt innovative methods and practices to enhance customer satisfaction and add value.
- Continuously engage with stakeholders to ensure the delivery of quality services.
- Monitor progress closely to ensure timely completion of projects.

# COMPANY VISION & MISSION



Sustainable & innovative Engineering Solutions

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## VISION

To become the leading engineering and consultancy company by delivering innovative solutions with a competitive edge, while maintaining the highest standards of quality through the implementation of best engineering practices.

## MISSION

To provide cutting-edge engineering solutions that drive efficiency and productivity, empowering businesses with the tools they need to thrive in a competitive landscape.

A handwritten signature in blue ink, appearing to read "K.S. Srinivasan".

K.S.Srinivasan  
(Founder & CEO)

A handwritten signature in blue ink, appearing to read "Hema G. Srinivasan".

Hema G. Srinivasan  
(COO)

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# SECTORS SERVED



Sustainable & innovative Engineering Solutions

## ENGINEERING SERVICES FOR CORE SECTORS

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- 01** OIL & GAS
  - 02** REFINERIES
  - 03** CHEMICALS
  - 04** BUILDING  
MANAGEMENT
  - 05** WATER MANAGEMENT
  - 06** POWER
- 

## CONCENPT TO COMMISSIONING SERVICES FOR SECTORS

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- 01** GAS PROCESSING  
LNG solutions for both land-based and floating  
LNG (FLNG)
  - 02** GAS STORAGE  
LNG STORAGE TANKS
  - 03** SUSTAINABLE PRODUCTS  
Fossil Fuels to Renewable Gasoline, SAF, and  
Other Renewable Chemicals
  - 04** RECYCLABLES  
Plastic & Batteries
  - 05** CHEMICAL PROCESSING  
Sewage Treatment Plant
-



# SERVICES OFFERED



Sustainable & innovative Engineering Solutions

## MAIN SERVICES

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### 01 ENGINEERING & PROJECT MANAGEMENT SERVICES

## CONTENTS

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Conceptual Study/ Pre-FEED Study  
Front End Engineering  
Detailed Engineering and Design  
Project Execution  
Project Management Consultancy  
Pre & Post Contract Award Management

### 02 PROCUREMENT ENGINEERING SERVICES

Request For Quotation (RFQ)  
Technical Bid Evaluation (TBE)  
Request for Purchase Order (RPO)  
Vendor Documents Review and Approval

### 03 SUBSTATION PROTECTION & AUTOMATION

Testing & commissioning of protection relays  
Configuration of IED/Numerical Protection for generator, transformer, Transmission line up to 400kV, and distribution network protection  
Integration of IEDs to SCADA system conforming to IEC 61850.  
Handling all most all relay makes including testing kits

### 04 ELECTRICAL SYSTEM STUDY

Energy Optimization Study  
Energy Audit / Electrical Safety Audit  
E-Hazop  
LOTO Survey

# SERVICES OFFERED



Sustainable & innovative Engineering Solutions

## MAIN SERVICES

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### 05 PROCESS SAFETY STUDIES

## CONTENTS

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HAZID, HAZOP, ENVID, PHASER, SIMOPS  
Reliability, Availability, and Maintainability (RAM)  
Study  
Constructability Review  
Design & Construction Risk Assessment Studies  
QRA  
Value Engineering  
Human Factors Engineering (HFE) Study  
SIL Study

### 06 PROCUREMENT SUPPORT & SERVICES

Secure Handling of Proprietary Technology & IP  
Strategic Supplier Relationships Drive Reliability  
& Schedule  
Supply Chain Management  
Flexible Service & Supply Models  
In-House QA, Inspection & Expediting for End-to-  
End Quality & On-Time Delivery

### 07 CONSTRUCTION MANAGEMENT & SUPERVISION

Construction & Commissioning Planning & Scheduling  
Cost Estimation and Budget Control  
Procurement Coordination  
Quality Assurance and Quality Control (QA/QC)  
Risk Management  
Safety and Environmental Compliance  
Contract Administration  
Resource and Site Management  
Progress Tracking and Reporting  
Stakeholder Communication and Coordination

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# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 01 BUILDING & INFRASTRUCTURES

#### 1.1



#### Building Performance

Our environmental engineers provide innovative solutions to address environmental challenges. We work with clients to develop sustainable practices that reduce waste, minimize pollution, and preserve natural resources. Our team is equipped with state-of-the-art technology in providing best performance of buildings with respect to longevity and uninterrupted use of the facility.

