

Plant Engineering India

Design & detail Engineering Service



THE DRIVING FORCE TOWARDS BETTER ENGINEERING SOLUTIONS

Our clients are waiting

Contact us

accounts@plantengineeringindia.com

www.plantengineeringindia.org

Delivering Engineering Excellency Word Wide



**“INNOVATION
DISTINGUISHES
BETWEEN A
LEADER AND A
FOLLOWER.”**

PLANT ENGINEERING INDIA



Ever wonder how big buildings or factories get built? Or how every system fits together so perfectly? That's what we do at Plant Engineering India! Since 2016, we've been helping companies solve tough problems by designing buildings, piping system, steel structure, MEP system, electrical system, BIM modelling and detailed engineering that work just right. We know it can be hard to find engineers who truly understand what you need. That's why we're here—to make sure you get high-quality designs that not only work but make everything easier and faster.

From factories to offices, we use the best tools to create designs that keep things running smoothly and safely.

Our team of experts is ready to help you bring your ideas to life with the latest technology and smart solutions. 🌍

Let us build your future together!

BUSINESS VERTICALS

- ❑ - Piping Design & Detail Engineering
- ❑ - Complete Basic Engineering Packages
- ❑ Complete Utility Area Piping Design & Detailing including process
- ❑ - Steel Structure Design & Detail Engineering
- ❑ - BIM Modeling & Detail Engineering
- ❑ - HVAC Design & Detail Engineering
- ❑ - MEP Design & Detail Engineering
- ❑ - Civil Structure Design & Detail Engineering
- ❑ - Electrical BIM Modelling CAD Drafting Services
- ❑ - Autodesk Plant 3D & Revit Admin Support, Library Creations
- ❑ - As-Built 3D & 2D Services

OUR SUCCESS STORY

WE WILL BE THE DRIVING FORCE TOWARDS YOUR SUCCESS

Executed many India and international Water Treatment Projects, Breweries, food processing plants, projects

So far Plant Engineering India Has supported many India & International companies in executing complex / challenging projects & made it easy for the customer in all design & detailing with the help of domain expatriation and Advanced Autodesk applications along with technical solutions ,

Developments towards advanced Autodesk applications

Plant Engineering India will always take all the design, tool changes with passion, that is the result we tend to use & develop all Autodesk applications in design & detailing engineering to effectively use our domain experiences to reduce errors and to increase quality of design, detailed engineered documents

Understand the exact requirements & providing solutions

Plant Engineering India has always been passionate about deeply understanding customer's requirements with respect to design, detail engineering deliverables using advanced Autodesk applications towards high quality engineered drawings & documents.

And adopted timings and speaking language efficiency so the we can effectively understand & convince customer about method statements for project planning, resource availability & allocations engineering deliverables, timelines which became the key success for global market attentions

OUR COMPANIES FEATURED

We Can Be The Driving Force Towards Design & Detail Engineering Solutions

Water Treatment Plants design & detailing

We conduct multiple site visits to propose cost effective & high quality design, detail engineering service, since team has depth knowledge of water treatment plants

We are specialized in **pipng design & detailing** for all industries like breweries industries, pharma industries, oil gas industries, etc using advanced Autodesk 3d applications in order to efficiently deliver high quality engineered 3d, 2d engineered drawings, documents

We are specialized in **steel structure design & detailing** for all industries using advanced Autodesk 3d applications in order to efficiently deliver high quality engineered 3d, 2d engineered drawings, documents

We are specialized in **civil structure design & detailing** for all industries using advanced Autodesk 3d applications in order to efficiently deliver high quality engineered 3d, 2d engineered drawings, documents

Learning & development culture is always been the best part of the company which helps to improve in delivering high quality, error free engineering documents to customer to ensure faith and to become the driving force.

Adapting to the new engineering challenges with advanced applications always been the passion which becomes the key to succuss

Our Company Mission

Mission –

Mission is to provide design & detail engineering services solutions with good , engineering Practices , Cost Effective Through Our domain Experiences And Adapting Competitive & Advanced Engineering Software.

Our Company Vision

To be the company of choice for our / clients in global markets for our business driven by entrepreneurial spirit, cutting edge technology and excellence.

Aim for excellence

“The best Is yet to

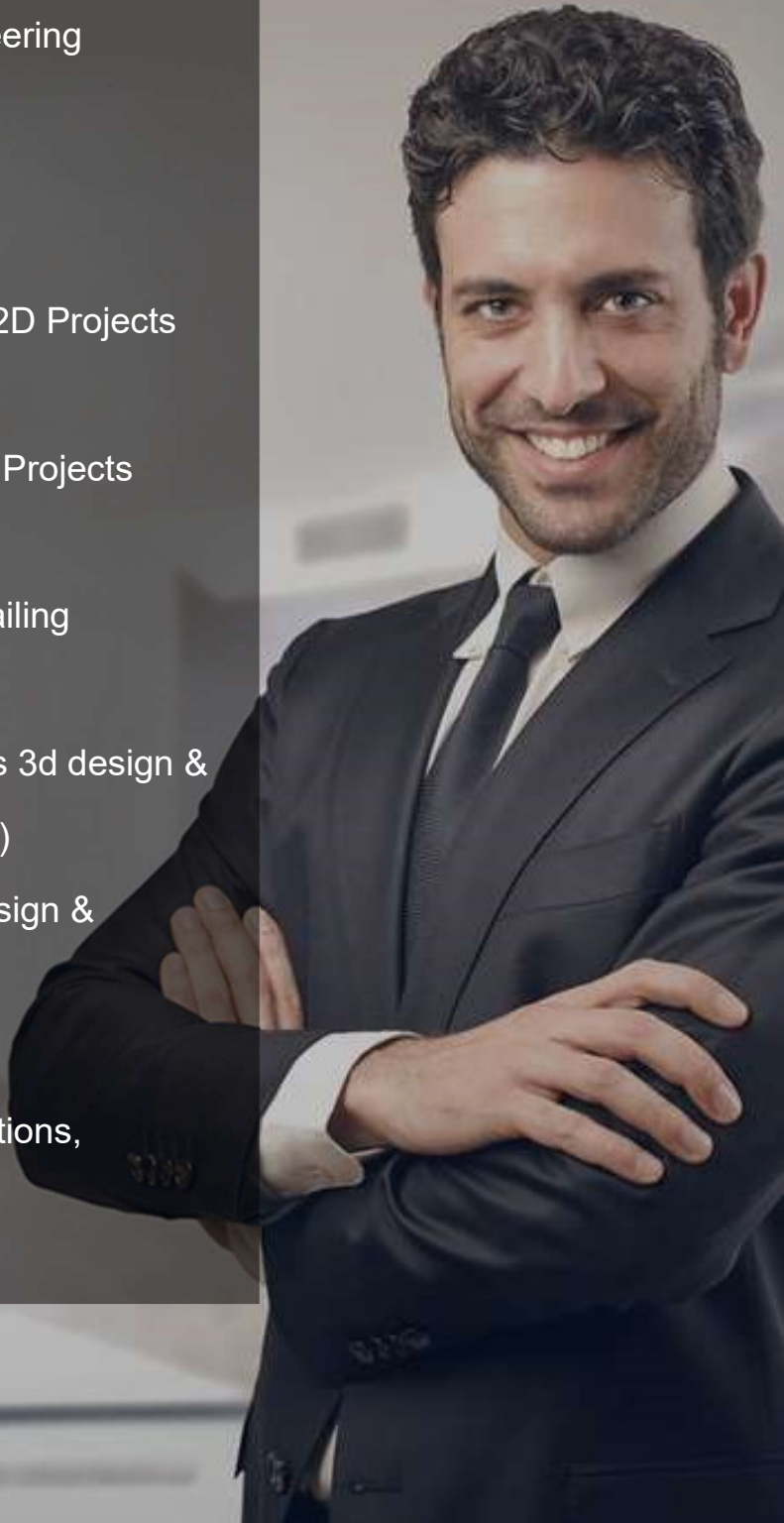
“Be the leader of change”

Team work “one for all, all for one” service mind

“Deliver more than expected”

We Under Take

- Basic Engineering Design & Detail Engineering
- Utility Area Design & Detail Engineering Package
- All Autodesk Plant 3D Projects
- All Autodesk Revit Projects
- All Autodesk Advance Steel 3D & 2D Projects
- All MEP 3D Modelling Project
- All CIVIL 3D Modelling & Detailing Projects
- All BIM Modelling Projects
- All Civil Structure Modelling & Detailing
- All P&ID Drafting
- All Food & Pharmaceutical projects 3d design & 2d detail engineering (ASME BPE)
- All Water treatment Projects 3d design & 2d detail engineering
- All Revit Library creations
- All Autodesk Plant 3D Library creations,
- Project Setup Admin work



OUR SERVICES

- CATEGORY 1**
Specialized in **Preparing basic engineering drawings & documents for all kind of projects.**
Example: P&ID preparation, proposal, equipment layout preparations, process calculations to the extent of utility area and basic pipeline size, equipment size calculations. Preparing other project related documents.
- CATEGORY 2**
We are specialized in **3d piping design & detailing, static / storage equipment design & detailing services for all domain** industrial plants using advanced Autodesk 3d applications in order to efficiently deliver high quality engineered 3d, 2d engineered drawings, documents
- CATEGORY 3**
We offer complete design & detail engineering package for all **Water treatment plants** right from the beginning to end
- CATEGORY 3**
We are specialized in **steel structure design & detailing** for all industries using advanced Autodesk 3d applications in order to efficiently deliver high quality engineered 3d, 2d engineered drawings, documents
- CATEGORY 4**
We are specialized in **HVAC & MEP Design & Detail Engineering services** using Autodesk Revit, Autodesk MEP CAD, Autodesk Plant 3D, Autodesk Advance steel
- CATEGORY 5**
We are specialized in **BIM Modelling for mechanical, electrical piping & Detail Engineering services** using Autodesk Revit
- We do take **Fire fighting system design & detail engineering services** using Autodesk Revit
- As-Built 3D & 2D & general CAD Services**



