




Dehu Engineering & Services

Customised Engineering Solutions

One Step Ahead towards Consistency

- 
- A large industrial facility, possibly a refinery or chemical plant, is shown at night. The scene is illuminated by various lights, including bright yellow and orange flames or heat sources. Several tall, cylindrical smokestacks or distillation columns are visible, with some emitting white steam or smoke. The complex network of pipes, valves, and structural steel is highlighted by the artificial lighting. The overall atmosphere is one of intense industrial activity.
- Multifaceted Engineering Solutions.
 - Economic Solutions for your Business.
 - Integrated Engineering Solutions.

ABOUT US

Dehu Engineering & Services is a starter concern of Dehu Engineering Pune, multifaceted manufacturing unit with global presence located in the city of Pune, India.

Our expertise is certified for manufacturing of Boilers and its various pressure components approved by Indian Boiler Regulations and other International Benchmarks.

We have a multimodal facility of engineering fabrication, manufacturing of quality equipments and components, pressure parts oriented units in domestic and international markets.

We cater to multitude of various industries like Energy Oil, Gas and Process industries.

Dehu provides a service friendly reliable, unmatched economic solutions as per your requirement, while lowering your consumption of energy and sustainability.

FOREWORD OUR COMMITMENT

Dehu is committed to Engineering manufacture and supply equipments & components of consistent quality customised to the specifications of the customers.

We strive to create and maintain stringent quality norms to create solutions that cater to our customers requirements and satisfy their needs to optimize their production and industry.

With more than 500++ satisfied National and International customers, Dehu caters to all their requirements. Our expertise, skills and commitment have been approved by various certifications and awards.

We also confer to the new production norms and maintaining high ethical standards within our

company and in our relations with customers, suppliers, authorities and the public forum.

Our engineering wings located in Chennai & Tiruchirappalli - Tamilnadu

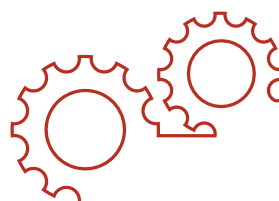


A decorative graphic of three interlocking gears in the top left corner, rendered in a red outline style.

Dehu Engineering & Services

OFFERS THE FOLLOWING COMPREHENSIVE AND COMPETITIVE ENGINEERING SERVICES

▪ Design & Detail Engineering	04
▪ Civil & Structural analysis, Steel structure & Pipe rack Design	04
▪ Design and manufacturing of Modular Skids, Skid package lifting analysis, sling / shackle selections	04
▪ 3D modelling services	05
▪ Piping stress analysis, detailing and pipe supports	05
▪ Storage tank design and detailing as per API 650 / API 620	05
▪ Pressure vessel Mechanical design and detailing as per ASME Div.1 and Div.2	06
▪ Heat exchanger Mechanical design and detailing as per TEMA, ASME & API 660	06
▪ Finite element analysis	07
▪ Computational Fluid Dynamics (CFD) solutions	07
▪ Boiler Fuel feeding system	07
▪ Travelling Grate, dumping grate and pulsating grate stoker Design and Detail Engineering	08
▪ Value Engineering, Reverse Engineering & Other services	08
▪ Engineering consultancy for Boiler and power plants	08
▪ Services for Quality Inspection & Expediting	09
▪ Services for Project Management	09
▪ Services for Erection, Commissioning and Supervision	09
▪ Training	10
▪ Recruitment / Placement support	10
▪ Computer programming and customization	10
▪ Tekla Modeling & Detailing Services	11



DESIGN & DETAIL ENGINEERING

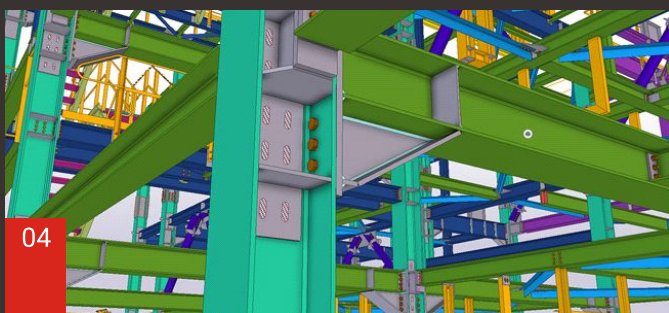
Dehu Engineering & Services provides Design and Detail Engineering services to all power plants, process industries and oil & gas industries.