#### 1.2



#### Building Lifestyle

We offer industrial engineering services to optimize processes, increase efficiency, and reduce costs. Our team of experts has experience in various industries and can provide customized solutions to meet each client's needs. We provide solutions that meet international standards in terms of optimal use of resources in restoration of the facility in mint condition at all times by way of continual maintenance procedures

#### 1.3



#### Building Automation (BMS)

Integrated and automated various building systems such as HVAC, lighting, security, shading, access control, CCTV, etc. for optimized & efficient operation, reduced energy consumption, increased safety & security, and enhanced occupant comfort. our engineers work in tandem with entire gamut of activities of the building performance in ensuring all aspects of the facility management is met to the international standards of building performance.

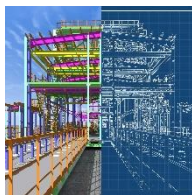
# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 02 CIVIL & STRUCTURAL

#### 2.1



#### Structural Analysis and Design

At CONTROLBITES, we perform structural analysis and design of structural components using various methods, including load calculations and material selection, all in compliance with international codes and standards. Our approach ensures that each component is optimized for safety, performance, and cost efficiency.

#### 2.2



#### Pipe racks

Pipe racks are designed to safely support the weight of pipes and cables, ensuring accessibility for maintenance and resilience against various environmental and operational conditions. At CONTROLBITES load calculations, material selection, spacing, and clearances are meticulously carried out, all in strict compliance with international standards to ensure safety, functionality, and durability.

#### 2.3



#### Equipment Foundations

Equipment foundations are designed to support heavy equipment such as machinery, reactors, turbines, compressors, or tanks in industrial facilities. These foundations ensure safe operation, stability under dynamic and static loads, and minimize vibrations or settlement. At CONTROLBITES load analysis, soil investigation, material selection, and structural design are all carried out to meet the specific requirements of each application.

#### 2.4



#### Building Foundations

Building foundations are critical structural elements designed to support the entire structure and prevent settlement, tilting, or failure. At CONTROLBITES, we conduct the necessary load analysis, soil investigation, and determine the appropriate shallow or deep foundation type. We also ensure proper material selection, all in full compliance with international standards.

# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 02 CIVIL & STRUCTURAL

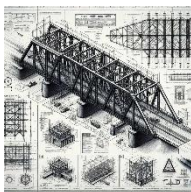
#### 2.5



#### Design Engineering and PMC

At CONTROLBITES, we offer comprehensive Civil and Structural Engineering services, including calculations and design reports. We also specialize in Project Management Consultancy (PMC). Together, Civil Engineering and PMC ensure that construction projects are executed efficiently, safely, and in line with design specifications. While our civil engineers provide the technical expertise, our PMC team manages the project processes, ensuring smooth execution from start to finish.

#### 2.6



#### Fabrication Drawings

Detailed fabrication drawings are prepared with all the necessary information for fabricating and assembling parts, ensuring accuracy, consistency, and compliance with design specifications throughout the production process.

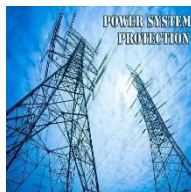
# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 03 ELECTRICAL

#### 3.1



#### Power Protection

At CONTROLBITES, we specialize in: Testing and Commissioning of Protection Relays: From traditional electromechanical relays to advanced Intelligent Electronic Devices (IEDs). IED Configuration: Tailored solutions for generator, transformer, transmission line (up to 400kV), and distribution network protection. SCADA Integration: Seamless integration of IEDs into SCADA systems, compliant with IEC 61850 standards.

#### 3.2



#### Power Shutdown Root Cause Analysis

At CONTROLBITES, we conduct Power Shutdown Root Cause Analysis (RCA) to identify and understand the causes behind power outages or shutdowns. By analyzing the incident overview, event logs, system configurations, and potential causes like equipment malfunction, human error, or overload, we provide a thorough RCA to help prevent future issues. Simply provide us with the date, time, duration, affected areas/systems, and relevant data, and we will handle the analysis for you.