PREPARATION OF BASIC ENGINEERING DRAWINGS & DOCUMENTS`

BUSINESS VERTICLS

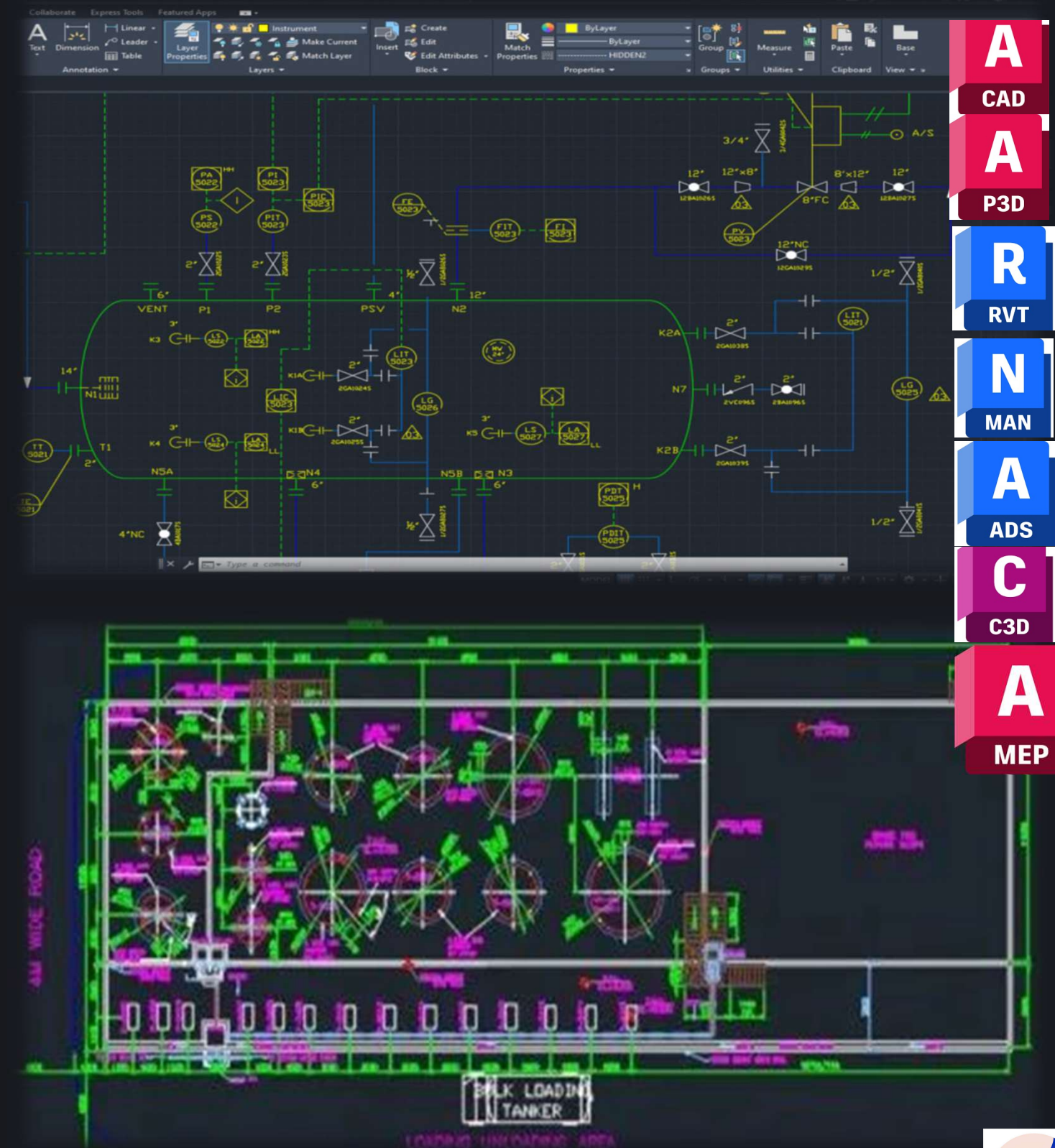
We are specialized in preparing all basic engineering documents for any piping domain plants ex: water, oil, gas cement, breweries, pharmaceutical plants

All Autodesk Application

Since our team has got all applicable industrial standards, norms & mostly site experience which helps to propose the best arrangement for equipment layout with respect to operations and maintenance of equipment, piping

And off course team has got process industries experience which helps to prepare P&IDs without much efforts with equipment size calculations and pipe line size calculations

Experienced in preparing intelligent P&ID using Autodesk Plant 3d which helps to prepare documents like line list, equipment list, all kind of basic engineering reports.



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PIPING DESIGN & DETAIL ENGINEERING

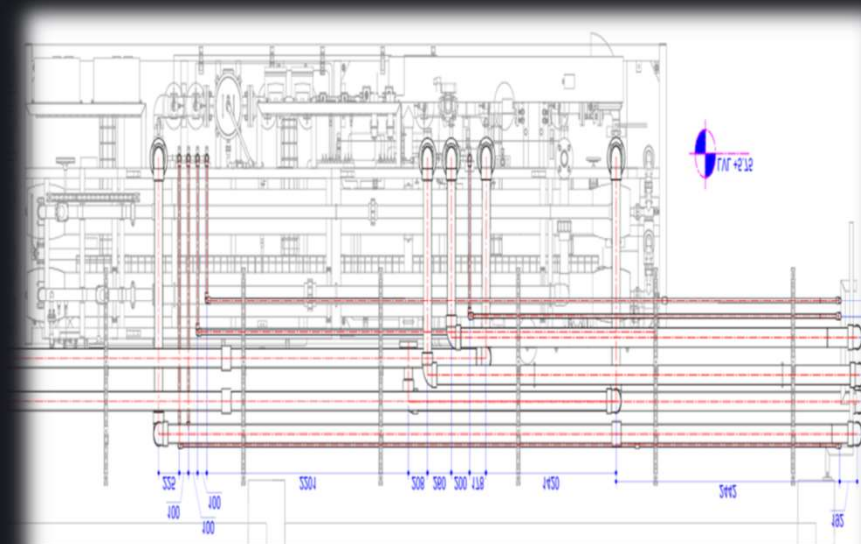
BUSINESS VERTICLS WITH EXAMPLES

We are specialized in 3d pipe routing design using **Autodesk plant 3d Application** For piping Design ,Modelling & Detailing

Piping Design is a critical component of engineering projects and process plants. The science of piping engineering involves developing efficient piping processes that safely transport fluids and gases across industrial plants. Optimally designed piping system can enhance the use of space, ease its construction, simplify maintenance and accessibility and improve the overall performance of piping systems

It becomes so easy to us do the piping design & dental engineering Since team has got wide experience in handling all kind of metallic, non metallic piping MOCs like CS, SS, CPVC, UPVC, FRP, HDPE, PP, etic applicable along with application material standards and dimensional standards , norms & mostly site experience which helps to propose the best arrangement for equipment layout with respect to operations and maintenance of equipment, piping

And off course depth of Autodesk plant 3d knowledge to customize to mee the end user requirements like catalogue, specs, complete custom settings



WATER TREATMENT PLANT DESIGN & DETAIL ENGINEERING

WATR TREATMENT PLANTS EXECUTED

We Offer water treatment plants (STP, ETP) design & desal engineering services

Team has Got Wide Experience In executing water treatment plants for example,

STP, ETP, WWTP, WWRP, RO Plants

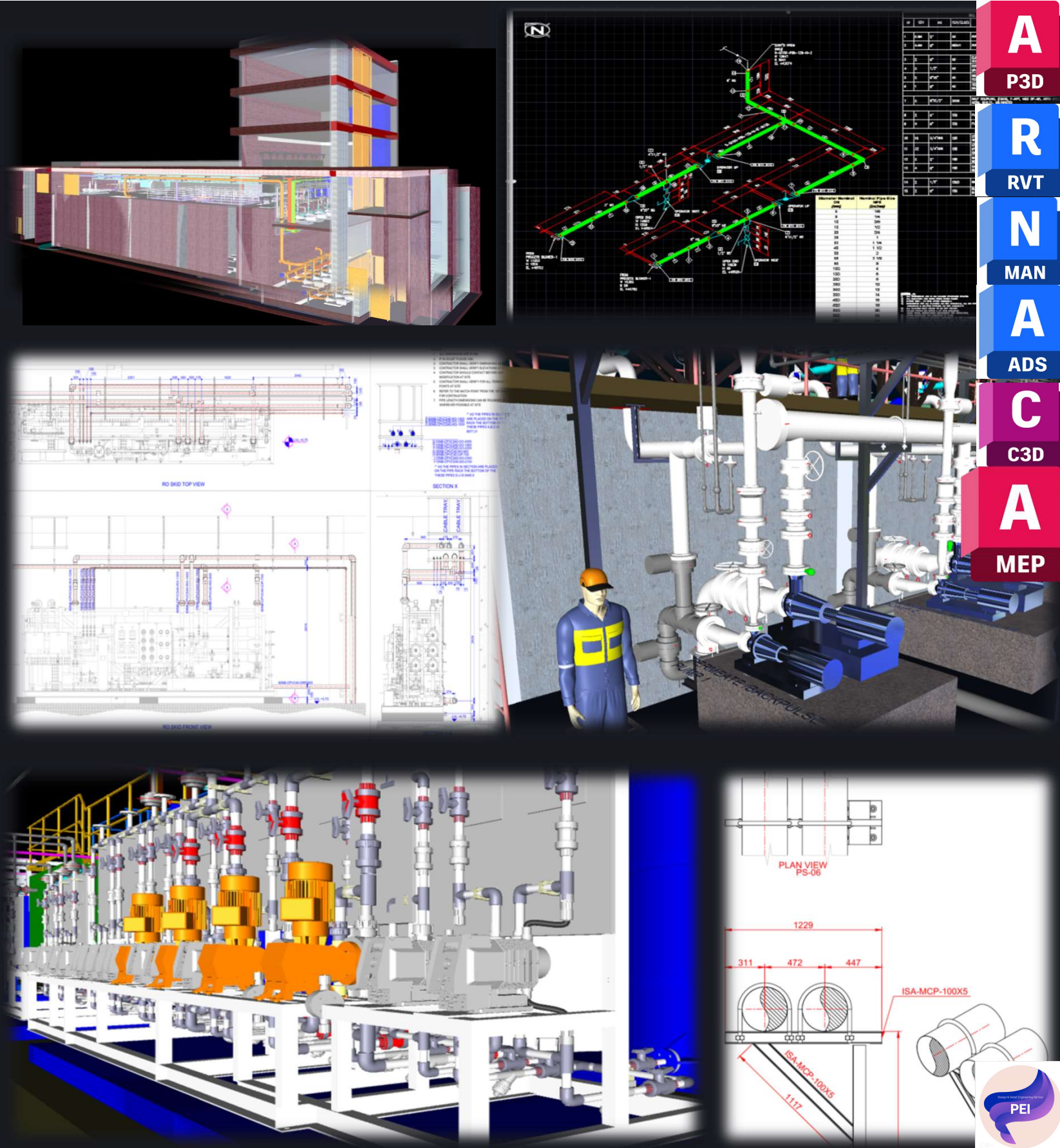
Autodesk Plant 3d, Autodesk Revit, Autodesk Advance steel application