We have well experienced Design Engineers and Detailers who can perform design, strength calculations and detail engineering.



CIVIL & STRUCTURAL ENGINEERING

- ❖ Civil & Structural analysis, Steel structure & Pipe rack Design as per international codes and standards
- ❖ Civil & Structural Design, Pipe rack design and analysis by using Stadd Pro software *
- ❖ Structural connection design
- ❖ Tekla 3D modelling and detailing for all kind of steel structure *
- ❖ Bill Of Quantities, Weight Control Report.
- ❖ Steel Structures Erection, Fabrication drawings
- ❖ Civil Construction, Layout, Architectural drawings and BOQ
- ❖ Bar Bending schedule for all type of civil works
- ❖ Industrial structures with mezzanine Floors and EOT Cranes
- ❖ All Plant and Non-Plant Buildings
- ❖ Roads & Storm water drainage system



DESIGN & MANUFACTURING OF MODULAR SKIDS

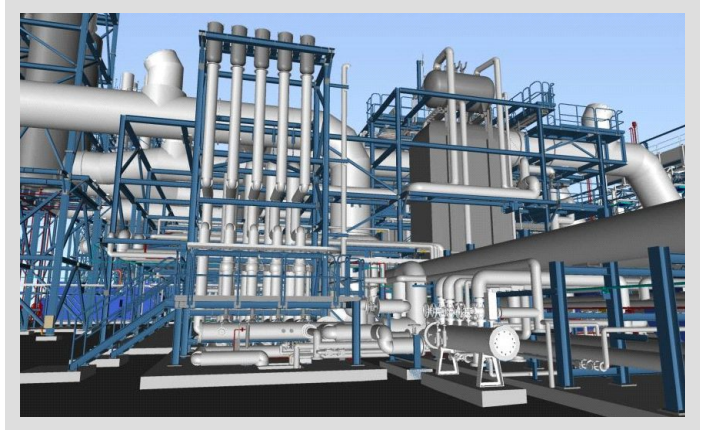
- ❖ Design of various modular skids, metering stations and Pressure reduction stations, Fuel oil/gas skids etc.
- ❖ 3D Modelling of skids*– Structural, Mechanical, Piping and E&I
- ❖ Skid frame structural design by using Stadd Pro structural analysis software
- ❖ E&I Engineering including cable and cable trays, junction box etc.
- ❖ Extraction of fabrication drawing for Structure, piping and electrical
- ❖ Piping Isometric drawings detailing
- ❖ Skid lifting analysis to optimize supporting arrangement & sling / shackle selections
- ❖ MTO for Piping, Structure and E&I



* Software related works are outsourced.

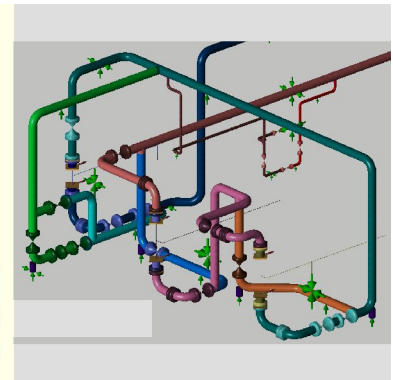
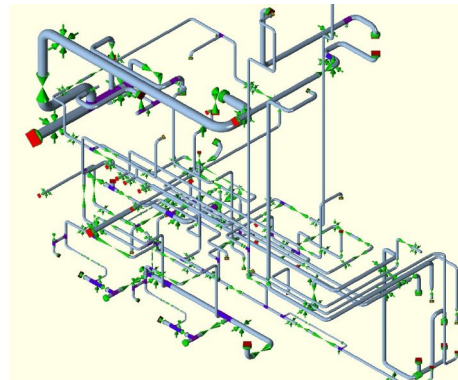
3D MODELING SERVICES

- ❖ 3D modeling of piping and plant layout in PDMS / CADWorx*
- ❖ Model review walk through along with client
- ❖ Extraction of piping layout
- ❖ Extraction of piping Isometric drawings with MTO
- ❖ 3D modeling for process equipment's
- ❖ Conceptual drawings / models