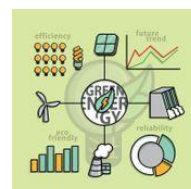
#### 3.3



#### Energy Optimization studies

The optimization of energy systems plays a pivotal role in advancing engineering practices, particularly in the face of rising global energy demands and environmental concerns. It involves designing, analyzing, and refining energy systems to ensure that they operate at maximum efficiency while minimizing waste and negative environmental impact. At CONTROLBITES, we specialize in Energy Optimization Study.

#### 3.4



#### Energy Audits and Energy Safety Audits

At CONTROLBITES, we specialize in Energy Audits to identify inefficiencies, reduce energy bills, and support sustainability efforts in commercial and industrial properties. We also conduct Electrical Safety Audits of Hazardous Areas, assessing electrical systems in environments with high risks of fire, explosion, or other incidents due to flammable gases, vapors, dust, or fibers, ensuring safety and regulatory compliance.

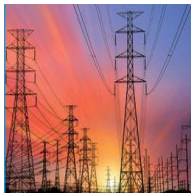
# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 03 ELECTRICAL

#### 3.5



#### Power System Study

At CONTROLBITES, we specialize in key electrical power system studies, including harmonic, load flow, protection coordination, short circuit, transient stability, voltage stability, and transient system studies. We also conduct E-HAZOP (Electronic Hazard and Operability Study) to identify and evaluate hazards in industries like chemical engineering, oil and gas, and manufacturing.

#### 3.6



#### EMC/EMI (Electromagnetic Compatibility / Electromagnetic Interference) Study

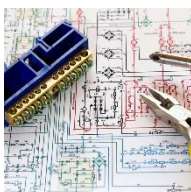
EMC and EMI studies are essential to ensure that electrical and electronic systems operate reliably within their electromagnetic environment—without causing or being affected by unacceptable interference.

This is especially critical in complex industrial environments such as LNG terminals, power plants, offshore platforms, and refineries, where a wide range of electrical systems operate in close proximity.

The Study requires to Ensure equipment immunity, Minimize emissions, Comply with international standards, Identify and mitigate interference risks.

At Controlbites, we take up site survey, Identification of EMI sources, Evaluation of susceptible systems, Analysis, Mitigation recommendations and Report preparation

#### 3.7



#### Detail Engineering

At CONTROLBITES, we envision a world where engineering solutions are sustainable, innovative, and accessible to all. Our goal is to lead the way in creating a better future through engineering excellence. We take-up from Feasibility studies to FEED to Detailed design. We also provide Procurement Assistance.



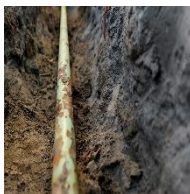
# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 04 INSTRUMENTATION & CONTROL

#### 4.1



#### Pipeline Leak Detection

Pipeline leak detection methods range from simple visual inspections to advanced hardware and software solutions. Techniques include pressure and flow monitoring, fiber optic sensors, smart pigs, drones, and AI systems. Selecting the best method depends on cost-effectiveness and operational needs. Controlbites can provide a tailored solution for optimal performance.

#### 4.2



#### Obsolescence Study

When items in a plant become obsolete—either because they are no longer manufactured or supported by the OEM, or are difficult to procure and maintain—it can present significant challenges in Operational Downtime, Safety Hazards, Higher Maintenance Costs, etc. By proactively addressing obsolescence and planning for upgrades, plant operators can ensure continuous, safe, and efficient operations.

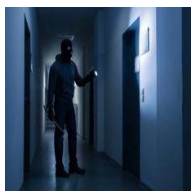
#### 4.3



#### Custody Metering

Custody Transfer or Fiscal Metering ensures precise fluid measurement at the point of sale between parties, emphasizing accuracy for both the supplier and recipient. It involves advanced systems like flow meters, pressure sensors, and temperature monitors to guarantee reliable and compliant transactions. Controlbites can design tailored solutions to meet specific operational needs and industry standards. Let us know if you'd like to explore this further!

#### 4.4



#### Intrusion Detection

When an unauthorized person gets access to a device, network, or a system to sneak into organizations without being detected, can create a havoc. An intrusion detection system play a crucial role in by monitoring networks or systems for signs of unauthorized access, malicious activity, or policy violations. They are designed to detect and alert security teams to potential intrusions before they can cause significant harm or compromise sensitive data.



# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 04 INSTRUMENTATION, CONTROL & AUTOMATION

4.5



#### Process Safety Studies

We provide comprehensive consultancy services in Process Safety, Functional Safety, Alarm Management, Control System HAZOP, and OT Cybersecurity Risk Assessment for the Oil & Gas, Refining, Pipelines, and Petrochemical industries. Our expertise spans the entire safety lifecycle, collaborating with engineering consultancies, EPC contractors, and operating companies worldwide.

4.6



#### Package Instrumentation Engineering

We provide engineering support for Package Instrumentation of skid-mounted equipment and process units, assisting vendors in the design and development of integrated instrumentation & automation. Our solutions ensure safe, reliable, and efficient equipment operation, with provisions for remote monitoring, control, and seamless integration with plant-wide DCS/SCADA systems.

4.7



#### Detail Engineering

We offer Instrumentation Engineering services right from project feasibility studies to FEED, Detailed design, and Project Management Consultancy.

We also provide assistance for: Procurement; Inspection & Testing; Construction & Commissioning.

# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 05 TELECOMMUNICATIONS

#### 5.1



#### Closed-Circuit Television (CCTV)

CCTV is a powerful tool for enhancing security and surveillance across a range of environments. While initially deployed for purposes such as crime prevention and safety, its applications have expanded to more complex and multifaceted roles in modern society like : Security and Crime Prevention; Centralized Monitoring; Environmental and Dangerous Area Monitoring; State Surveillance and Social Control; Advanced Analytics and AI Integration; etc. Controlbites can design an effective CCTV system..

#### 5.2



#### Public Addressing and General Alarm System (PAGA)

PAGA system, which plays a crucial role in emergency situations, especially in industries like oil and gas, maritime, and large commercial or industrial facilities. A PAGA system is designed to alert personnel to hazards, provide instructions, and ensure that vital safety information is disseminated quickly and clearly to all areas of a facility. Understanding the design of a PAGA system can help you make better decisions in selection. Controlbites specializes in PAGA system tailored to specific industry needs.

#### 5.3



#### Access Control System (ACS)

Access Control Systems are crucial for both physical and digital security. Whether for protecting a building/plant or safeguarding sensitive data, from unauthorized access, protect resources, and maintain compliance with security standards. Access Points are provided through Credential Readers; Control Panels; Locks; Cameras. Controlbites offers a robust approach to security by integrating various technologies to control and monitor access

# CAPABILITIES

## DISCIPLINE

## ACTIVITY/ STUDY

### 05 TELECOMMUNICATIONS

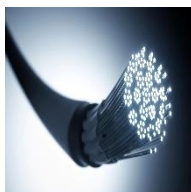
#### 5.4



#### Audio-Visual System (AVS)

Audio-visual systems enable communication across various devices, including cameras and sound systems. These systems have become essential to the functioning of modern workplaces, live events, concerts, parties and more. An AV Control System allows a person to control an interactive space with multiple components like Audio (Speakers, Microphones, Amplifiers, Mixers, etc.); Visual Components (Display Screens, Projects, Cameras, Switches, etc.); Signal Sources (Computers, Laptops, Media Players, Streaming Devices, etc.) through cabling (HDMI, VGA, XLR, etc.) and Control Systems (Remote controls, touch panels, software platform, etc.)

#### 5.5



#### Fiber Optic, ISP and OSP Cabling

A fiber-optic cable, used for providing a high-speed data connection between different parts of a building or a plant. Designed for outdoor applications such as direct burial in trenches, dual use as power lines, installation in conduit, insertion in paved streets, Subsea, etc. Communication Inside Plant include servers, switches, routers, and other networking equipment needed to process signals, route, and manage the infrastructure. On the other hand, an Outside Plant includes all the physical infrastructure for distributing the processed signals from the Inside Plant (via poles, towers, conduits, etc.) to end users.