PEI team is expert In understanding water treatment plants requirements with respect to process, equipment, all pipe line material & standards like Stainless steel, Carbon steel, FRP, UPVC, CPVC, HDPE etc and can effetely utilize our water treatment knowledge site execution knowledge in developing error free piping arrangements to ease fabrication & installation, error free bill of materials for all materials

We have a culture of preparing lesson learnt with continuous improvements based on the past experience which leads to effectively review all project related documents and deliver all detail engineering documents such as piping GA, Support GA, Support Fabrication drawings, Bill of materials with proper descriptions, foundation layout, cable tray layout, earthing layout, earthing BOM , cable tray BOM and 3d design & 2d drawings

Team has got wide experience In steel structure design, so that for us its easy to design the required pipe rack design and deep tool experience of Autodesk advance steel knowledge will help in presenting all GA Drawings, Fabrication Drawings With Required Details,.

We developed all piping material library, instruments library in Autodesk Plant 3D, Revit utilizing our deep experience at Admin level.



STEEL STRUCTURE DESIGN & DETAIL ENGINEERING

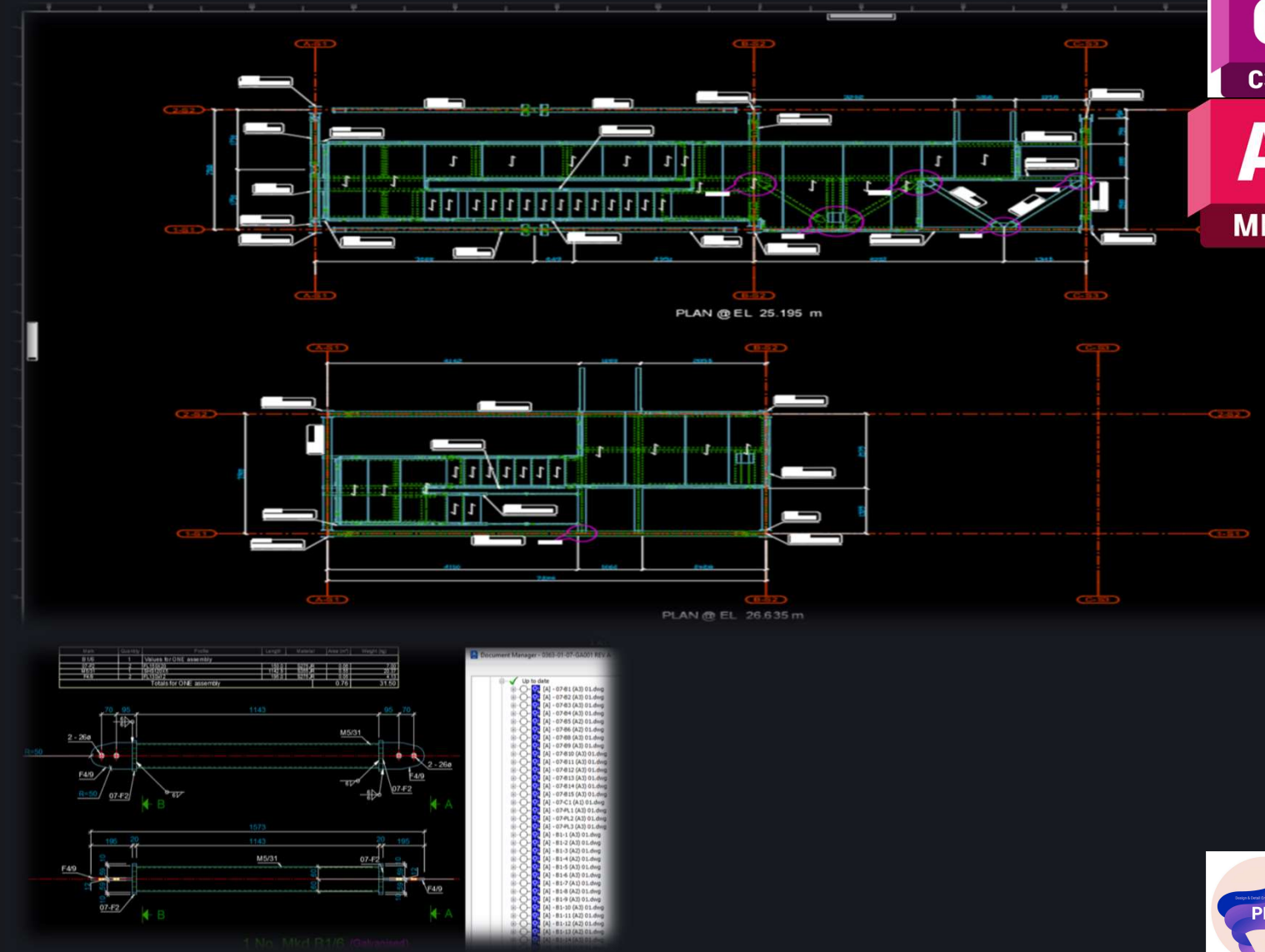
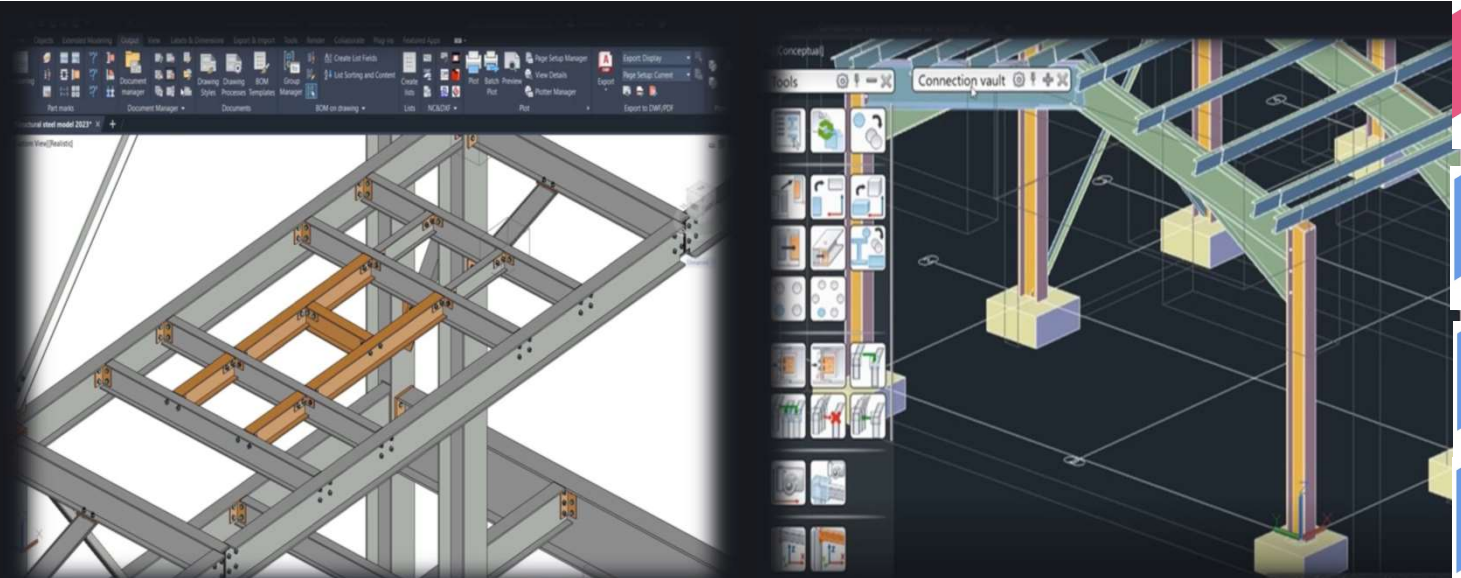
BUSINESS VERTICLS WITH EXAMPLES

Team has Got Wide Experience In presenting Assembly And Fabrication Drawings, etc.. Because Of That We Can Do The Advance Steel Settings Effectively To Present The Output Drawing As Required.

Autodesk advance steel application For steel structure Design ,Modelling & Detailing

PEI team is expert In understanding stress calculations for steel members configurations and can understand steel connections technically as required (Welded / Bolted) based on conditions and same connections will be modelled In the advance steel with deep settings showing up word wide competence.

Team has got wide experience In steel structure design and presenting GA Drawings, Fabrication Drawings With Required Details, etc.. Because Of That We Can Do The Advance Steel Settings Effectively To Present The Output Drawing as Required.