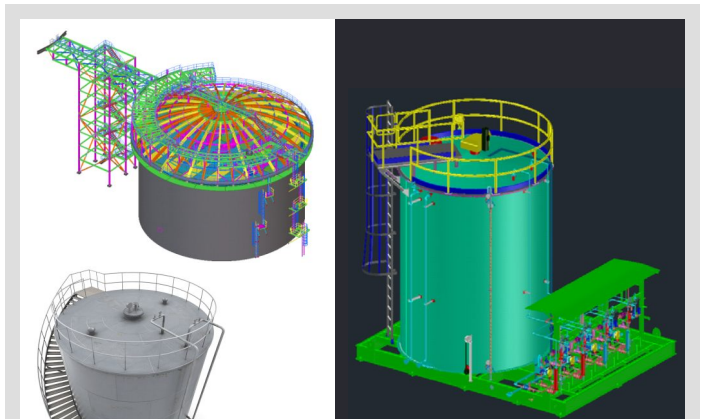
PIPING STRESS ANALYSIS, DETAILING AND PIPE SUPPORTS

- ❖ Piping Stress Analysis and piping flexibility calculations for existing & new piping systems as per ASME code*
- ❖ Compliance issues, flexibility of pipe stress analysis for codes B31.3, B31.1, B31.5 and others
- ❖ Design, analysis and re-rating of piping systems based on ASME/ANSI 31.1 & B31.3.
- ❖ Fatigue Analysis to calculate the fatigue life of Piping Systems with pressure cycles, temperature cycles and start-up shut-down cycles.
- ❖ Wind & Seismic analysis
- ❖ API 579 Fitness for Service
- ❖ Finite Element Analysis for Piping and Piping components.
- ❖ Preparation of Stress analysis report as per client format & Stress Isometric drawings
- ❖ Preparation of P&I Diagrams
- ❖ Pipe routing and layouts
- ❖ Piping Isometric drawings with MTO
- ❖ Pipe support design based on piping stress analysis report



STORAGE TANK DESIGN AND DETAILING

- ❖ Design and Analysis of Storage Tank based on API 650/653/620*
- ❖ Detailing of tank by using Tank-2016 software*
- ❖ Design and Analysis of Low-Pressure Storage Tank based on API 620
- ❖ Design of cone roof structure for external loading
- ❖ Rectangular tank design and detailing by using Roak's formulas for stress and strain



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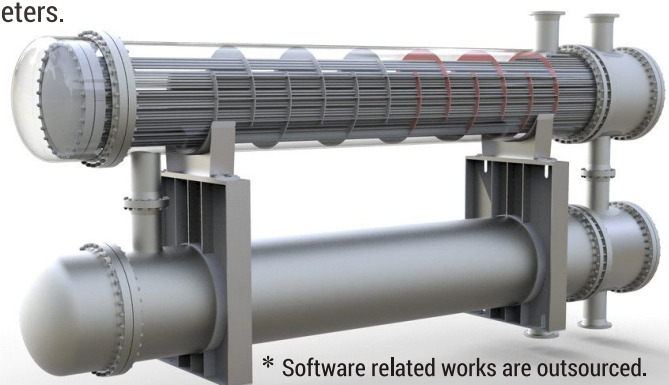
PRESSURE VESSEL MECHANICAL DESIGN AND DETAILING

- ❖ Mechanical design of Pressure Vessels, Columns, Reactors & Tanks as per International Standard Codes.
- ❖ Design & Analysis of Pressure Vessel (Tall Columns, Vertical Pressure Vessels, Horizontal Pressure Vessels, Reactors etc.) as per ASME Section VIII Div 1 & 2, Section II, PD5500 etc.*
- ❖ Re-rating of existing pressure vessels for a new set of design parameters.
- ❖ Finite Element Analysis for Pressure Vessels and Pressure Vessel components.
- ❖ Fitness-for-service evaluations for pressure vessels to assure the structural integrity of equipment.
- ❖ Design as per PV-Elite, ANSYS tools*
- ❖ General arrangement drawing & detailed fabrication drawings.
- ❖ Combined Loading Calculation for Tall Columns / Vessels
- ❖ Doing Local Load calculations for nozzles & supports as per WRC, PD5500 etc.
- ❖ Static Analysis of Vessels for Wind and Seismic Forces.
- ❖ Fatigue analysis to calculate the fatigue life of pressure vessels subjected to pressure cycles, temperature cycles and start up / shutdown cycles.
- ❖ Detailed Material Take Off