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# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 01 CIVIL & STRUCTURAL

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- Pre-FEED/ Conceptual Studies and Report generation
  - Analysis & Design of :
    - structures
    - pile and shallow foundations, Mat foundations, Retaining Walls, Piles (Cast-insitu, Precast)
    - Equipment foundations for Vertical/Horizontal Vessels, Heat exchangers, Storage Tanks, Pumps
    - Steel stack
    - Water storage tanks
  - Foundation design for PEB structure
  - Lifting and Transportation Analysis/Study
  - Preparation of Civil & Structural Standard Drawings and Specifications
  - Detail Drawings (Layout, Rebar details)
  - Preparation & review of Structural Steel Fabrication Drawings
  - Connection designs using RAM connection software
  - Preparation of Pile Layouts, Foundation Layouts, Design Calculation Reports, Concrete Standard Drawings, Formworks and Detailed Civil drawings, Excavation Back Filling Surplus drawings.
  - Bar Bending schedule
  - Preparation of Construction and Demolition Scope of Works for EPC
  - Preparation of Modification Scope of Works for the existing Systems to OEM
  - Preparation of Scope Of Work for Replacement of Obsolete Systems
  - Preparation of EPC Scope Of Work with Cost estimate
  - Preparation of Bill of Quantity (BOQ)
  - Conversion of point cloud data to 3D Modeling services
  - As Built Drawings
  - 3D Modeling – Revit, CADWorx
-

# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 02 ELECTRICAL

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- Obsolescence and Pre-FEED/ Conceptual Studies for Electrical System and Report generation
  - EHV & HV Transmission Line Electrical Design
  - Lighting Design
  - Earthing Design
  - Load Flow Calculation & Short circuit analysis
  - Lightning Protection System
  - Design of Passive cooled Shelter with Solar power
  - Electrical Equipment & Cable Sizing/Calculation
  - Single Line Diagram (SLD) and Panel GA drawings
  - Installation Drawings (Typical)
  - Preparation of Bill of Quantity (BOQ)
  - Cable & Conduit Layout
  - Cable Schedule
  - Preparation of Construction and Demolition Scope of Works for EPC
  - Preparation of Modification Scope of Works for the existing Systems to OEM
  - Preparation of Scope Of Work for Replacement of Obsolete Systems
  - Preparation of EPC Scope Of Work with Cost estimate
  - Procurement Assistance through Material Requisitions, Vendor Evaluation, Technical Bid Analysis, Request for Purchase, etc.
  - As Built Drawings
-

# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 03 INSTRUMENTATION, CONTROL & AUTOMATION

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- Obsolescence and Pre-FEED/ Conceptual Studies for Field Instrumentation & Control System and Report generation
  - Design of all types of field instruments, Fire & Gas Detectors, Analyzers, Flow Metering/Custody Metering, Leak detection, Tank Gauging, Terminal Automation with Specifications, Datasheets and MR as required
  - Design of Control Systems (ICSS, DCS, ESD, SCADA, RTU, etc.) with Specifications and MR as required
  - Design of Fire and Gas System (FGS) with Specifications and MR as required
  - Preparation of Instrument Schedule, IO Lists, Alarm trip list, Cable and JB Schedules, etc.
  - Preparation of System Block Diagrams and Architectures
  - Instruments and Cables Calculations/Sizing
  - Preparation of Instruments and F&G Location Layouts; Cable routing Layouts, Equipment Layouts, Control Room Layouts, etc.
  - Preparation of Instruments & F&G Installation Hook-ups, Loop Drawings, Functional Schemes, Wiring/Termination details, etc.
  - Preparation of Construction and Demolition Scope of Works for EPC
  - Preparation of Modification Scope of Works for the existing Systems to OEM
  - Preparation of Scope Of Work for Replacement of Obsolete Systems
  - Preparation of EPC Scope Of Work with Cost estimate
  - Preparation of Project Definition Reports
  - Preparation of Bill of Quantity (BOQ)
  - Procurement Assistance through Material Requisitions, Vendor Evaluation, Technical Bid Analysis, Request for Purchase, etc.
  - Inspection and Testing Assistance (FAT, IFAT, SAT)
  - Site Assistance (Construction and Commissioning support)
-

# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 0 4 TELECOMMUNICATION & BMS