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HVAC, MEP DESIGN & DETAIL ENGINEERING

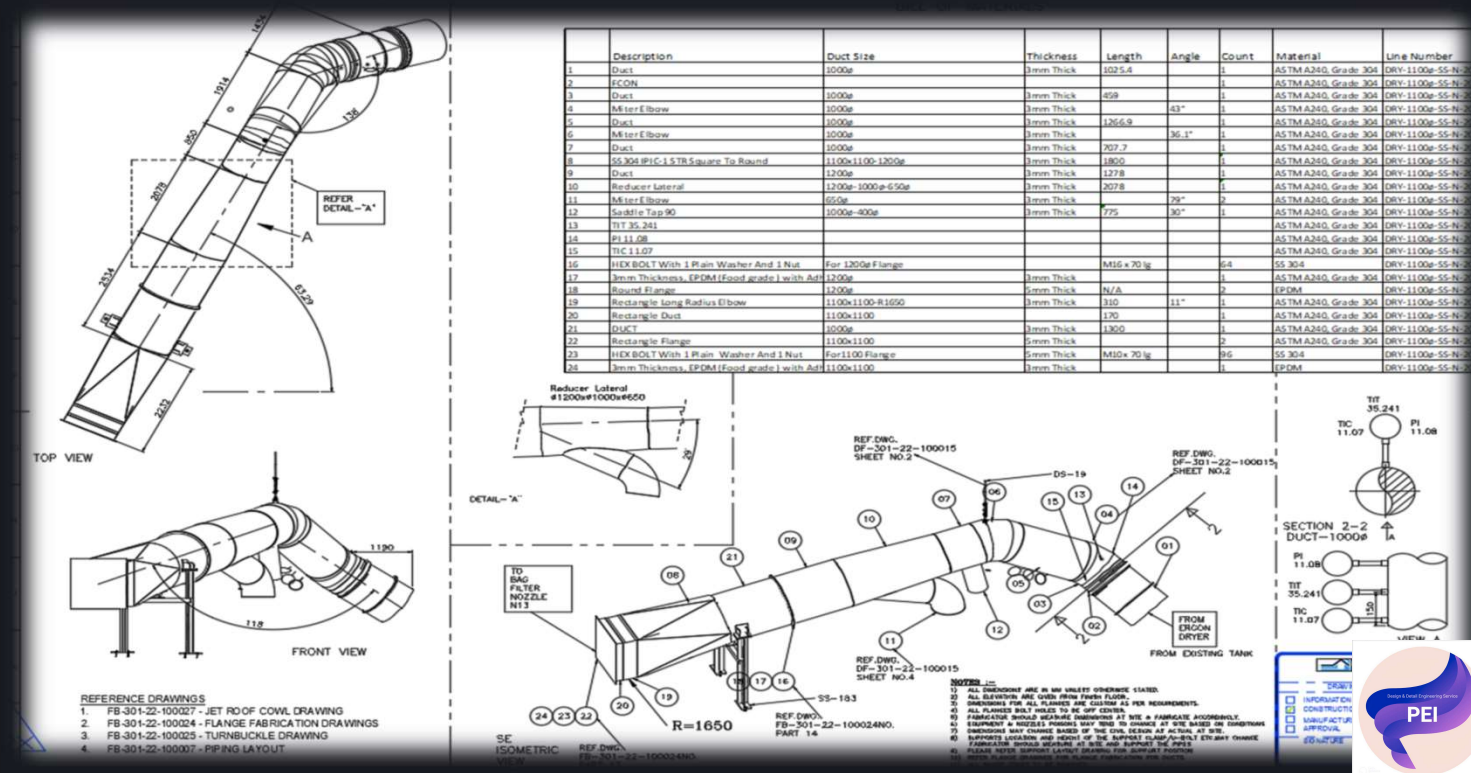
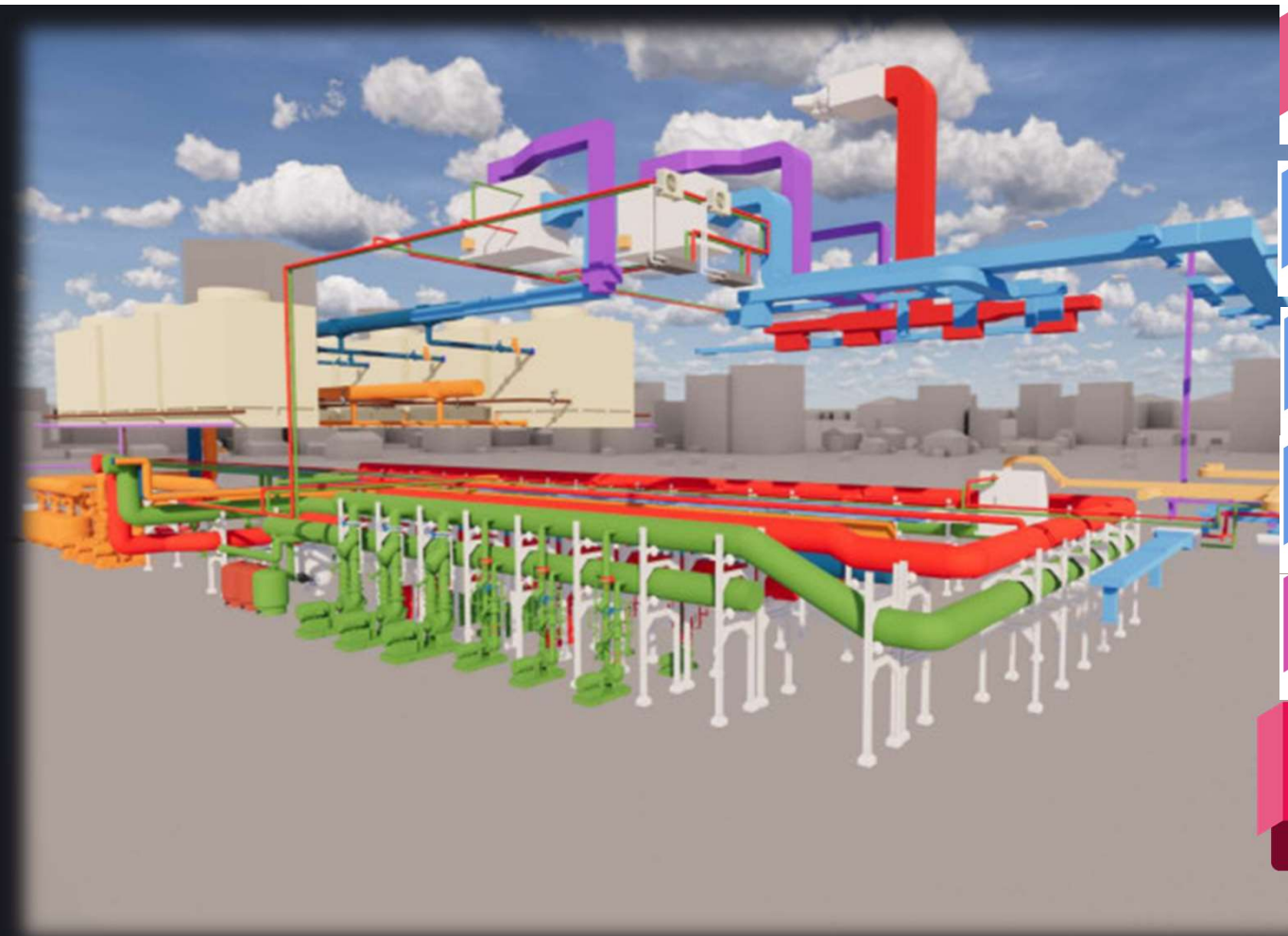
BUSINESS VERTICLS WITH EXAMPLES

HVAC, MEP design, routing using
Autodesk Revit, MEP CAD Application For piping Design ,Modelling & Detailing

We are a leading MEP 3D modeling services provider from India delivering 3D CAD models for MEP layouts and clash free BIM models using Revit® and Navisworks® to construction firms, MEP contractors and engineers. Our MEP modeling services includes creation of 3D rendered MEP layout and Revit family creation for MEPF as well as plant room equipment along with 2D MEP coordination drawings.

What we offer under MEP 3D modelling services:

- 2D Detailed engineering drawings for MEP components
- 3D models with rendering characteristics
- Piping diagrams for plumbing and electrical fittings
- BIM objects for plumbing, mechanical and electrical fixtures
- BIM 360® implementation for end to end project solutions
- Clash detection and resolutions services for soft and hard clashes



BOM 3D MODELLING & DETAILING SERVICES

BUSINESS VERTICALS WITH EXAMPLES

BIM is used for creating and managing data during the design, construction, and operations process. BIM integrates multi-disciplinary data to create detailed digital representations. Using BIM gives you greater visibility, better decision-making, more sustainable options, and cost-savings on architecture, engineering, and construction