HEAT EXCHANGER MECHANICAL DESIGN AND DETAILING

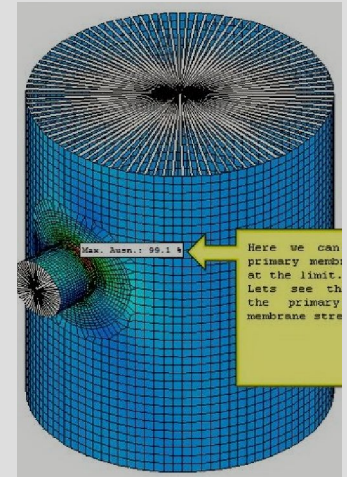
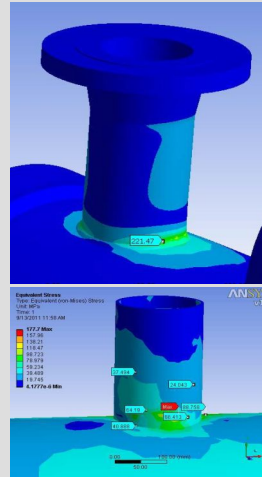
- ❖ Design and Analysis of Heat exchanger ("U" Tube, Fixed Tube sheet with or without Thin/Thick expansion joints), Floating Head.
- ❖ Design Code: ASME Section VIII, Div. – 1, TEMA & API 660 by using PV Elite software*
- ❖ Thermal design of shell & Tube heat exchangers
- ❖ Mechanical calculation as per ASME Section VIII Div. 1, TEMA Standards etc
- ❖ Fitness-for-service evaluations for heat exchangers to assure the structural integrity of equipment
- ❖ Finite Element Analysis for heat exchangers and heat exchanger components
- ❖ General arrangement drawing & detailed fabrication drawing
- ❖ Material Selection- We can offer you proper materials in high temperature, or for very corrosive services.
- ❖ Doing Local Load calculations for nozzles & supports as per WRC, PD5500, etc.
- ❖ Re-rating of existing heat exchanger for a new set of design parameters.
- ❖ Fatigue analysis to calculate the fatigue life of heat exchanger subjected to pressure cycles, temperature cycles and start up / shutdown cycles.
- ❖ Detailed Material Take Off



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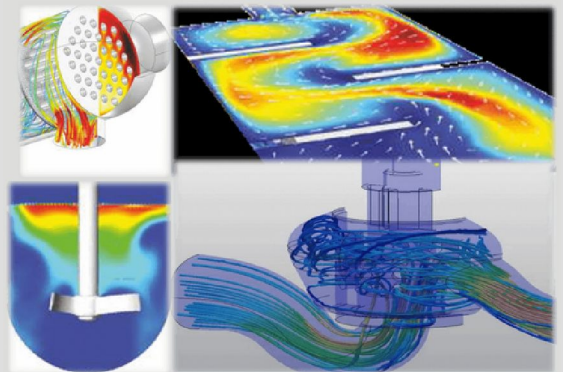
FINITE ELEMENT ANALYSIS

- ❖ FEA (Finite Element Analysis) for Pressure parts and Non pressure parts*
- ❖ Thermo-Structural analysis of piping and equipment
- ❖ Nozzle localized stress analysis
- ❖ Buckling Analysis
- ❖ Fatigue Analysis
- ❖ Creep Analysis
- ❖ Vibrational Analysis
- ❖ Transient Thermal and Steady State Analysis*



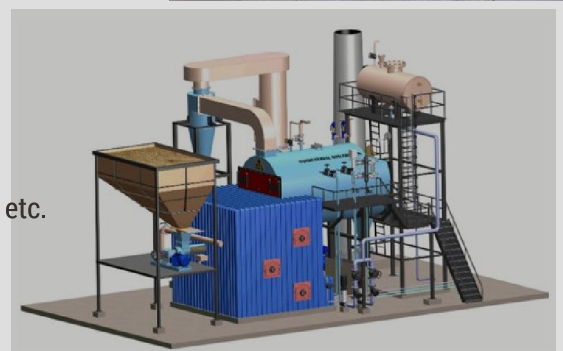
COMPUTATIONAL FLUID DYNAMICS (CFD) SOLUTIONS*

- ❖ Validation of conceptual thought and processes in industry
- ❖ Performance and rating of heat exchangers
- ❖ Solutions for irregular process solutions
- ❖ Solutions for R&D activities in product development (avoiding actual cost impact)
- ❖ Solutions for product geometric changes
- ❖ Thermal & physical behaviour of fluid flow passages in operation
- ❖ Temperature & velocity profile inside flow passages
- ❖ Pressure drop analysis for various fluids
- ❖ Pump performance & validation



