Pharmaceutical Industrial Projects

We as a company are well-equipped to provide one-stop solutions for all the process & packaging of products in pharmaceutical formulations industry, **i.e., tablets, capsules, liquid oral, dry syrup, Injectables, and IV fluids**. We provide services right from planning stage to the starting of the production unit, i.e., preparing plant designs, layouts, the requirement of utilities, process plans, designing of air handling unit, clean room partitions, modular partitions, effluent treatment systems, water treatment plants, air filtration systems, etc. We have a team of professionals associated with us for handling & execution of the project from inception to the production of finished products. Our team provides all the necessary support and assistance in giving the accurate and latest inputs as per developments around the universe.

We can do turnkey projects for pharmaceuticals as per **WHO-GMP, USFDA, MHRA, TGA and cGMP** norms & requirements. We offer cost-effective solutions to set up pharmaceutical/ liquid oral/ as a modification of existing facilities. From project planning, production machinery to packaging material for finished goods, everything falls within our scope of work. With industry-wide experience, the company has aspired and, quite successfully, to penetrate the domestic and international market with products and services at the higher end of technology.

Engineering Consultancy

A fast-growing consultancy organization offering complete pharmaceuticals (allopathy, homeopathy, herbal, cosmetics food industry, and medical devices) turnkey solutions for new facilities with a dedicated and highly skilled workforce. Serving the pharmaceutical industry since 2013, driven by a team of highly experienced and motivated professionals and experts. With a strong history of innovation, our experts seek out not only the most up to date equipment but also the most logical solutions for our clients.

We always lay emphasis on optimal workflows, cost-efficiency and safety with every new project we design. From laboratories to pilot and production plants, from General products to products with OEL 5. From Pharmaceuticals wehave also expanded our work arena to hospitals, high–precision devices, Nutraceuticals, Cosmetics, Food and Microelectronics to provide a dedicated solution for all your requirements.

Consultancy Service covers -

 # Plant Layout Designing

- Pharmaceutical Project designing as per regulatory requirement of USFDA, MHRA, TGA, WHO GMP, Schedule M – Guidelines
- Man & Material flow Drawings
- Machine Placement Drawings
- Architectural Drawings of Facility

 # Civil Designing

- Civil & Structural Drawing of Plant Building considering GMP requirements
- Construction Management
- Preparation of bill of quantity & estimate
- Specifications for floor, wall & ceilings in plant
- Specifications for Clean Room Partition Panels, Doors & Windows

 # Heat Ventilation & Air Conditioning (HVAC) Designing

- HVAC Single line Air Flow Diagram as per GMP Requirement
- AHU Piping & Single line Ducting Layout Drawings with proposed location of HVAC equipments
- AHU Grouping, AHU Filtration Level Drawings, Room Classification & Pressure Zoning
- Design Qualification (DQ) & HVAC Validation
- Preparation of bill of quantity & estimate
- General Arrangement (GA) Drawings

 # Utility Design

- Selection of Suitable Utility for Plant
- Preparation of P&ID for Purified Water Generation & Distribution System, Compressed Air System, Vacuum System, Gas System, CIP & SIP System
- BOQ Generation & Quotation Procurement for Purified Water System, Boilers, Cooling Towers, Compressors, Vacuum Pumps, Chilling Plants, Dust Extraction System, Piping & Insulation
- Checking & approval of Drawings, Documents & Contractors

 # Electrical Engineering

- Designing of complete Electrical distribution in plant
- Drawing & Designing of High Tension (HT) Yard
- Single Line Diagrams for Electrical Panels & Earthling
- Cable Specification & Cable Tray Layouts

- Prepare Specifications for Motors, Clean Room Light Fittings, Cables (LV/HV) Panels, Push Button Stations, Socket Outlets, Substation Equipments
- Prepare Drawings for Transformers, DG Sets, MCC, PCC, LDBs, Motors, Cables, VFDs, UPS etc
- Preparation of bill of quantity & estimate

 # Capacity Designing & Machinery Selection

- Plant Productivity based Machinery Selection
- Preparation of user requirement specification (URS) of Machinery, Lab Equipments & Utilities
- Preparation of tender Documents, Call of Quotation, Selection of Suitable Machinery & Vendor

#Environmental Engineering

- Identification of Effluent (Solid/Liquid) likely to be generated
- Designing of Complete Effluent Management System like preliminary storage tank, decontamination, pumping of neutralized effluent to main stream
- Concept & detailed engineering for handling of exhaust air & gases through Scrubbers & Incinerators
- Liquid/Solid waste disposal treatment & handling technology
- Specifications for machinery required for controlling of Air & Noise Pollution

 # Plant Safety Engineering

- Designing of Safety Plans required for Plant Safety, Product Safety, Personal Safety, Spill/contamination Measures, Gaseous Contamination Measures, Static Electric Discharge etc
- Preparation of Design Philosophy for Fire/Smoke Detectors & Fire Protection System
- Designing for Fire Fighting System & Fire Water Tank, Hydrant System, Sprinklers System

 # Documentation

- Complete Plant Documentation Like SOP, Batch Manufacturing records, CTD Dossiers, Qualification, Validation etc

 # Feasibility Study Report for Project

- Preparation of Feasibility Study Report with Technical & Financial Calculation Details
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 # Third Party Inspection

- Inspection Feasibility of project report

 # Clean Room Design

- Designing of Clean Room from ISO Class 1 to ISO Class 9 (FS209E Class 1 to Class 1,00,000)
- Designing of modular wall partitions, Walk able/ Non Walk able Ceilings, Doors, Windows, Light Fittings, HEPA Filters
- Preparation of BOQ & Estimate

Supplies of Pharmaceutical Machinery

We can provide machineries for all the industries dealing in API (Active Pharmaceutical Ingredients), bulk drugs, formulations industry, i.e., tablets, capsules, liquid oral, dry syrup, injectables, IV fluids, and also, all the other related items, such as steam boilers, HVAC systems, water treatment plants, filtered compressed air, complete plant pipeline, etc supplied by us. These products are designed and manufactured as per latest cGMP guidelines; also the finishing is at par with the best in the industry. Depending on the inputs, we ensure the performance of our machines is as per the rated capacity; support of proper training and guidance is provided by our team; documentation and validation is carried out as required by the customer; after-sales support and spare parts are easily available to ensure smooth operations of the plant and machinery. We have a range of products depending on the rated capacity of production required by the client.