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- Obsolescence Study and Conceptual Study
- Engineering and Design of the below ELV Systems with necessary Specs., Datasheets & MR :
  - Closed Circuit Tele Vision (CCTV),
  - Access Control System (ACS),
  - Public Addressing (PAGA),
  - Intrusion Detection,
  - Networking,
  - Audio Video System (AV),
  - Tetra,
  - Fiber Optic Cabling
- Preparation of Installation Hook-ups, Wiring/ Termination details, etc.
- Preparation of Construction and Demolition Scope of Works for EPC
- Preparation of Modification Scope of Works for the existing Systems to OEM
- Preparation of Scope Of Work for Replacement of Obsolete Systems
- Preparation of EPC Scope Of Work with Cost estimate
- Preparation of Bill of Quantity (BOQ)
- Procurement Assistance through Material Requisitions, Vendor Evaluation, Technical Bid Analysis, Request for Purchase, etc.

# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 05 PROCESS

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- Process Conceptualization
- Process Simulation
- Material & Energy Balances,
- Process Flow Diagrams
- Process Equipment Selection & Sizing
- Process Control & Safety Interlocks
- Piping & Instrumentation Diagrams
- Hydraulics Analysis
- Datasheets for Equipment & Package Units
- Process Datasheets for Instruments
- PSV Selection & Sizing
- HAZOP Participation
- Technical Evaluation & Purchase Orders
- Pre-commissioning and Commissioning



# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 06 MECHANICAL (STATIC/ROTATING)

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- Mechanical design of pressure vessels / columns / drums
- Mechanical design of shell & tube exchangers
- Mechanical design of API storage tanks with internal & external floating roofs
- Technical procurement of static equipment & textile machineries
- Vendor calculations review and approval of drawings
- Fabrication drawings - Plate cutting diagrams, Bill of Materials, etc.
- 3D modelling of equipment

# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 07 PIPING/PIPELINES

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- Plot plan & equipment layouts
- Pipe routing studies
- 3D modeling – Equipment and Piping (E3D & SP3D)
- Stress analysis
- Constructability / 3D model reviews
- Specialty Piping Item Specifications
- Interference checks and resolution
- Vendor Drawing Review
- Piping general arrangements and support modeling
- Isometrics
- Material Take Off (MTO) for piping / insulation / painting
- Technical Procurement Support
- Field Engineering Support

# DISCIPLINEWISE ACTIVITIES



Sustainable & innovative Engineering Solutions

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## 08 PROJECT MANAGEMENT

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### Projects

- Liaise with Customer / Technology Supplier / PMC / Vendor.
- Contract scope finalization / division of responsibilities.
- Internal and External co-ordination including setting up communication channels
- Project Quality Plan preparation
- Prepare / monitor Project schedule and Engineering budget,
- Resource Management including cost monitoring.
- Project Reviews with respect to schedules, progress, etc.
- Implementation Strategies, lag analysis, preparing recovery plans

### Project Planning and Controls

- Preparing Project Milestone Summary Schedule
  - Preparing & issuing initial '4-week Look ahead' Schedule
  - Preparing & updating integrated detailed Project Level Schedule, Functional Schedule and S-Curve. Project Controls engineer shall directly deal with various disciplines, PM / Customer to get comments / concurrence on all schedules
  - Monthly Activity Lists – Prepare, discuss & finalize with Engineering Disciplines and issue, expedite deliverables / activities per agreed Activity List
  - Co-ordinating & taking lead in DDS updates, Progress Calculation, Progress Reporting
  - Updating and issuing Drawing and Document List
  - Maintaining / updating CCR Log
  - Analysing Progress / Status, providing Feedback with suggested Corrective Actions to Project Team
  - Prepare risks and opportunities register
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# DISCIPLINEWISE ACTIVITIES



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## 09 SUPPLY CHAIN MANAGEMENT

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- Vendor selection and data base management.
- Vendor co-ordination w.r.t Release of RFQ's, Receipt of offers
- Managing technical queries from vendor with Engineering disciplines.
- Interphase with vendor for technical compliance
- Interphase with vendors and Customers for commercial finalization.
- Vendor data expediting as per Engineering schedule requirement.
- Reporting of vendor data progress status
- Planning of inspection schedule and management of delivery.