BOILER FUEL FEEDING SYSTEM

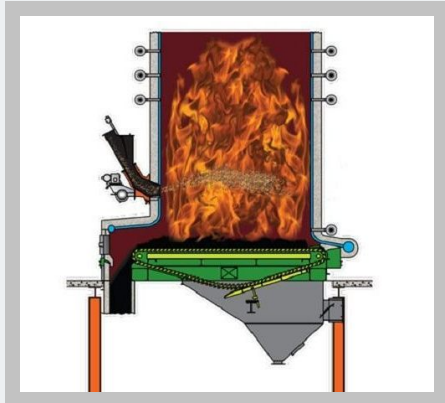
- ❖ Bagasse, coal, husk etc fuel storage and feeding system design
- ❖ Screw conveyors
- ❖ Coal spreaders for Traveling grate boilers
- ❖ Baggage storage bin, Drum feeders and chutes
- ❖ Pulverized fuel piping layout and design (Coal mill to Burner)
- ❖ Fuel storage bunkers
- ❖ Fuel conveyors - Belt type, Drag chain type, bucket type, screw type etc.



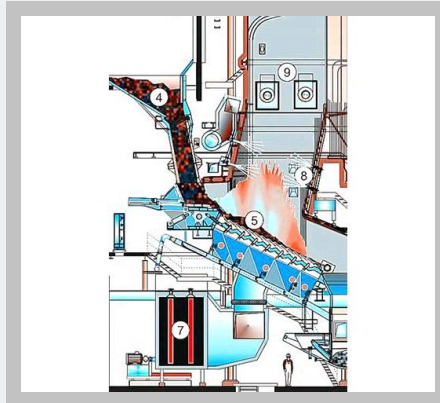
* Software related works are outsourced.

TRAVELLING GRATE, DUMPING GRATE AND PULSATING GRATE STOKER DESIGN AND DETAIL ENGINEERING

- ❖ Design and Detail Engineering for Travelling grate, dumping grate and Pulsating grate stoker
- ❖ Latest material for high calorific low ash coal fuel
- ❖ Travelling Grate Stoker drive system technical specifications
- ❖ High pressure lubrication system
- ❖ Refractory and insulation design and detailing
- ❖ Re engineering for travelling and dumping grate parts
- ❖ Site inspection & troubleshooting for travelling and dumping grate stokers



TRAVELLING GRATE



STEP GRATE



DUMPING GRATE

VALUE ENGINEERING, REVERSE ENGINEERING & OTHER SERVICES

- ❖ Energy auditing to optimize in house power and fuel consumption
- ❖ System functional analysis and identify scope for improvement and cost saving
- ❖ Reverse engineering for existing boiler parts such as Economizer, Super heater, Re Heater coils, Bed coils, Fuel burning system and nozzles etc
- ❖ Rerouting of piping and its pipe supports
- ❖ All kind of drawing development for existing items in power plant.



ENGINEERING CONSULTANCY FOR BOILER AND POWER PLANTS

- ❖ Feasibility Reports
- ❖ Detailed Project Reports
- ❖ Basic Engineering
- ❖ Detailed Engineering
- ❖ Procurement Assistance
- ❖ Construction and Commissioning Supervision
- ❖ Project Management
- ❖ Operation and Maintenance
- ❖ Boiler Capacity Upgradation
- ❖ Boiler Performance Improvement
- ❖ Combustion System Modification



SERVICES FOR QUALITY INSPECTION & EXPEDIATING

- ❖ Inspection at workshops, Mechanical and Electrical, during fabrication, final, FAT, performance, pressure tests, etc.
- ❖ Third-party vendor and Source Inspection services (on-site) across the global supply chain.
- ❖ On time, partial or full time (resident inspectors)
- ❖ Full project inspection management
- ❖ Supplier's evaluations and capabilities.
- ❖ Project & Procurement Expediting services
- ❖ Witness and Verification of critical activities
- ❖ Quality Program Management
- ❖ Quality System Audits
- ❖ Inspections at site during erection and commissioning.
- ❖ Pipeline Inspection Services
- ❖ Status Reporting
- ❖ Corrective Action and follow-up
- ❖ ITP Review

SERVICES FOR ERECTION, COMMISSIONING & SUPERVISION

- ❖ Complete site supervision and management by deputing competent Project Manager / Construction Manager and supporting staff at site.