Pharmaceutical Utility Equipments Supply

Over the past years, Transindia experienced engineers have used advanced technologies on several fronts and contributed to making the installation of process piping more efficient

and with fewer delays. Projects are planned in advance by the experienced Engineers and activities are coordinated between the design engineer, client's project team and the validation team.

Before beginning construction, Engineers team gives the owner a very clear idea of exactly what he wants the system to look like and how it shall function. Computer simulations done by Transindia engineering team help to visualize the project before the takeoff.

Our experienced team uses latest fabrication technology for installing process piping. They have better defined procedures and fewer "cut-outs" of welds which has meant "cleaner" documentation submitted for FDA approval. As a result, productivity is higher.

The experienced site team at Transindia follows the SOPs which are written procedures to be followed at site by welding personnel so that the same series of steps in the same order for handling materials, cutting and end-prepping of tubing for welding, inert gas purging, and orbital welding, etc. are followed.

We focus Primarily on Utility generation and distribution Systems

- **Compressed Air**

In the pharmaceutical industry, compressed air is used for a number of production and packaging applications, including blowing off and drying bottles prior to filling, conveying pills, providing air for pneumatically controlled valves and cylinders, as well as breathing air systems.

Each of these applications requires a different level of air quality and a different combination of air treatment to meet the needed quality. Because the uses of compressed air within the industry vary so greatly, there is no set standard in place that every process must adhere to.

- **Steam**

For Pharmaceutical steam, there are two basic types of steam:

1. Industrial steam or Black Steam is produced in boilers, used as a utility and which does not come into contact with the product and process equipment. It contains several additives to protect the boilers and pipes from precipitation and corrosion.
2. Pharmaceutical steam, pure steam or Clean Steam is the steam generated from treated water(Purified Water). The steam condensation complies with the pharmacopoeia parameters for WFI grade water

- **Water**

We provide solutions and complete systems for PW generation, storage and distribution skids and steam sterilisation, in accordance with the latest pharmacopeia. This includes right from Pre-Treatment, Double pass Reverse Osmosis systems, Electro De ionization systems and water for injection Multi column Distillation plants and pure steam generators (PSG).

All equipment's and the plants are manufactured using Sanitary AISI 316 L Stainless Steel electro-polished tubes and fittings with surface finish of RA 0.4 um. All piping and fittings are welded using latest orbital welding machines. All other fittings and equipment's including values, pumps and instruments selected are sanitary type. Optionally the plants may also be supplied with PVDF piping systems. As a standard feature, all plants are SS 304 skid mounted with stainless steel control panel and tough screen for ease of operation

- **Cooling Water/Towers**

Thermal cycles are crucial in the pharmaceutical industry: so many processes require to remove the unused heat or produced in excess in order to continue and complete the process.
TE designs and builds technologically advanced cooling towers systems for pharmaceutical industries worldwide.
Cooling towers are often a key component of pharmaceutical industry processes, on their performance relies how effectively and efficiently the cooling water is used. Many of the most important processes in the pharmaceutical industry generate heat, and require an appropriate cooling system.

TE, with over 08 years of experience in the cooling towers field, manufactures efficient and technologically advanced process cooling equipment, ideal for many pharmaceutical industries.

Some of the pharmaceutical key processes that require an efficient cooling system:

Batch processing in multipurpose reactors, which requires cooling water for chemical reactions at high temperatures and crystallization of final products at low temperatures
Cooling ointments before pouring and packaging
Controlling the temperature of the molding process when forming gelatin for capsules.
Heating and subsequent cooling of components of creams before they're mixed together
Heating and cooling during sterilization of liquid pharmaceuticals
Water used in the wet granulation process for tablet forming

- **Chilling Plants**

Chillers are the heart of the Pharma Factory. Our Designed brine chilling plant for pharma industries are having the higher cooling capability as it is designed with the modern technical aspects for it superiority in cooling capability. Moreover, every pharma industries majorly require these chilling plant and we are also supplying and exporting them at numerous pharma industries in India. Several pharmaceutical process and reactors requires the brine chiller plants and we are providing this plant with the necessary efficacy in it.

We design the Chilling Plants with Distribution System, Pumps & Electronic Control.

- **Dust Extraction**

Dust extraction and centralized vacuum cleaning systems vary in their design, performance and costs. Different companies have different approaches to their design, however, there are some basic rules that must be followed if these systems are going to be immediately effective and avoid future problems.

Many of the products used and produced in pharmaceutical production contain hazardous ingredients that can be toxic because of the quantities being processed. Some, in certain circumstances, are also potentially explosive and, therefore, pose hazards to personnel and the plant in which they are being processed.

The capture and safe handling of the ingredients used within the pharmaceutical manufacturing process is essential. Extracting hazardous dusts at their point of generation and conveying them to a correctly designed filtration system with in-built safety features are necessary to protect both personnel and plant.

Because of the size of tablets and the raw material costs associated with their production the amount of dusts generated tends to be low. However, any dusts that are generated from the production process must be extracted to ensure a safe, efficient and clean work area.

Some manufacturers of pharmaceutical production machinery build a dust extraction facility that must be connected to a dust extraction system into the design of their production equipment. Because of the size and complexity of the production machines, the pressure differential caused by the small diameter extraction ducts provided, causes a high pressure differential, which must be included within the design calculations of the resulting dust extraction system.

Dust Collector

When the dusts have been captured within the extraction air stream, they can be successfully conveyed to a dust collector under a negative pressure at the correct conveying velocity to keep the dust in suspension.