# DISCIPLINEWISE ACTIVITIES



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## 10 CONSTRUCTION SUPPORT

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- Construction & Commissioning related activities Planning and Scheduling
- Cost Estimation and Budget Control
- Procurement Coordination: Managing the acquisition of services, subcontractors, materials, and equipment as per the project requirements and timelines.
- Quality Assurance and Quality Control (QA/QC): Setting and monitoring standards, conducting inspections, and implementing corrective actions to ensure that construction meets specified requirements throughout the lifecycle.
- Risk Management: Identifying, assessing, and mitigating risks (including safety, environmental, and financial risks) to minimize project disruption.
- Safety and Environmental Compliance: Enforcing safety programs, performing audits, ensuring site hygiene, and upholding regulatory compliance for both people and environment.
- Contract Administration: Managing and documenting all contractual agreements, monitoring compliance, processing change orders, and resolving conflicts.
- Resource and Site Management: Handling logistics related to workforce, equipment, and material flow; overseeing site access, facilities, and activity coordination.
- Progress Tracking and Reporting: Generating regular reports (progress, cost, schedule, quality) for management and stakeholders to ensure transparent and proactive project control.
- Stakeholder Communication and Coordination: Organizing meetings, maintaining documentation, and facilitating clear information flow among all project parties.

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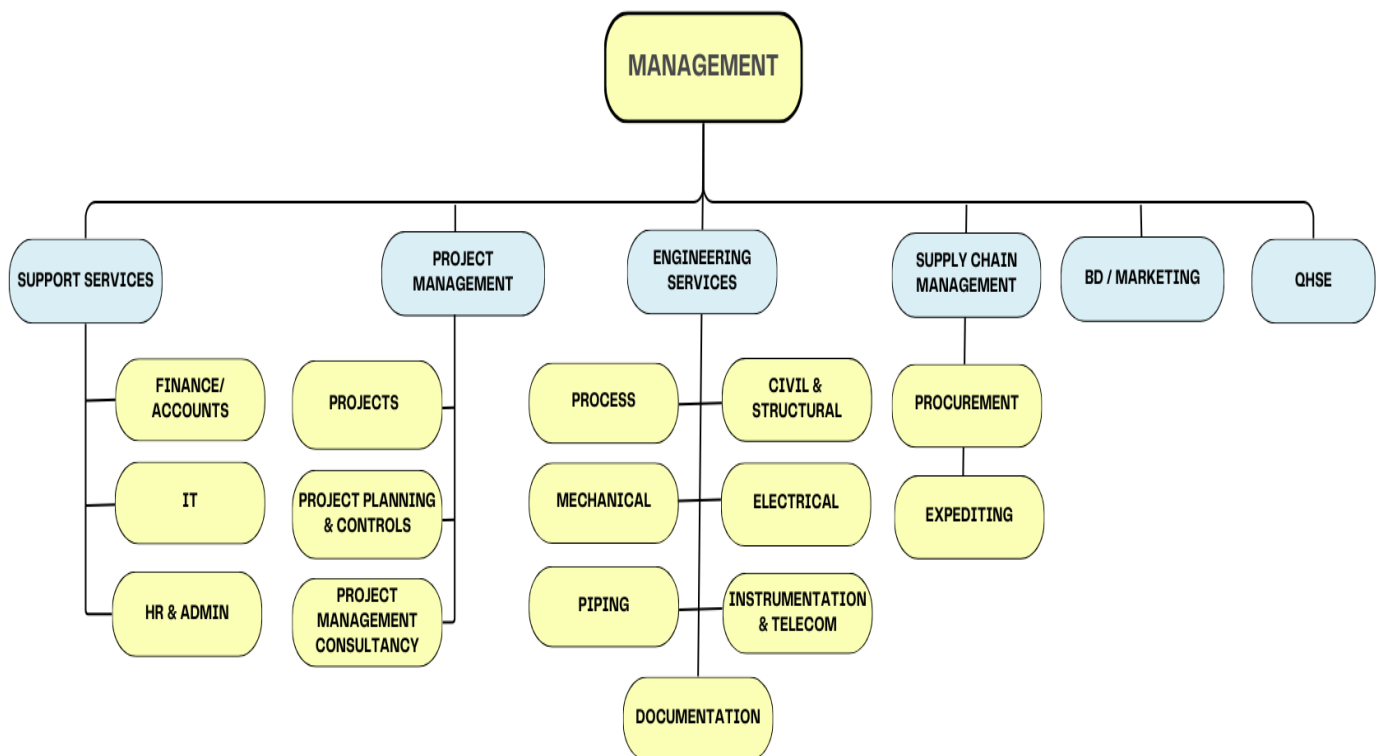
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# COMPANY ORGANIZATION CHART