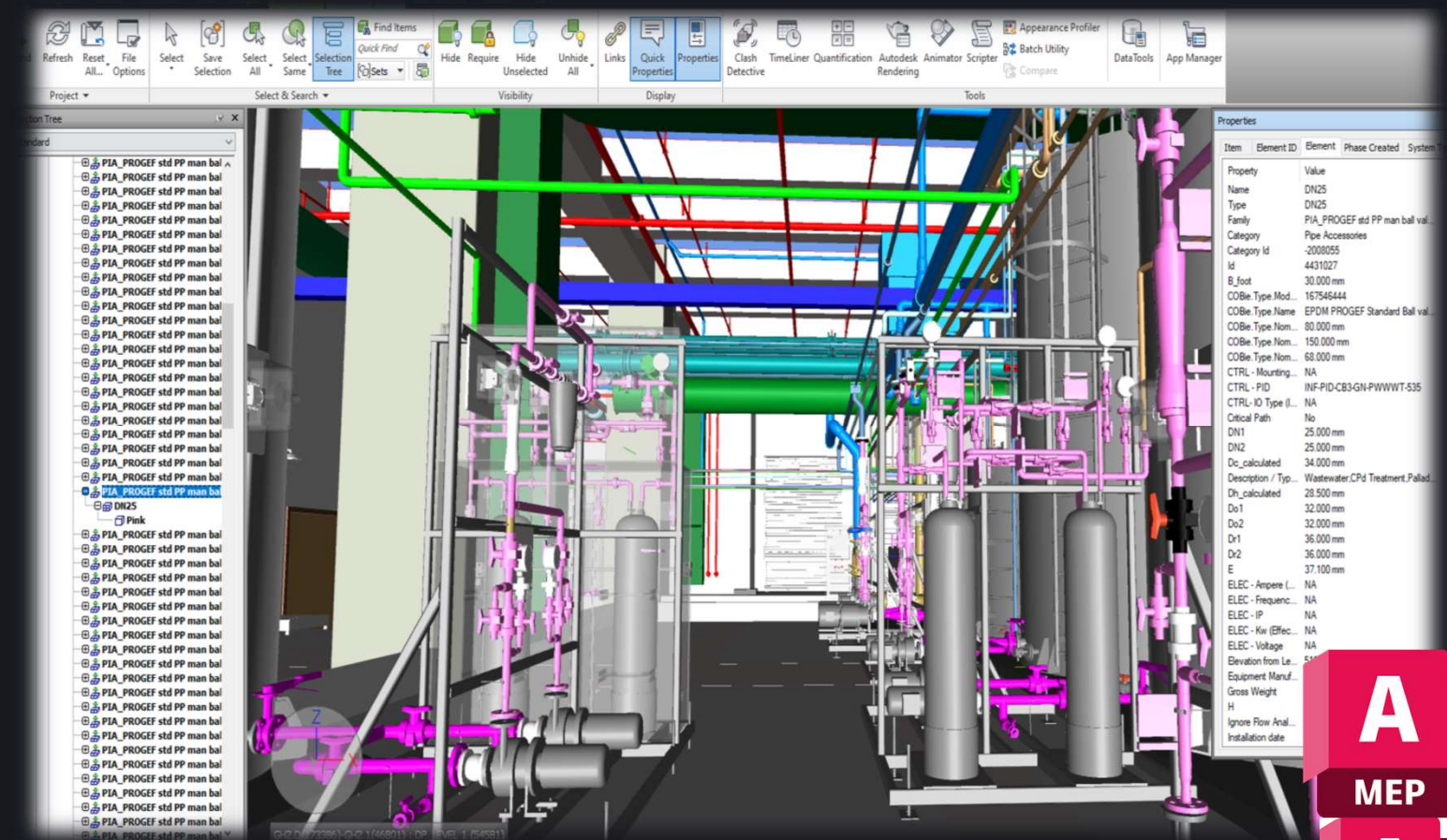
The Process Of BIM

The process of BIM supports the creation of intelligent data Benefits Of BIM Modelling

- A Greater Coordination and Collaboration.
- B BIM Is Effective For Cost Estimations
- C BIM Is Effective For Complex Systems Design Like Mechanical, Electrical, Plumbing, Structural Steel, Structural, HVAC, Piping Systems.
- D Calculates accurate quantities for cost savings

We Offer BIM Services

1. BIM modelling of piping with customized COBie data
2. BIM modelling of mechanical equipment with customized COBie data
3. BIM modelling of electrical equipment with customized COBie data
4. BIM modelling of all piping components & instruments with customized COBie data
5. Clash Detection for integrated project which is extremely helpful for avoiding any mistakes during construction phase
6. BIM Revit library creation for all systems
7. We can be the part COBie implementation for the working project
8. BIM modelling for LOD 100, LOD 200, LOD 300, LOD 400, LOD 500



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BOM 3D MODELLING & DETAILING SERVICES

BUSINESS VERTICALS WITH EXAMPLES

BIM Revit Model Process Involves

LOD 100,

Which is the pre-design stage, the model consists of 2D symbols and the masses to signify an element's existence

LOD 200,

The elements are partially defined by outlining their approximate quantity, size, shape, and location

LOD 300, & 350,

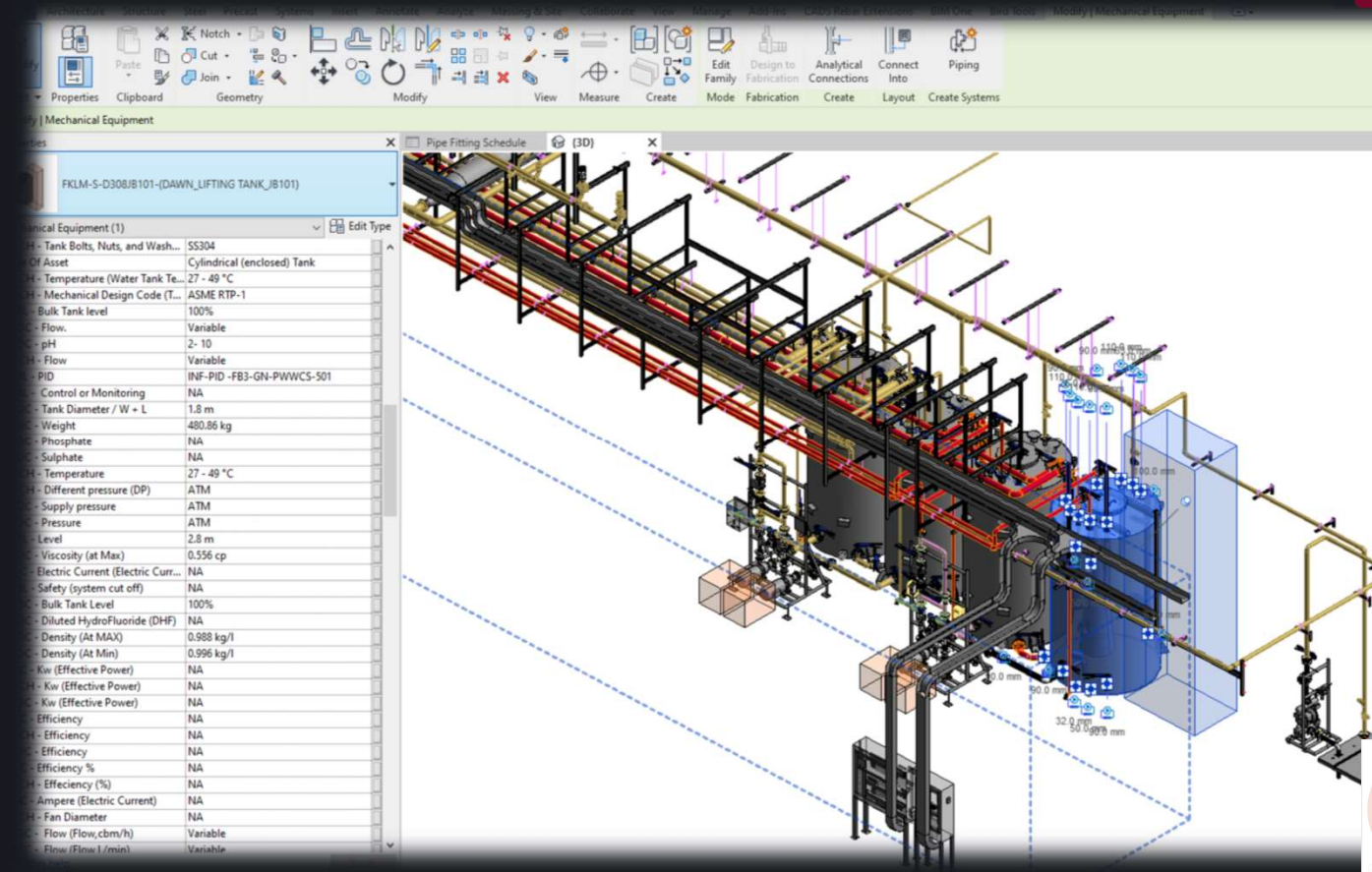
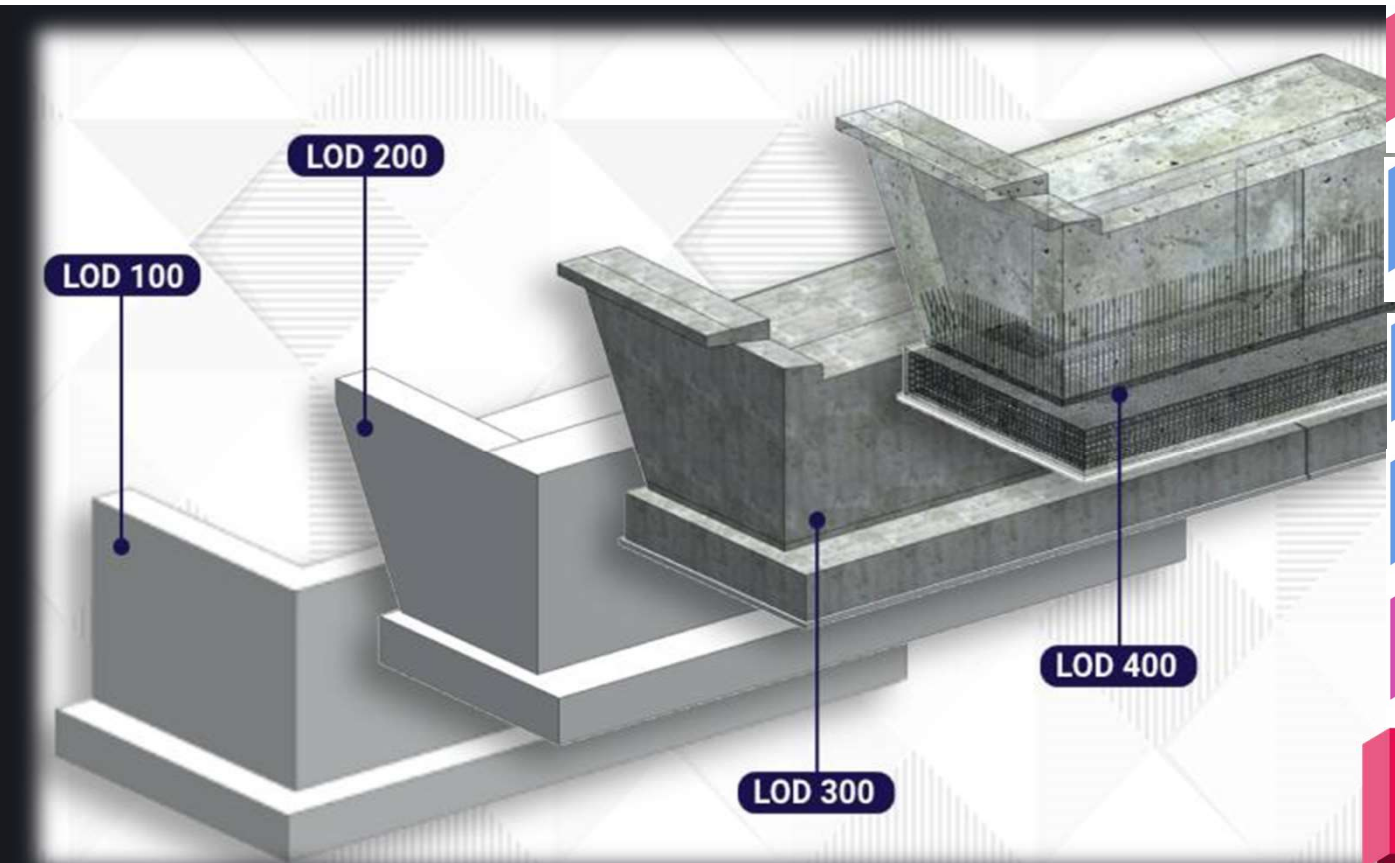
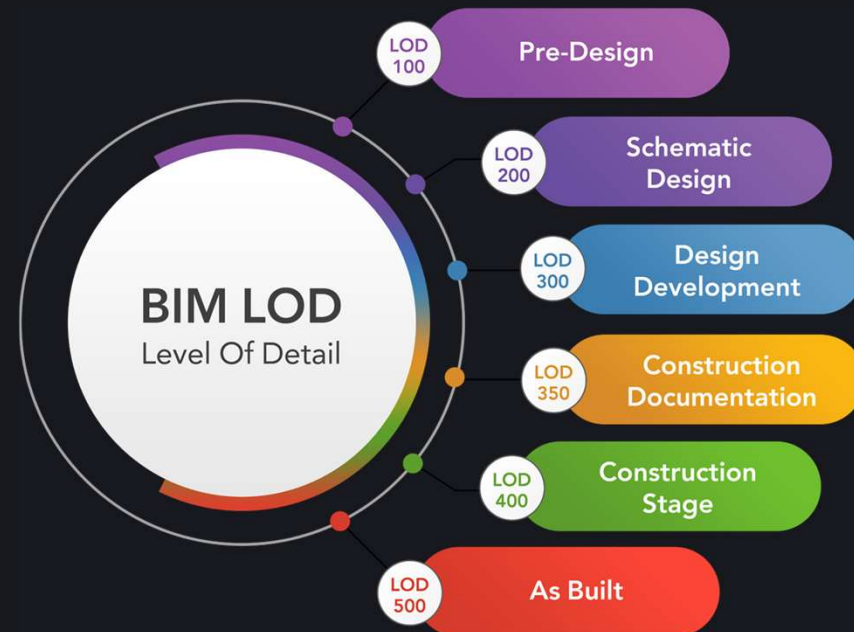
Which is the pre-design stage, the model consists of 2D symbols and the masses to signify an element's existence