Pharmaceutical Piping Supply & Services

A. Pharmaceutical Process Piping

- Process Piping Layout for Pharmaceutical Industries Includes Design of Pharmaceutical Process Piping Layout as per Pharmaceutical Industry Standards with having Hygiene of Pharmaceutical Process Piping.
- Stainless Steel Piping (S.S. Piping), S.S. 304 Piping, S.S. 316 Piping for Pharmaceutical Processes for Hygiene Products as per Pharmaceutical Industry Standards.
- Stainless Steel Piping Are Chosen for Corrosion Resistance.
- For Pharmaceutical Industries, we have got an Extensive Technique of Joining of Pipes and its Fittings by Dairy Tube Expander System without Welding which leads to no Deposit of Weld Burr Particles and in Critical area where welding is Required we used TIG Welding (Argon Gas Welding/ Orbital Welding) for Joining of Pipes and Fittings.
- Designing of Pump Piping Layout such as Centrifugal Pump Piping for Convey of Fluid.
- Design and Fabrication of Manifold Piping Systems / Piping Header for Pharmaceuticals Hygiene Products to Convey Fluid to Various Processes with proper Flow of Fluid.
- Selection of Pipe Size and Thickness for Jacketed Piping.
- Selection of Manifold Pipe Size and Thickness / Piping Header Pipe Size and Thickness.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per Pharmaceutical Industry Standards.
- Material used for Pharmaceutical Process Piping such as Pipe, Fittings, Valves are of Standard Companies.
- Design and Fabrication of Rest Supports for Pharmaceutical Process Piping to Sustain the Loads of Pipe, Fittings, Valves, Weight of Fluid with Distance between Supports Are Decided based on Piping Engineering Standards.
- Piping Material Take off (MTO) / Bill of Material (BOM).
- Procurement of Pipes, Fittings & Accessories with Material Testing Certificates.
- Fabrication of Pharmaceutical Process Piping as per General Engineering Standards and Practices.
- Erection of Pharmaceutical Process Piping.
- Pneumatic Testing of Pharmaceutical Process Piping for Leak Tests in Pharmaceutical Process Piping, Welded Joints Leak Test, Flange Joints Leak Test, Threaded Connections Leak Test.
- Commissioning of Pharmaceutical Process Piping.

B. Pharmaceutical Utility Piping

As a Utility Piping Contractors We Provide Complete Utility Piping Turnkey Solutions from

- Concept.
- Designing and Detailing of Utility Piping Systems.
- Procurement of Pipes, Fittings, Valves, Pumps & Accessories
- Fabrication of Utility Piping.
- Erection of Utility Pipelines.
- Testing and Commissioning of Utility Pipelines.

Due to our Extensive Field Experience in Industrial Plants We Consult Clients with our Best Technical Skills for Efficient use of Utility Systems for Heating and Cooling Systems for Processes Which Are Cost Effective.

We have Gain Appreciation from our Clients for our Technical Skills, Quality Work, Delivery of Projects Within Stipulated Time which is done by us with Proper Management Systems.

We Undertake Utility Piping Contracts for Following:

- Compressed Air Piping.
- Cooling Tower Piping.
- Chilling Plant Piping.
- Steam Boiler Piping.
- Thermic Fluid Heater Piping.
- Hot Water Generator Piping.
- Waste Heat Recovery Unit Piping.
- Waste Heat Recovery Boiler Piping.
- Air Preheater Ducting.
- Fuel Oil Piping.
- Gas Piping
- uPVC, CPVC, HDPE, PP – Drain Piping

a) Compressed Air Piping

Compressed Air Piping Layout Includes

- Design of Compressed Air Piping for Whole Plant with Proper Flow of Air with Proper Pressure with Minimum Pressure Loss, Moisture Free Air to Increase the Life of Equipment's and Machineries where Air will be used.
- Designing of Piping Layout for compressed air distribution system for Distribution of Air Flow to Various Locations of Plant with Minimum Pressure Loss and Even Flow of air to Equipment's and Machines Requiring Air.
- Design and Fabrication of Centrifugal Compressors Piping, Rotary Screwed Compressors Piping, Positive Displacement Compressors Piping, Reciprocating Compressor Piping, Blowers Piping.
- Design and Fabrication of Air Dryer Piping for Air Dryer with Bypass System for Removing Moisture Contents from Air to give Clean and Dry Air Which Enhances the Life of Compressed Air Piping as well as Machineries and Equipment's where Air Will Be Used.
- Design and Fabrication of Compressed Air Receiving Tank Piping / Compressed Air Storage Tank Piping.
- Design of Layout of Air Piping is done with Minimum Pressure Loss in Air Piping Leading to Good Performance and Proper Flow of Volume of Air and Air Pressure Required for Machineries and Equipment's
- Designing and Fabrication of Compressed Air Manifold Piping Systems / Compressed Air Distribution Header for Connections of Multiple Air Compressors, Even Distribution of Air in Various Location of Plants with Proper Flow and Temperature.
- Installation of Pressure Regulator with Filter and Lubricators, Moisture Separators for Removal Moisture content in air which indirectly Increases the Performance of Compressors and Equipment connected with Air Piping.
- Installation of Automatic Drain Valves in Air Compressors, Receiving Tanks for Removal of Water from them to revent its Entering in Air Piping.
- Installation of Safety Valves.
- Fabrication of Frames for Compressors.
- Calculation of Pipe Sizing Based on Velocity and Pressure Drop and Proper Flow.
- Calculation of Pipe Wall Thickness as per ASME Standards.
- Selection of Compressed Air Manifold Pipe Size / Compressed Air Header Pipe Size.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per ASME/ Standards.

- Piping Material such as Pipe, Fittings, Valves used for Fabrication of Compressed air Piping are of Standard Companies.
- Design and Fabrication of Supports for Compressed Air Piping Systems to Support Dead Weight of Pipe, Fittings, Valves, Air to avoid Sagging of Pipe During Sustain and Operating Conditions, The Distance Between the Supports are Selected as per Piping Engineering Standards.
- Piping Material Take off (MTO)/Bill of Material (BOM).
- Fabrication of Compressed Air Piping is Carried out as per General Engineering Standards and Practices.
- Pipeline Erection for Compressed Air.
- Pneumatic Testing of Compressed Air Piping for Leak Test Compressed Air Pipeline, Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.
- Commissioning of Compressed Air Piping.

b) Cooling Tower Piping

* Cooling Tower Piping Layout Includes :

Cooling Tower Water Distribution System : Designing of Cooling Tower Piping Layout for Cooling Tower Water Distribution Systems for Whole Plant to Various Locations of Plant with Even flow of Cooling Water and Its Proper Distribution, Fabrication of Piping for Cooling Tower Water Distribution Systems.

Closed Loop Cooling Tower Piping : Designing and Fabrication of Closed Loop Cooling Tower Piping System with Installation of a Throttle Valve at the End of Piping for Throttling of Cooling water for Proper Flow of Cooling water in Piping System.

Cooling Tower Circulation Pump Piping : Fabrication of Frame for Circulation Pump, Designing of Cooling water Circulation Pump Piping Layout while Considering Important Aspects for Pump Piping to Avoid Pump Cavitation and Better Fluid Flow, Designing and Fabrication of Circulation Pump Suction Piping, Designing and Fabrication of Circulation Pump Discharge Pipeline, Designing of Piping Layout for Multiple Circulation Pump Connections, Installation of Strainers, Throttle Valves, Non Return Valves (NRV) with Proper Selection of their Materials and Grade.