The responsibilities shall include:

- ❖ Maintaining Quality of construction / erection work.
- ❖ Planning and controlling the Construction / Erection work to meet the project schedule.
- ❖ Manpower, tools, tackles and equipment's management
- ❖ Following Safety Standards
- ❖ Reporting to client for the site progress with short falls, if any, and corrective measures
- ❖ Start-up & commissioning assistance
- ❖ Site performance tests
- ❖ O & M manual preparation
- ❖ As-built documentation
- ❖ Training of Owner's Personnel
- ❖ Trouble shooting



SERVICES FOR PROJECT MANAGEMENT

- ❖ Project planning & scheduling
- ❖ Project Monitoring
- ❖ Coordination between the Owner and Vendor / Contractor
- ❖ Critical path evaluation and identification of constraints and systematic elimination of such constraints
- ❖ Conducting project review meetings
- ❖ Preparation of periodic progress reports
- ❖ Progress monitoring and cost control



TRAINING

Training for plant operators, plant engineers and Technicians for

- ❖ Reliability, Availability and Maintainability (RAM) Analysis Training
- ❖ Equipment Critical Analysis (ECA) Training
- ❖ Safety Training to Engineers, Supervisors, Technicians for Permit to Work (PTW), Zero Accident, Confined Space Entry, Hole Watcher, Fire Watcher & Lifting Supervision
- ❖ RCM Basic Induction Training for HO and Site Team Engineers
- ❖ Safety Mechanical, Electrical and Instrumentation maintenance skills training
- ❖ Operation Training -Power, Petro chemical and Oil& Gas Industries
- ❖ Onsite training on specific client needs
- ❖ Integrated safe operating procedures and job inductions



RECRUITMENT / PLACEMENT SUPPORT

- ❖ Provide proactive recruitment of viable candidates in various industries from CV consolidation and pre-qualified candidates for client final Interview
- ❖ Recruit leading candidates for client's field from prospective graduates and job applicants
- ❖ Provide a variety of services including mass hiring and top-level recruitment services to ensure clients fully staffed with the most suitable and capable people
- ❖ To find out-sourcing services to meet client business needs and cut down on full-time employment costs



COMPUTER PROGRAMMING & CUSTOMIZATION

- ❖ Client Specific Management Systems (ERP) for small / medium size business/industries

Example Drawing, Material, procurement, supply chain, inventory, accounting, etc.

- ❖ Customized Software tools for various applications

Like design tools, project management tools, QA/QC tools etc.

- ❖ Computer software for Conversion of files

Example files from Gtstrudl to Staad, NC files into DWG convertor etc.

- ❖ Web page management system



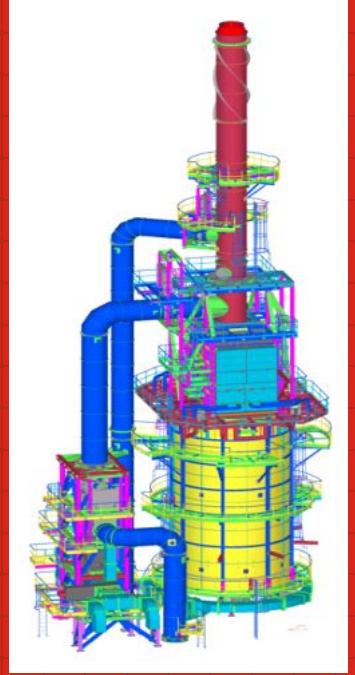
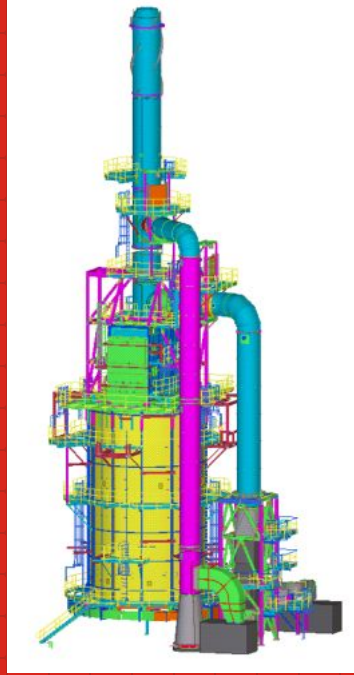
TEKLA MODELING & DETAILING SERVICES*

We have detailed Engineering services facilities by using Tekla* & Auto Cad. We deliver precise steel detailing drawings. The team is organized and motivated with the Agile working model to understand the project requirements in order to deliver the output in a streamlined common approach. We take time to comprehend the client's obligation and provide work rendering to client's needs.