LOD 400,

level outlines the basic information about the construction of various elements

LOD 500,

The model begins representing the real-life functions of elements in a real building. Here are all the levels of development with their definitions in detail.



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BIM 3D MODELLING & DETAILING SERVICES FOR ELECTRICAL SYSTEMS

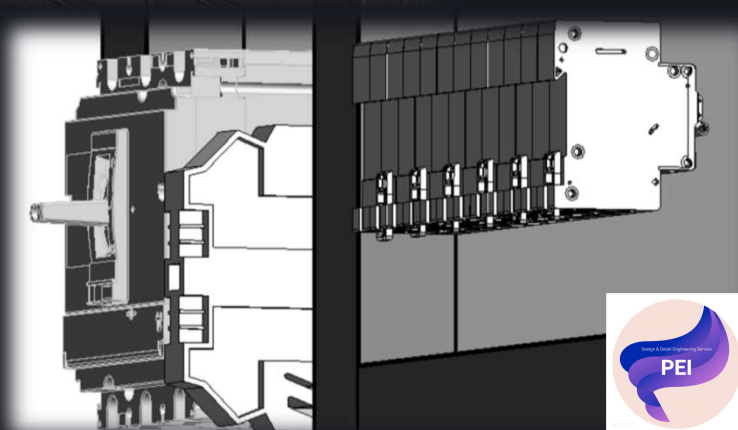
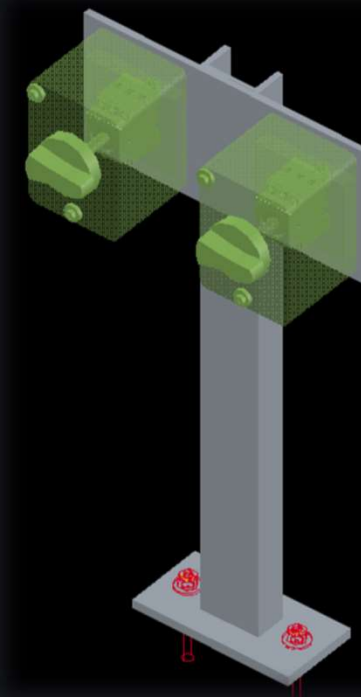
BUSINESS VERTICLS WITH EXAMPLES

Our team can prepare all electrical related drawings and documents

Experts In Revit BIM 3d Electrical Modelling Using Autodesk Revit to the extent of realistic look for 3d components using Autodesk Revit and adding COBie data to all the BIM m3d models and exporting schedules from Revit

We offer

- Cable tray layouts,
- 3D Model drawings for complete electrical system.
- Layout Drawings of Panel Room, Site Electrical development
- Earthing layout drawings
- Lighting layouts
- Calculating cable tray sizes based on cable schedules
- Cable Tray BOM
- Earthing BOM

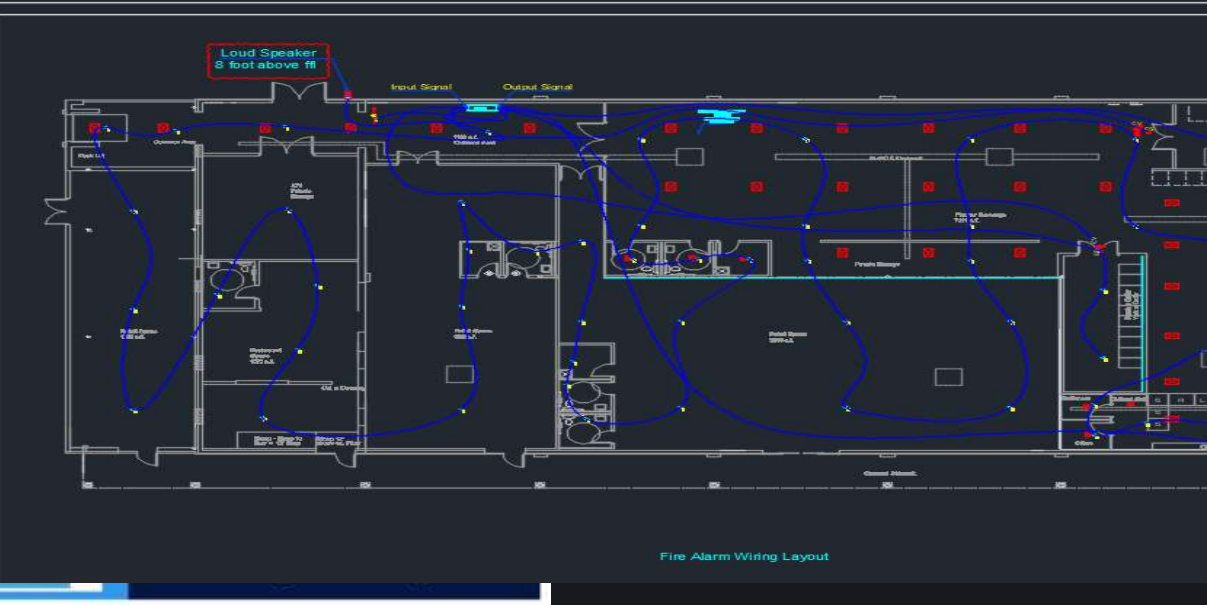
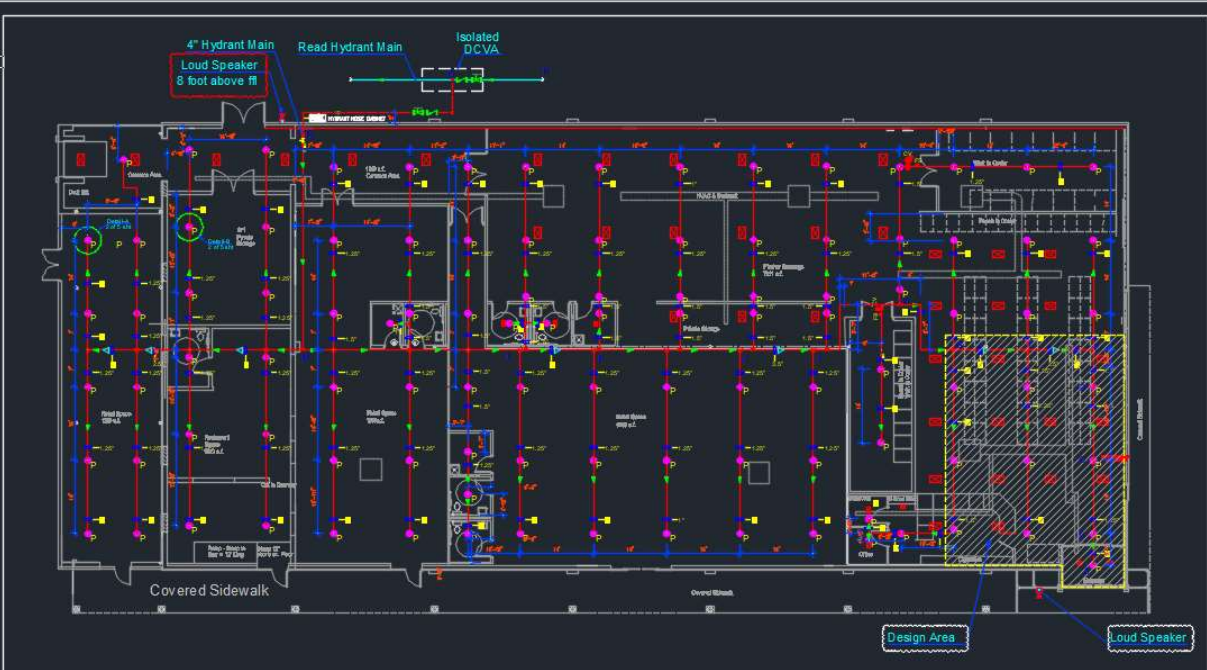


FIRE FIGHTING SYSTEM DESIGN & DETAILING SERVICES

Project Brief for Design & Detail Engineering For Fire Sprinkler And Alarm System

Location USA

The proposed to type II B, Noncombustible unit area 15835 S. F. as per approved document, the total height of Building is 23 ft. from ground floor level. Building is near to read hydrant (Which is near to the building) - corner of 10th & 6th Ave - elevation - 751.31 and flow hydrant - corner of 10th & 3rd Ave - elevation - 738.18.