Cooling Tower Manifold Piping Systems / Cooling Tower Distribution Header : Designing and Fabrication of Cooling Tower Manifold Piping Systems / Cooling Tower Distribution Header for Multiple Connections of Cooling Tower, Distribution of Cooling

water to Various Locations of Plant for Proper Flow and Even Distribution of Cooling water with Cost Saving for Clients.

Cooling Tower Piping Connections : Designing and Fabrication of Inlet and Outlet Cooling Tower Connections Piping Layout for Process Equipment's with Installations of Throttling Valves.

Cooling Tower Water Fill up : Fabrication of Fill up Pipeline for Cooling Tower for Fill up of water with Installation of Automatic Valve for Automatic Filling of Water in Cooling Towers during Low level of Water in Cooling Tower.

- Calculation of Pipe Sizing Based on Velocity and Pressure Drop and Proper Flow.
- Calculation of Pipe Wall Thickness as per ASME Standards.
- Selection of Manifold Pipe Size for Cooling Towers / Cooling Tower Header Pipe Size.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per ASME/ Standards.
- Piping Material such as Pipe, Fittings, Valves used for Fabrication of Cooling Tower Piping are of Standard Companies.
- Design and Fabrication of Supports for Cooling Tower Piping Systems to Support Dead Weight of Pipe, Fittings, Valves, Water to avoid Sagging of Pipe During Sustain and Operating Conditions and Distance Between the Supports Are Selected as per Piping Engineering Standards.
- Piping Material Take off (MTO)/Bill of Material (BOM).
- Fabrication of Cooling Tower Piping is Carried out as per General Engineering Standards and Practices.
- Pipeline Erection for Cooling Tower.
- Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.
- Commissioning of Cooling Tower Piping

c) Chilled Water Piping

Chilled Water Piping Layout Includes :

Chilled Water Distribution System : Designing of Piping Layout for Chilled Water distribution system for Whole Plant with Proper Distribution and Flow of Chilled Water to Various Locations of Plant, Fabrication of Chilled Water Distribution System.

Chilled Water Closed Loop Piping : Designing and Fabrication of Chilled Water Closed Loop Piping System with Installation of a Throttle Valve at the End of Piping for Throttling of Chilled Water for Proper Flow of Chilled Water in Piping System.

Chilled Water Circulation Pump Piping : Fabrication of Frame for Circulation Pump, Designing of Chilled Water Circulation Pump Piping Layout while Considering Important Aspects for Pump Piping to Avoid Pump Cavitation and Better Fluid Flow, Designing and Fabrication of Circulation Pump Suction Piping, Designing and Fabrication of Circulation Pump Discharge Pipeline, Designing of Piping Layout for Multiple Circulation Pump Connections, Installation of Strainers, Throttle Valves, Non Return Valves (NRV) with Proper Selection of their Materials and Grade.

Chilled Water Manifold Piping Systems / Chilled Water Header : Designing and Fabrication of Chilled Water Manifold Piping Systems / Chilled Water Header for Multiple Connections of Chilling Plant, Distribution of Chilled Water to Various Locations of Plant for Proper Flow and Even Distribution of Chilled Water with Cost Saving for Clients.

Chilled Water Piping Connections : Designing and Fabrication of Inlet and Outlet Chilled Water Piping Connections Piping Layout for Process Equipment's with Installations of Throttling Valves.

Chilling Plant Water Fill up : Fabrication of Fill up Pipeline for Chilling Plant for Fill up of water with Installation of Automatic Valve for Automatic Filling of Water in Chilling Plants during Low level of Water in Chilling Plant.

- Calculation of Pipe Sizing Based on Velocity and Pressure Drop and Proper Flow.
- Calculation of Pipe Wall Thickness as per ASME Standards.
- Selection of Chilled Water Manifold Pipe Size for Chilling Plants / Chilled Water Header Pipe Size for Chilling Plant.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per ASME/ Standards.
- Piping Material such as Pipe, Fittings, Valves used for Fabrication of Chilling Plant Piping are of Standard Companies.
- Design and Fabrication of Supports for Chilled Water Piping Systems to Support Dead Weight of Pipe, Fittings, Valves, Water Weight to avoid Sagging of Pipe During Sustain and Contracting Conditions, the Distance Between the Supports Are Selected as per Piping Engineering Standards.
- Piping Material Take off (MTO)/Bill of Material (BOM).
- Fabrication of Chilling Plant Piping is Carried out as per General Engineering Standards and Practices.

- Pipeline Erection for Chilling Plant.
- Hydraulic and Pneumatic Testing of Chilling Plant Piping for Leak Test Chilling Plant Pipeline, Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.
- Commissioning of Chilling Plant Piping.
- Cold Insulations for Chilling Plant Piping with Proper Thickness of Insulation.

D) Boiler Steam Piping

Steam Boiler Piping Layout includes :

Steam Piping Layout / Steam Distribution System : Designing, Fabrication and Erection of Steam Boiler Piping Layout / Steam Distribution System for Proper Distribution of Steam to Complete Plant with Efficient Use of Steam Energy where ever Required in Plant according to General Steam Engineering Standards and Practices.

Steam Manifold Piping System / Steam Distribution Header : Designing and Fabrication of Steam Manifold Piping Systems / Steam Distribution Header for Multiple Connections of Steam Boilers, Distribution of Steam to Various Locations of Plant for Proper Flow of Steam and Evenly Distribution of Steam to Various Locations of Plants with Efficient use of Steam and Cost Saving for Clients.

Steam Pressure Reducing Stations (PRS Station): Fabrication and Installation of Steam Pressure Reducing Station (Steam PRS Station) with Complete Installation of all Accessories Required for Steam Pressure Reducing Station. We Can Also Fabricate the Steam PRS System at Site to Avoid Transportation Cost.

Steam Piping Connections : Design and Fabrication of Steam Piping Connections to Various Process Equipment's with Selection and Installation of Steam Valves,

Control Station Piping for Steam Boiler : Many Application Requires Automatic Control of Flow of Steam and Temperature Control for Processes. As per Applications and Customer Requirements We Design and Fabricate Control Station Piping for Steam Boiler with Bypass Piping System, Selection and Installation of Control Valve I.e. Solenoid Valve Pneumatically Operated, Digital Temperature Controller and Industrial Sensors.
When Controlling of Steam is Critical and Fine Tuning is Required for Flow and Temperature Control, We Design Control Station Piping System by use of Proportionate Switch for operating of Valve in percentage wise for Opening and Closing of Valves for Fine Control of Flow and Temperature for Processes.