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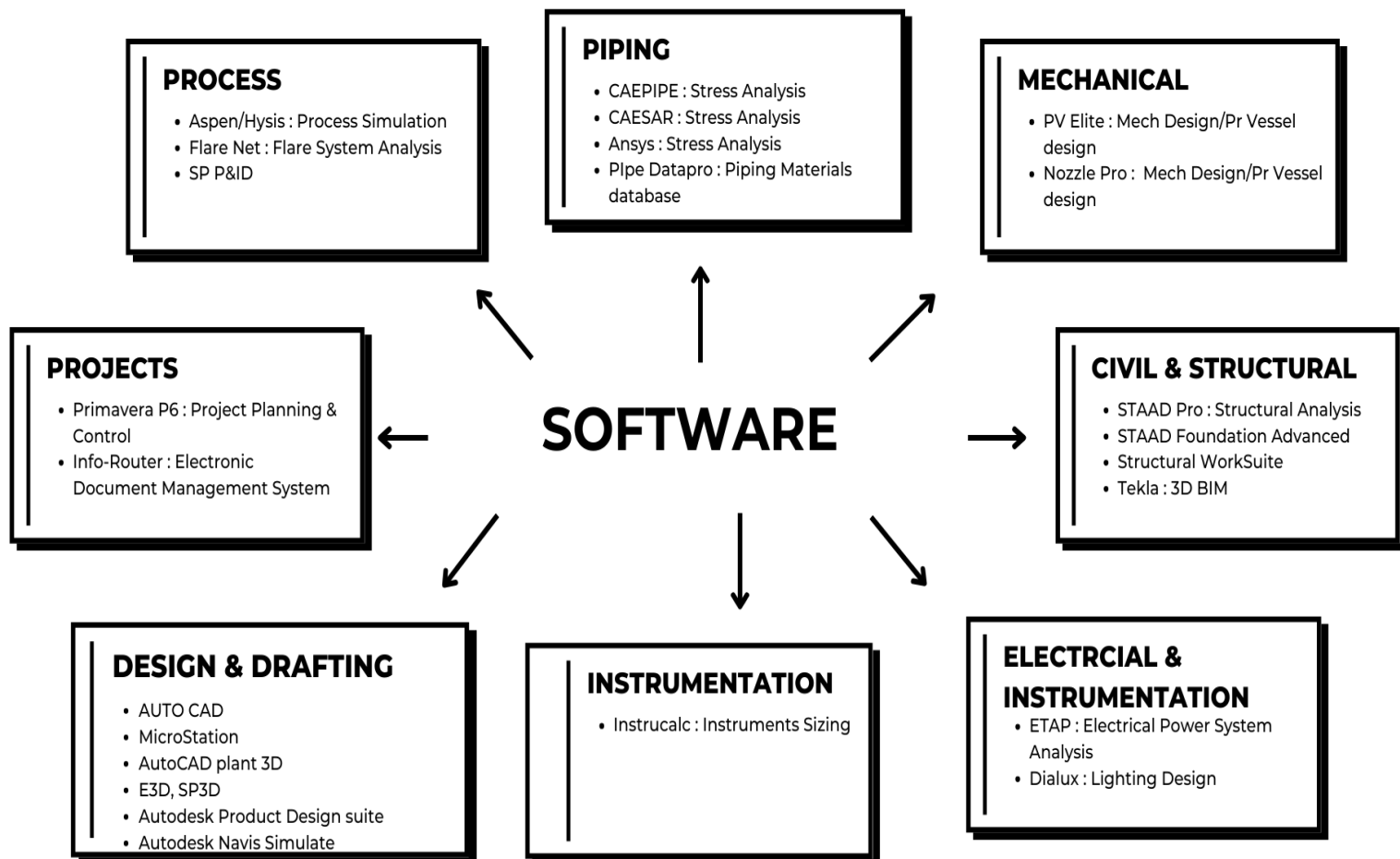
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# COMPANY SOFTWARE LIST



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