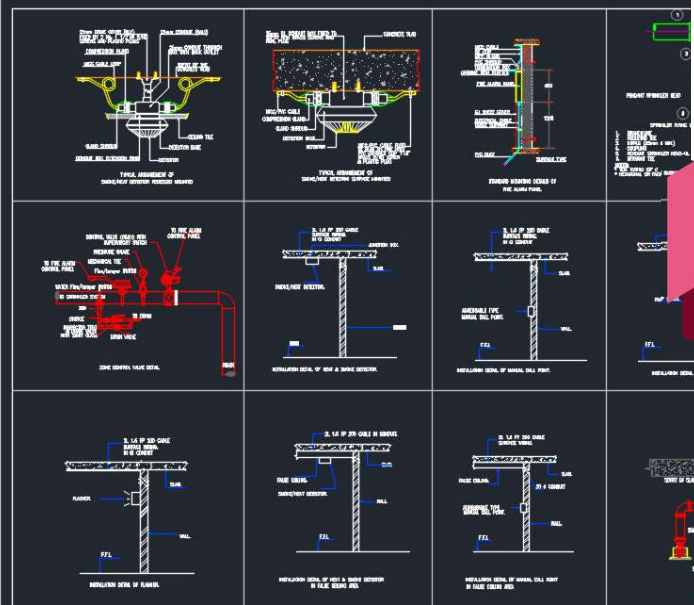
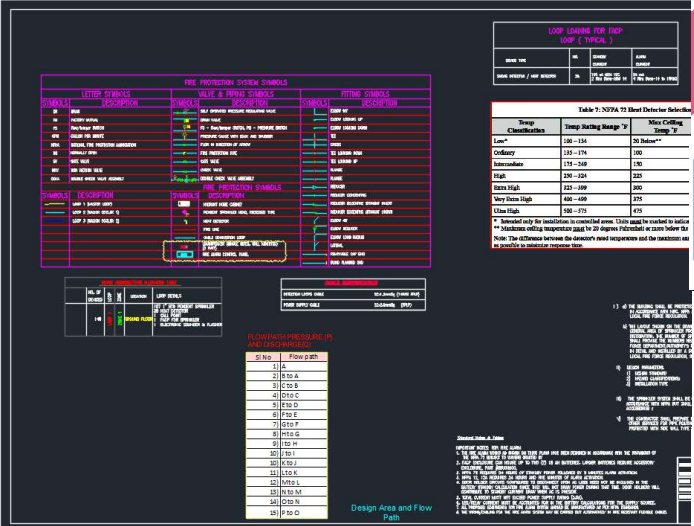
Conditions	Hazard Classification		
	Light Hazard	Ordinary Hazard	Extra Hazard
Maximum Sprinkler Spacing (m)	4.6	4.6	3.7
Sprinkler/nozzle K-Factor (gpm/psi ^{1/2})	5.6	5.6	5.6
Sprinkler Rated Temperature (°C)	68	79	79
Water Supply Density (mm/min)	4.1	6.1	10.2
Hose Stream Allowance, gpm	100	250	500
Storage Duration Time , min	30-60	60 - 90	90 - 120

- 2. Selection of sprinklers (STD Pendent)
- 3. Design calculation for Sprinkler
- 4. Pipe sizing
- 5. Design Calculation
- 6. Fire alarm spacing
- 7. Riser size consideration will be as per the input document
- 8. All pipes and fittings applicable as per ANSI STD.
- 9. Sprinkler water distribution will be as per NFPA area density curve



fig.7.2.3.1.2.

Detailed drawings for sprinkler system arrangements and alarm system arrangements will be provided as well as with wiring connections. Wiring of equipment showing the route of conduit / cable will be submitted. All the equipment and materials legends will be provided.



2.0 NFPA Codes, Standards Applicable

SR.N O.	NFP A	TITL E
1	Table 6.2.3.1	Sprinkler Discharge Characteristics Identification
2	Table 23.4.4.7.1	Hazen Williams C Values
3	Figure 7.2.3.1.2	Area/density curve
4	Table 8.6.2.2.1(a)	Protection area and maximum sprinkler spacing 10.2.4.2.1B
5	Table 23.4.3.1.1	Equivalent schedule 40 steel pipe length chart
6	Table 7.2.4.1	Temperature ratings, classifications, & color coding
7	Chapter 9.5.2.1.2	Coverage area of calculations
8	Figure.7.2.3.1.2	For Area density curve
9	NFPA 72	National Fire Alarm and Signal

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BUSINESS VERTICLS WITH EXAMPLES

A quick glance at our CAD services:

3D drawings for architectural and structural plan

2D and 3D drawings of multicomponent assemblies

BOMs, Advanced BOMs, and API functionalities

CAD conversion from paper to CAD and 2D to 3D

We remain strategic partner and maintain long-term relationship with our clients across the globe in USA, UK, Australia, Singapore, Malaysia and many more with our exceptional skills of project management and quality deliverables. We deliver CAD design and drafting services at low and affordable fees and our onshore/offshore CAD drafters are at your ready assistance for constant support and expert advice during the project tenure.

Benefits of outsourcing CAD services to us:

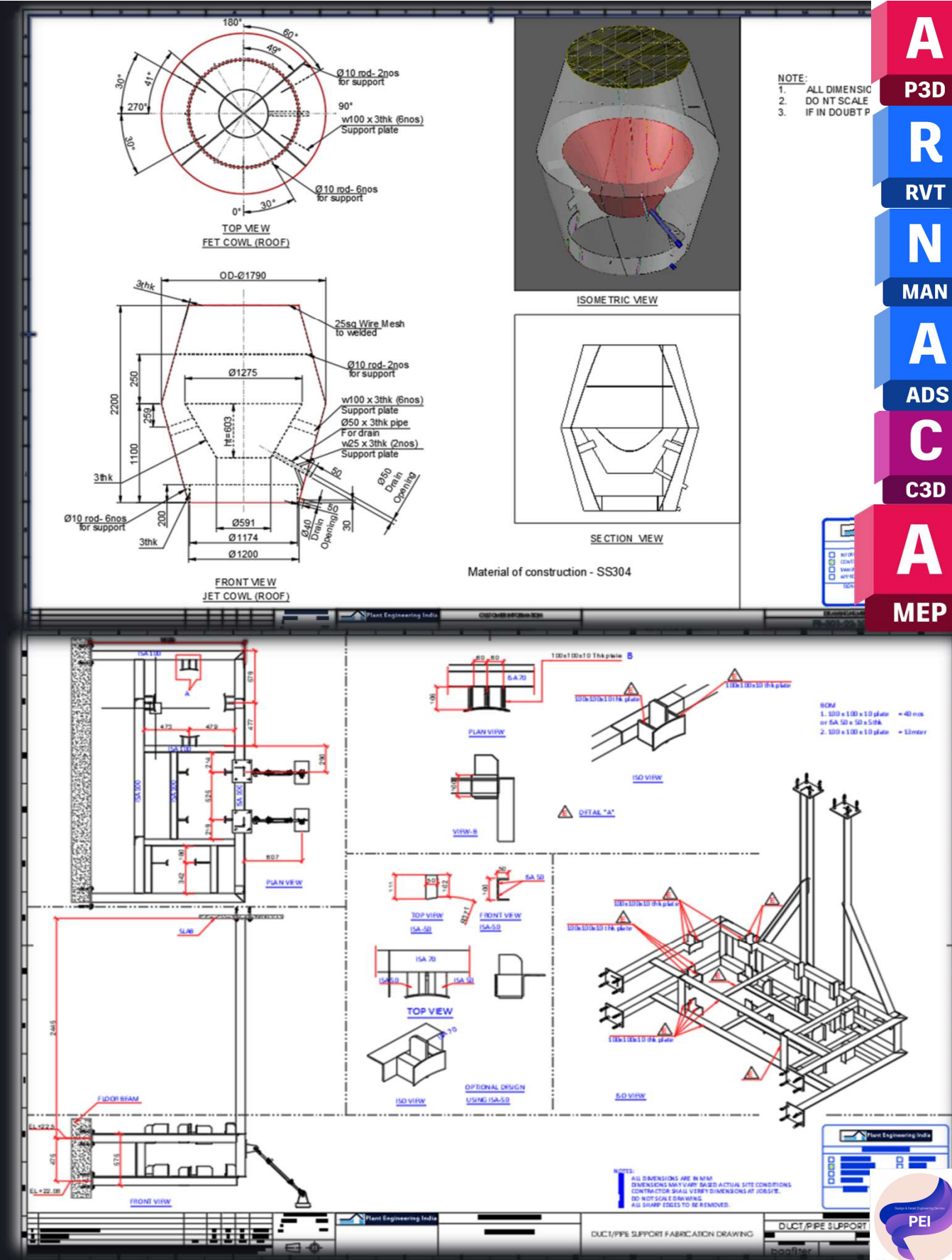
Excellence in all leading CAD software

Adherence to SI, ASME, BS, AIA etc. design standards

Time and cost effective CAD modeling solutions

Dedicated resource allocation for important projects

20+ years of experience in the industry

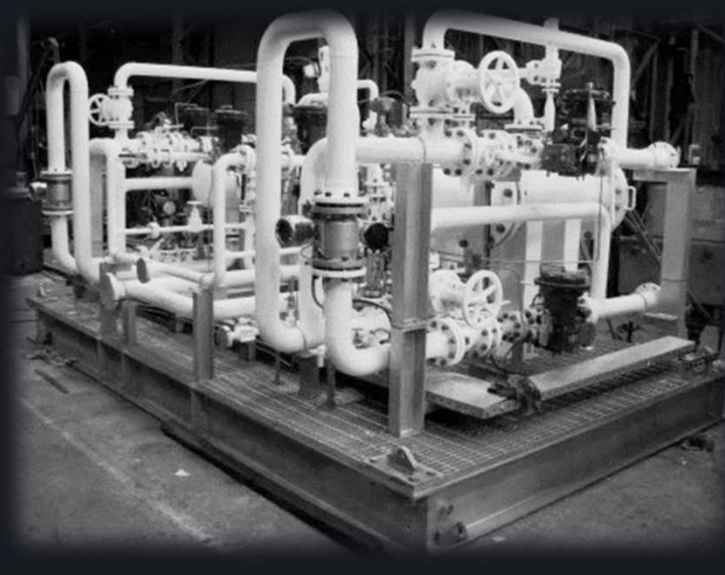


We Generally Offer Services

MOC: STIANLESSLESS STEEL, CARBON STEEL, UPVC, CPVC, FRP, HDPE, DI etc.



Plant 3D Piping Design &
Detail Engineering Services



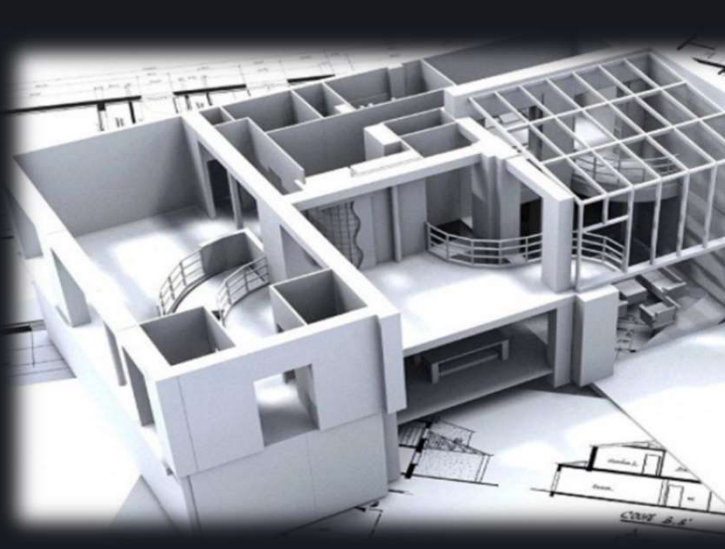
Piping Skid
Design & Detailing Engineering



Water Treatment Plants Design &
Detailing Services STP, ETP, WWTP,
RO Plants etc.



MEP Design Detail Engineering



Civil 3D Design & 2D
Detail Engineering Services



Steel Structure 3D Design &
2D Detail Engineering Services

We Generally Offer Services

Piping Design For Plant Skid Based Piping System

- i. Basic engineering Drawings / Documents
- ii. Process and instrumentation diagrams development.
- iii. Preparation process / Utility calculations, ex: pipe line sizing, calculations for pumps etc.
- iv. Preparation of proposal layouts
- v. Preparation plot plant
- vi. Preparation of all mechanical, civil equipment and layout drawings
- vii. Preparation of detailed fabrication drawings.
- viii. Preparation of
- ix. Preparation of line list, valve list, document list etc.
- x. Preparation Piping Material Specifications.
- xi. Complete AHU, Ventilation 3d duct routing modelling using REVIT and CAD MEP and detail engineering

Mechanical Design

- i. Equipment general arrangement & fabrication drawings.
- ii. Preparation of equipment data sheets.
- iii. Preparation of equipment Fabrication Drawings.
- iv. Applicable Codes are ASME, API, IS...
- v. Pipe Rack Design
- vi. All types of pipe supports
- vii. design and detailing.

Civil/ Steel Structural

- i. Design of RCC & steel structures for industrial & residential
- ii. Design of pre-engineering building (PEB)
- iii. Design of structural evaluation of existing building with NDT tests, feasibility study reports and BOQ
- iv. Retrofit projects for strengthening of existing building.
- v. Inspection & evaluation of existing building / factory
- vi. Civil & steel design calculations.
- vii. New design dimensions / fit / functional applied to product metrics
- viii. General building layout drawings.
- ix. Drain layout drawings.
- x. Plot plan, equipment layout, foundation layouts.
- xi. Validation existing building / drain layout
- xii. Complete design & analysis of buildings
- xiii. Includes concrete & steel structures
- xiv. Revamp engineering design
- xv. design

ASME ATS, ASME BPE STD, API 650, ASME Sec IIIV, DIN etc.

- i. Industrial Steel and RCC Structures
- ii. Connection Designs
- iii. Lattice Structures
- iv. All Types Foundation Design
- v. Earth Retaining Structure Design
- vi. Blast resistant structure

As-built 2D / 3D

- i. All cad based As-built piping drawings 2d and 3d services for
- ii. Implementing Scan To BIM using Clear edge software)

BIM Modelling

- I. BIM modelling of piping with customized COBie data
- II. BIM modelling of mechanical equipment with customized COBie data
- III. BIM modelling of electrical equipment with customized COBie data
- IV. BIM modelling of all piping components & instruments with customized
- V. COBie data
- VI. Clash Detection for integrated project which is extremely helpful for
- VII. avoiding any mistakes during construction phase
- VIII. BIM Revit library creation for all systems
- IX. We can be the part COBie implementation for the working project
- X. BIM modelling for LOD 100, LOD 200, LOD 300, LOD 400, LOD 500

Electrical

- i. Electrical Load list
- ii. Cable tray layouts
- iii. Cable tray BOM
- iv. 3D modeling and 2d detailing
- v. Lighting Calculations
- vi. Lighting Layouts
- vii. Eating Layouts

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Specialized in In Autodesk Design Applications

A AutoCAD
Plant 3D 2023

For Piping

A Advance Steel 2023

Autodesk Advance Steel 2023

For Steel Structure

R Revit 2023

BIM Modelling

AUTODESK
REVIT

MEP

Revit MEP

N Navisworks Manage

For Review, Clash detection and reports, Rendering

AUTODESK

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For HVAC 3d & detailing

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For
Storm Water
Sanitary Sewer Water
Including Structures

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Industries We Serve



Water Treatment Plants



FMGC Plants



Oil & Gas



Cement Industries



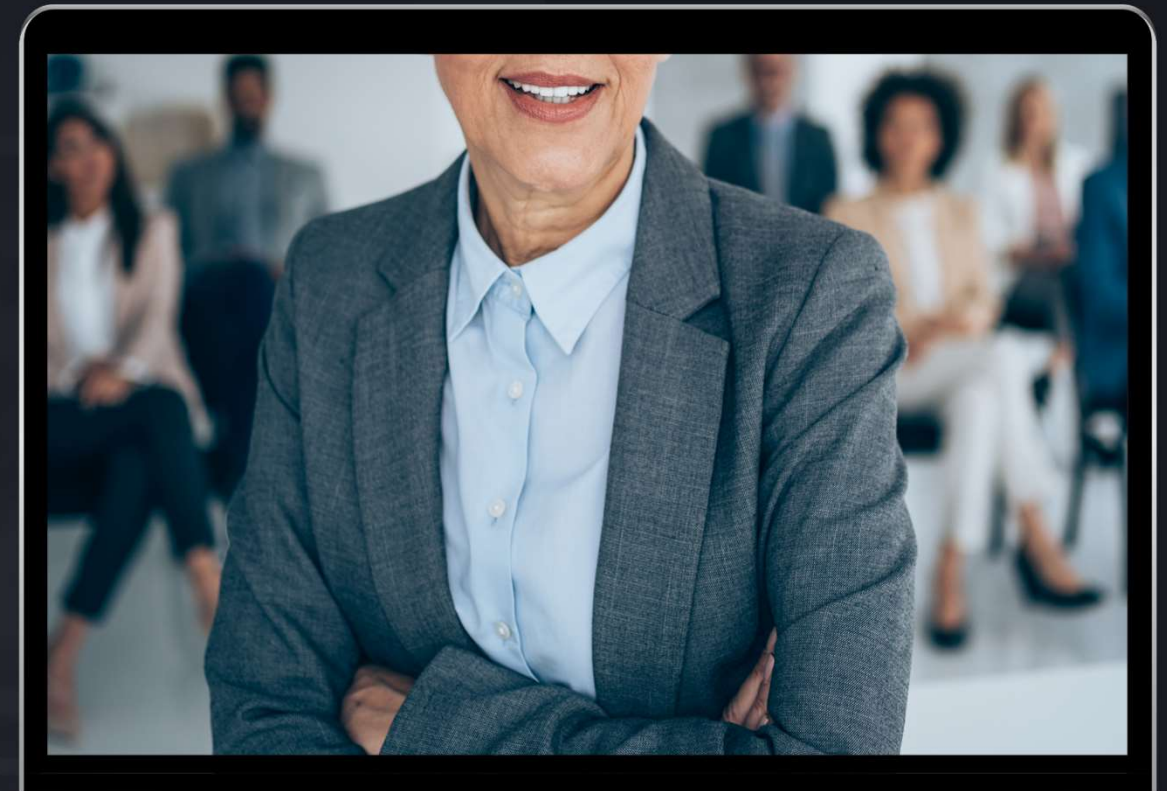
Chemical Plants



Brewage Plants



Power Plants



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<https://www.plantengineeringindia.org/>



<https://www.linkedin.com/company/104462325/admin/dashboard/>

Social Media



<https://www.youtube.com/watch?v=lxwBONBkcU8>

<https://www.youtube.com/watch?v=pF8MjwXogx4>