Steam Trap Systems : Selection of Steam Traps as per its applications and Air Lock Removing Arrangement. Design and Fabrication of Steam Trap Piping with Steam Trap Bypass Piping for Proper Collection of Condensate and Efficient use of Steam Trap.

Condensate Return Piping : Designing and Fabrication of Condensate Return Piping for Efficient use of Condensate, As Utilization of Condensate as Boiler Feed Water Lowers the Use of Fuel Which Ultimately Increases the Efficiency of Boiler and Lowering the Fuel Cost.

Boiler Feed Water Piping : Fabrication of Frames for Boiler Feed Water Pump, Designing of Boiler Feed Water Pump Piping Layout with Considering Important Points while Designing Pump Piping Layout to avoid Cavitation and to Have Proper Flow, Designing and Fabrication of Pump Suction Piping, Designing and Fabrication of Pump Discharge Pipeline, Designing of Piping Layout for Multiple Pump Connections, Installation of Strainers, Throttle Valves with Proper Selection of their Materials and Grade.

Steam Tracing Systems : Designing and Fabrication of Steam Jacketed Piping / Steam Tracing Piping with Steam Tracing Manifold as Many Processes in Industries Required Steam Tracing in Process piping to Maintain Fluid in Liquid Form.

- Boiler House Piping.
- Non IBR Steam Boiler Piping Systems doesn't come under Purview of IBR Piping (Indian Boiler Act).
- Calculation of Steam Pipe Sizing Based on Velocity and Pressure Drop.
- Calculation of Pipe Wall Thickness as per ASME/IBR Standards.
- Selection of Manifold Pipe Size for Steam Boilers / Steam Distribution Header Pipe Size for Steam Boilers.
- Selection of Piping Materials and its Grades for Pipe, Fittings, Valves, Traps as per ASME/IBR Standards.
- Pipe, Fittings and Valve Material used for Fabrication of Steam Boiler Piping are of Standard Companies.
- Design and Fabrication of Rest Supports for Pressurized Hot Water Piping Systems to Sustain Dead Loads of Pipe, Fittings, Valves, Steam Weight While Distance Between the Two Supports Are Selected based on Piping Engineering Standards.
- Design and Fabrication of Shoe Supports for Free Movement of Pipe during Its Operating Conditions at High Temperature to provide Flexibility to Pipe, Avoid Stresses in Piping Systems.
- Wherever Applicable Expansion Loops Are Designed and Fabricated for High Temperature of Steam Piping to Provide Flexibility of Piping and to Sustain the Thermal Loads developed due to Stresses developed in Piping.
- Piping Material Take off (MTO)/Bill of Material (BOM).

- Fabrication of Steam Boiler Piping as per General Steam Engineering Standards and Practices.
- Erection of Steam Boiler Piping.
- Hydraulic and Pneumatic Testing of Steam Boiler Piping for Leak Test in Steam Pipeline, Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.
- Commissioning of Steam Piping.
- Hot Insulations for Steam Piping with Proper Thickness of Insulation for avoiding Heat Loss.

E) Thermic Fluid Heater Piping

- Thermic Fluid Heater Piping Systems doesn't come under Purview of IBR Piping (Indian Boiler Act).
- It's a Low Pressure Piping with High Output Temperatures with High Energy Output.

Thermic Fluid Heater Piping Layout for Plant Includes :

Thermic Fluid Heater Closed Loop Piping : Designing and Fabrication of Thermic Fluid Heater Closed Loop Piping System with Installation of a Throttle Valve at the End of Piping for Throttling of Thermic Fluid for Proper Flow of Thermic Fluid in Piping System.

Thermic Fluid Heater Balance Piping : Designing and Fabrication of Thermic Fluid Heater Balance Pipeline for Proper Flow of Thermic Fluid, Proper Heat Transfer to Process Equipment's and to obtain Proper Required Temperature for Process.

Thermic Fluid Heater Circulation Pump Piping : Fabrication of Frame for Circulation Pump, Designing of Thermic Fluid Circulation Pump Piping Layout while Considering Important Aspects for Pump Piping to Avoid Pump Cavitation and Better Fluid Flow, Designing and Fabrication of Circulation Pump Suction Piping, Designing and Fabrication of Circulation Pump Discharge Pipeline, Designing of Piping Layout for Multiple Circulation Pump Connections, Installation of Strainers, Throttle Valves, Non Return Valves (NRV) with Proper Selection of their Materials and Grade.

Thermic Fluid Heater Manifold Piping Systems/ Thermic Fluid Heater Distribution Header : Designing and Fabrication of Thermic Fluid Heater Manifold Piping Systems /

Thermic Fluid Heater Distribution Header for Multiple Connections of Thermic Fluid Heater, Distribution of Thermic Fluid to Various Locations of Plant for Proper Flow and Even Distribution of Thermic Fluid with Providing Cost Efficient and Cost Saving for Clients.

Thermic Fluid Heater Piping Connections : Designing and Fabrication of Inlet and Outlet Thermic Fluid Heater Connections Piping Layout for Process Equipment's with Installations of Throttling Valves.

Control Station Piping for Thermic Fluid Heater : Many Application Requires Automatic Control of Flow of Thermic Fluid and Temperature Control for Processes. As per Applications and Customer Requirements We Design and Fabricate Control Station Piping for Thermic Fluid Heater with Bypass Piping System, Selection and Installation of Control Valves Electrically, Pneumatically Operated, Digital Temperature Controller and Industrial Sensors.
When Controlling of Thermic Fluid is Critical and Fine Tuning is Required for Control of Flow and Temperature, We Design the Control Station Piping System by use of Proportionate Switch for operating of Valve in Percentage Wise for Opening and Closing of Valves for Fine Control of Flow and Temperature for Processes I.e. Less Variation in Temperature.

Thermic Fluid Heater Charging Piping : Designing and Fabrication of Thermic Fluid Heater Charging Piping for Thermic Fluid Heater During Initial Stage for Filling of Top of Thermic Fluid in Piping Systems and During Operations of Piping Systems for Low Flow and Low Level with Installation of Strainers and Throttling Valve.

Thermic Fluid Expansion Tank Piping : Designing and Fabrication of Expansion Tank Piping for Thermic Fluid Heater with Designing of Expansion Tank Piping Layout with Considering Important aspects and Fundamentals for Proper Working of thermic Fluid Heater Expansion Tank.

Thermic Fluid Heater Nitrogen Blanking : To operate Thermic Fluid over 300oC, thermic Fluid System is Provided with a Nitrogen Blanking to Remove Oxidation and avoid Oxygen Contact with Thermic Fluid Oil, to avoid Formation of Carbon in Internal Thermic Fluid Heater Piping for Proper Heat Transfer, Installation of Necessary Accessories Required for Thermic Fluid Heater Nitrogen Blanking.

- Calculation of Pipe Sizing Based on Velocity and Pressure Drop and Proper Flow.
- Calculation of Pipe Wall Thickness as per ASME Standards.

- Selection of Manifold Pipe Size for Thermic Fluid Heaters / Thermic Fluid Heater Distribution Header Pipe Size.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per ASME/ Standards.
- Material used for Fabrication of Thermic Fluid Heater Piping I.e. Pipe, Fittings, valves are of Standard Companies.
- Design and Fabrication of Rest Supports for Thermic Fluid Piping Systems for Sustaining of Dead Weights of Pipe, Fittings, Valves, Thermic Fluid Oil Weight while Distance Between the Two Supports Are Selected based on Piping Engineering Standards.
- Design and Fabrication of Shoe Supports for Free Movement of Pipe during Its Operating Conditions at High Temperature to provide Flexibility to Pipe, Avoid Stresses in Piping Systems.
- Wherever Required Expansion Loops Are Designed and Fabricated for High Temperature Thermic Fluid to Provide Flexibility to Piping and Sustain the Thermal Loads due to Stresses developed in Piping.
- Piping Material Take off (MTO) / Bill of Material (BOM).
- Fabrication of Thermic Fluid Heater Piping as per General Engineering Standards and Practices.
- Erection of Thermic Fluid Heater Piping.
- Pneumatic Testing of Thermic Fluid Heater Piping for Leak Test in Thermic Fluid Pipeline, Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.
- Commissioning of Thermic Fluid Heater Piping.
- Hot Insulations for Thermic Fluid Heater Piping with Proper Thickness of Insulation for avoiding Heat Loss.

F) Hot Water Generator Piping

- Hot Water Generator Piping Systems doesn't come under Purview of IBR (Indian Boiler Act).

Hot Water Generator Piping Layout Includes :

Hot Water Generator Distribution System : Designing of Piping Layout for Hot Water Generator Distribution System for Various Locations of Plant with Proper Flow and Maintaining Proper Pressure of Water, Fabrication of Piping for Hot Water Generator Distribution System.

Hot Water Generator Closed Loop Piping : Designing and Fabrication of Hot Water Generator Closed Loop Piping System with Installation of a Throttle Valve at the End of Piping for Throttling of Hot Water Generator for Proper Flow of Hot Water Generator in Piping System.

Hot Water Generator Balance Piping : Designing and Fabrication of Hot Water Generator Balance Pipeline for Proper Flow of Pressurized Hot Water, Proper Heat Transfer to Process Equipment's and to obtain Proper Required Temperature for Process.

Hot Water Generator Circulation Pump Piping : Fabrication of Frame for Circulation Pump, Designing of Hot Water Generator Circulation Pump Piping Layout while Considering Important Aspects for Pump Piping to Avoid Pump Cavitation and Better Fluid Flow, Designing and Fabrication of Circulation Pump Suction Piping, Designing and Fabrication of Circulation Pump Discharge Pipeline, Designing of Piping Layout for Multiple Circulation Pump Connections, Installation of Strainers, Throttle Valves, Non Return Valves (NRV) with Proper Selection of their Materials and Grade.

Hot Water Generator Manifold Piping Systems / Hot Water Generator Distribution Header : Designing and Fabrication of Hot Water Generator Manifold Piping Systems for Multiple Hot Water Generator Connections, Distribution of Hot Water Generator to Various Locations of Plant for Proper Flow and Even Distribution of Hot Water Generator with Cost Saving for Clients.

Hot Water Generator Piping Connections : Designing and Fabrication of Inlet and Outlet Hot Water Generator Connections Piping Layout for Process Equipment's with Installations of Throttling Valves.

Control Station Piping for Hot Water Generator : Many Application Requires Automatic Control of Flow of Hot Water Generator and Temperature Control for Processes. As per Applications and Customer Requirements We Design and Fabricate Control Station Piping for Hot Water Generator with Bypass Piping System, Selection and Installation of Control Valves Electrically, Pneumatically Operated, Digital Temperature Controller and Industrial Sensors.
When Controlling Fine Tuning is Required for Control of Flow and Temperature, We Design the Control Station Piping System by use of Proportionate Switch for operating of Valve in Percentage Wise for Opening and Closing of Valves for Fine Control of Flow and Temperature for Processes I.e. Less Variation in Temperature.

Water Generator Charging Piping : Designing and Fabrication of Water Charging Piping for Top of Water in Piping Systems of Hot Water Generator and During Operating

Conditions of Piping Systems for Low Flow, Low Pressure, Low Level of Hot Water Generator to avoid Damage to Pressurized Hot Generator and Piping Systems of Whole plant, Installation of Strainers and Throttling Valve.

Air Lock Removing System : Designing of a System for Removing Air Lock in Piping Systems with Design and Fabrication of a Cylinder of Calculated Diameter and Length with Installation of Solenoid Valve, Low Level Switch for Air Lock Release in Piping Systems for Safety of Piping Systems and Hot Water Generator.

- Calculation of Pipe Sizing Based on Velocity and Pressure Drop and Proper Flow.
- Calculation of Pipe Wall Thickness as per ASME Standards.
- Selection of Manifold Pipe Size for Hot Water Generator.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per ASME/ Standards.
- Material used for Pipe, Fittings, Valves for Fabrication of Hot Water Generator Piping are of Standard Companies.
- Design and Fabrication of Rest Supports for Hot Water Generator Piping Systems to Sustain Dead Loads of Pipe, Fittings, Valves, Weight of Water with Distance Between the Two Supports Are Selected based on Piping Engineering Standards.
- Design and Fabrication of Shoe Supports for Free Movement of Pipe during Its Operating Conditions at High Temperature to provide Flexibility to Pipe, Avoid Stresses in Piping Systems.
- Wherever Required Expansion Loops Are Designed and Fabricated for High Temperature of Pressurized Hot Water for Providing Flexibility in Piping and to Sustain the Thermal Loads developed due to Stresses developed in Piping.
- Piping Material Take off (MTO)/Bill of Material (BOM).
- Fabrication of Hot Water Generator Piping is Carried out as per General Engineering Standards and Practices.
- Erection of Hot Water Generator Pipelines.
- Hydraulic and Pneumatic Testing of Hot Water Generator Piping for Leak Test in Hot Water Generator Pipeline, Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.
- Commissioning of Hot Water Generator Piping.
- Hot Insulations for Hot Water Generator Piping with Proper Thickness of Insulation for avoiding Heat Loss.

G) Fuel Oil Piping

- Fuel Oil Piping Are Designed to provide Reliable Fuels to Boilers, Generators, Furnaces, Ovens, Yarn Dyeing Machines and Other Firing Units to Develop Firing in Combustion Chambers.

- Fuel Oil Piping Layout includes Piping systems for Supply for Fuels such as Diesel Piping, LDO Piping, Furnace Oil Piping (F.O. Piping), Gas Piping.
- For Furnace Oil Piping Heat Tracing Systems is provided in Pipeline so as to Maintain the Viscosity of it otherwise it will Tends to get solidify at normal Temperature and Conditions Disturbing the Firing of Boilers, Generators, Furnaces, Ovens, Yarn Dyeing Machines and Other Firing Units.
- Heat Tracing Systems Are Provided by jacketed Piping with the use of Heating Fluid Flowing in Jacket of Furnace Oil Piping and Electrical Heaters (Tracer Heaters) wound around the Pipelines, Selection of this Heat Tracing Systems is done based on Economy Factor for Client whichever is Cost Saving.
- Fuel Oil Piping Systems Layout Are Designed in such way that Proper Flow is Maintained for Boilers, Generators, Furnaces, Ovens Yarn Dyeing Machines and Other Firing Units.
- Design of Ring Man Piping Systems for Fuel Oil for Ovens, Furnaces.
- Fabrication of Frames for Fuel Pumps.
- Calculations of Pipe Sizing for Fuel Oils Are Done with Providing Proper Flow Rate.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per ASME/ Standards.
- Piping Material such as Pipe, Fittings, Valves used for Fabrication of Compressed air Piping are of Standard Companies.
- Design and Fabrication of Supports for Fuel Oil Piping Systems to Support Dead Weight of Pipe, Fittings, Valves, Fuels to avoid Sagging of Pipe During Sustain and Operating Conditions with Distance Between the Supports Are Selected as per Piping Engineering Standards.
- Piping Material Take off (MTO)/Bill of Material (BOM).
- Fabrication of Fuel Oil Piping is Carried out as per General Engineering Standards and Practices.
- Pipeline Erection for Compressed Air.

- Pneumatic Testing of Fuel Air Piping for Leak Test Compressed Air Pipeline, Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.

- Commissioning of Fuel Oil Piping.

H) Heat Recovery / Heat Exchanger Piping

- Waste Heat Recovery / Waste Heat Recovery Boiler and Air Preheater Piping Systems doesn't come under Purview of IBR (Indian Boiler Act).

Waste Heat Recovery Unit / Waste Heat Recovery Boiler Closed Loop Piping : Designing and Fabrication of Waste Heat Recovery Unit / Waste Heat Recovery Boiler Closed Loop Piping System with Installation of a Throttle Valve at the End of Piping for Throttling of Hot Water for Proper Flow of Hot Water in Piping System.

Waste Heat Recovery Unit / Waste Heat Recovery Boiler Balance Piping : Designing and Fabrication of Waste Heat Recovery Unit Balance Pipeline / Waste Heat Recovery Boiler Piping for Proper Flow of Hot Water, Proper Heat Transfer to Process Equipment's and to obtain Proper Required Temperature for Process.

Waste Heat Recovery Unit Circulation Pump Piping : Fabrication of Frame for Circulation Pump, Designing of Hot Water Circulation Pump Piping Layout while Considering Important Aspects for Pump Piping to Avoid Pump Cavitation and Better Fluid Flow, Designing and Fabrication of Circulation Pump Suction Piping, Designing and Fabrication of Circulation Pump Discharge Pipeline, Designing of Piping Layout for Multiple Circulation Pump Connections, Installation of Strainers, Throttle Valves, Non Return Valves (NRV) with Proper Selection of their Materials and Grade.

Waste Heat Recovery Unit Manifold Piping Systems / Waste Heat Recovery Boiler Manifold Piping Systems / Waste Heat Recovery Unit Distribution Header / Waste Heat Recovery Boiler Distribution Header : Designing and Fabrication of Waste Heat Recovery Unit Manifold Piping Systems / Waste Heat Recovery Boiler Manifold Piping Systems / Waste Heat Recovery Unit Distribution Header / Waste Heat Recovery Boiler Distribution Header for Multiple Connections of Waste Heat Recovery Units, Distribution of Hot Water to Various Locations of Plant for Proper Flow and Even Distribution of Hot Water with Providing Cost Saving for Clients.

Waste Heat Recovery Unit Piping Connections / Waste Heat Recovery Boiler Piping Connections : Designing and Fabrication of Inlet and Outlet Waste Heat Recovery Unit / Waste Heat Recovery Boiler Piping Connections Layout for Process Equipment's with Installations of Throttling Valves.

Control Station Piping for Waste Heat Recovery Unit / Waste Heat Recovery Boiler : Many Application Requires Automatic Control of Flow of Hot Water and Temperature Control for Processes. As per Applications and Customer Requirements We Design and Fabricate Control Station Piping for Waste Heat Recovery Unit with Bypass Piping System, Selection and Installation of Control Valves Electrically, Pneumatically Operated, Digital Temperature Controller and Industrial Sensors.
When Controlling Fine Tuning is Required for Control of Flow and Temperature, We Design the Control Station Piping System by use of Proportionate Switch for operating of Valve in

Percentage Wise for Opening and Closing of Valves for Fine Control of Flow and Temperature for Processes I.e. Less Variation in Temperature.

Induced Draft Ducting : Designing and Fabrication of Ducting for Induced Draft from Furnace Chimney to Waste Heat Recovery Unit for Creating a Draft in Waster Heat Recovery Unit to Increase the Heat Transfer Efficiency in Waste Recovery Unit.

Water Generator Charging Piping : Designing and Fabrication of Water Charging Piping for Waste Heat Recovery Unit / Waste Heat Recovery Boiler and Charging of Water During Initial Stage for Filling of Water in Piping Systems and During Running Systems for Low Flow, Low Pressure, low Level of Hot Water to avoid Damage to Water Charging Piping for Waste Heat Recovery Unit / Waste Heat Recovery Boiler and Piping Systems of Whole plant, Installation of Strainers and Throttling Valve.

Air Lock Removing System : Designing of a System for Removing Air Lock in Piping Systems with Design and Fabrication of a Cylinder of Calculated Diameter and Length with Installation of Solenoid Valve, Low Level Switch for Air Lock Release in Piping Systems for Safety of Piping Systems and Waste Heat Recovery Unit.

Air Preheater : Design and Fabrication of Ducting for Air Preheaters to Various Locations of Plants.

- Calculation of Pipe Sizing Based on Velocity and Pressure Drop and Proper Flow.
- Calculation of Pipe Wall Thickness as per ASME Standards.
- Selection of Manifold Pipe Size for Waste Heat Recovery Unit / Waste Heat Recovery Boiler.
- Selection of Distribution Header for Waste Heat Recovery Unit / Waste Heat Recovery Boiler.
- Selection of Piping Material and its Grades for Pipe, Fittings, Valves as per ASME/ Standards.
- Material used for Pipe, Fitting, valves for Fabrication of Waste Heat Recovery Unit Piping / Waste Heat Recovery Boiler Piping are of Standard Companies.
- Design and Fabrication of Rest Supports for Waste Heat Recovery Piping Systems / Waste Heat Recovery Boiler Piping Systems for Sustaining of Dead Weights of Pipe, Fittings, Valves, Weight of Water. Distance Between the Two Supports Are Selected based on Piping Engineering Standards.
- Design and Fabrication of Shoe Supports for Free Movement of Pipe during Its Operating Conditions to provide Flexibility to Pipe and Avoid Stresses to be Developed in Piping Systems due to Temperature of Hot Water.

- Expansion Loops Are Designed and Fabricated Wherever Required to provide Flexibility in Piping Avoiding Stresses in Piping.
- Piping Material Take off (MTO) / Bill of Material (BOM).
- Fabrication of Waste Heat Recovery Unit Piping / Waste Heat Recovery Boiler Piping as per General Engineering Standards and Practices.
- Erection of Pipelines for Waste Heat Recovery Unit / Waste Heat Recovery Boiler.
- Hydraulic and Pneumatic Testing of Waste Heat Recovery Unit Piping / Waste Heat Recovery Boiler Piping for Leak Test in Hot Water Pipeline, Checking of Welding Leakages in Piping Weld Joints, Checking of Leakages in Flange Joints and Checking of Leakages in Threaded Connection.
- Commissioning of Waste Heat Recovery Unit Piping / Waste Heat Recovery Boiler.
- Hot Insulations for Waste Heat Recovery Unit Piping / Waste Heat Recovery Boiler Piping with Proper Thickness of Insulation for avoiding Heat Loss.

I) Gas Piping

* Oxygen, Nitrogen, LPG, Methane Gas piping with SS316 Tube with Fittings & Cylinder Rack

* Gas Detection System, Gas Monitoring System including Panels & Purification Hub

J) uPVC/HDPE/PP Piping for Drainage

***** Raw Water Piping – uPVC or PP Pipelines with accessories .

* Level Control System with Pumps & Over head Tank

* HDPE Drain Piping with Clean Room Trap Fixing & Pipe Supports

Pharma Equipments Installation & Commissioning

- Erection of Process Machinery Equipment's for Pharma Plants – Manufacturing Equipments, Fillings Machines, Packing Machines, QC Lab Equipments, R&D Installations
- Erection of Utilities Equipments – Cooling Towers, Boilers, Compressors, Chilling Plants, Process Coolers, Chimney, Generators, Transformers etc
- Erection of Static Equipment's and Rotating Equipment's as per Equipment Layout.
- Erection of Process Equipment's as per Process Equipment Layouts.
- Erection of Equipment's such as Reactors, Kettles, Pressure Vessels, Holding Tank, Storage Tanks, Fuel Storage Tanks, Heat Exchangers, Condenser's, Re-boilers, Vessels, and Many Other Chemical equipment's for Chemical Plants, Pharmaceuticals Plants, Oil Distillation Plants and Engineering Industries.
- Erections of Reactors, Cookers, Holding Tanks, Syrup Reactors, Syrup Holding Tanks, Votator, Storage Tanks for Food and Liquid Storages, Vessels and Many Other Food equipment's for Food Industries such as Confectionary Plants, Biscuit Manufacturing Plant, Dairy Industries, Bakery Industries and Many Other Food Industries.
- Erection of Chemical Process Pumps such as Centrifugal Pumps, Lobe Pumps, Positive Displacement Pumps, Gear Pumps along with Design and Fabrication of Frames for Pumps,
- The Erection of Following equipment's is done with all Technical aspects for Erection of equipment's
  - Proper Nozzle Orientation for Proper Operations and Stress Free Piping.
  - Proper Spacing for Operations and Maintenance of Process Pumps.
  - Proper Spacing for Operations and Maintenance of Process Equipment's.
  - Proper Supporting of Saddles of equipment's for Stress Relief in equipment's During its Operating Conditions.
  - Proper Spacing for Removal of Coil Bundles for Heat Exchangers, Condensers and other Heat Exchanger equipment's.
- - Installation of Utility Equipments, Process Equipments, Plant Furniture, Electrical Panels, DG Set, Transformers as Per Equipment Layouts.
- Erection of House Centrifugal Air Compressors, Rotary Screw Compressors, Positive Displacement Compressors, Blowers, Air Compressors, Blowers, Compressed Air Dryer, Compressed Air Receiving Tank, Compressed Air Storage Tank in Compressor House as per Compressor Equipment Layout with Fabrication of Frames for Compressors.
- Erection of Utility Pumps such as Centrifugal Pumps, Lobe Pumps, Positive Displacement Pumps, Gear Pumps along with Design and Fabrication of Frames for Pumps,
- Erection of Cooling Towers and Erection of Chilled Water Equipment with Fabrication of Frames for Cooling Towers and Chilled Water Equipment.
- Erection of Fuel Storage Tanks, Hot Water Storage Tanks.

Validation & Documentation

We do not limit themselves to controlling final project quality, but also works to guarantee it from the previous phases until the final handover to the user. As an integral part of project development, we execute a complete commissioning and qualification plan, with full documentation that ensures final product quality.

Maintenance & Training

We provide maintenance and training along with trained manpower for factory-oriented equipment, machinery, and process.
Training of the people on-site, for which we provide the personnel.