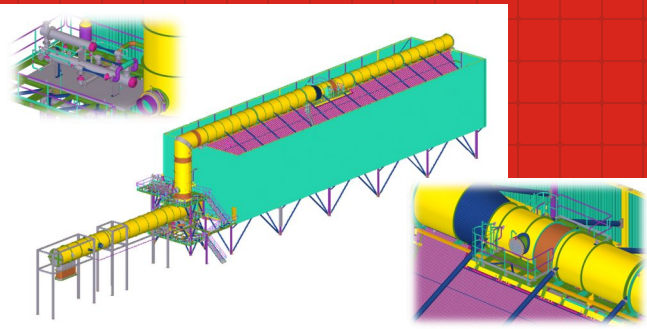
We provide drafting & detailing services for all types of steel structures in the areas of

- ▶ Petrochemical Refineries
- ▶ Power Plants
- ▶ Commercial Buildings
- ▶ Minerals and Mines
- ▶ Industrial Buildings
- ▶ Industrial & Circular Platforms
- ▶ Bridges
- ▶ High Rises & Multi-Storey Structures
- ▶ Trusses, Stair Cases, Handrails, Ladders & Miscellaneous
- ▶ Water Treatment Plants
- ▶ Conveyors, Chutes, Bins, Liners, Etc

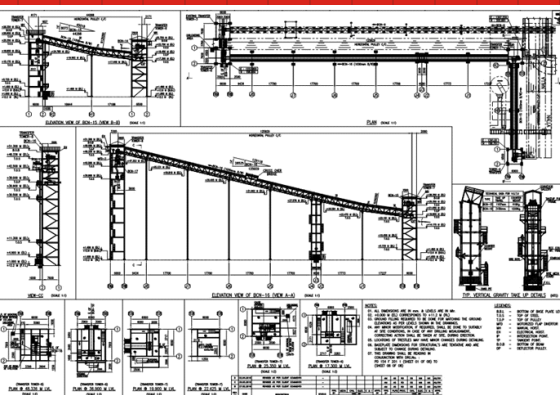
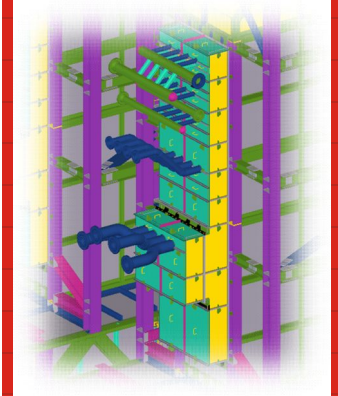
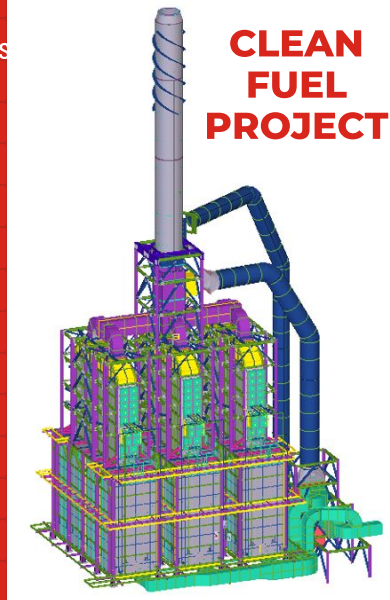
NHT REACTOR FEED HEATER



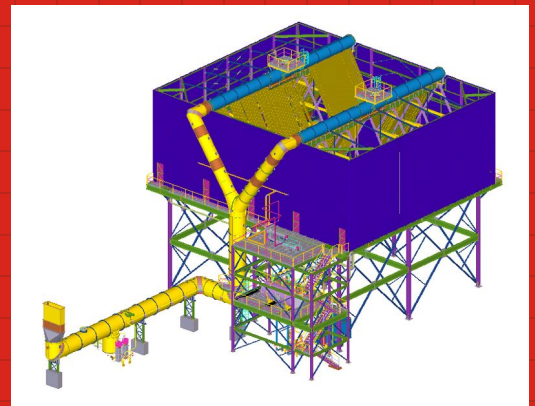
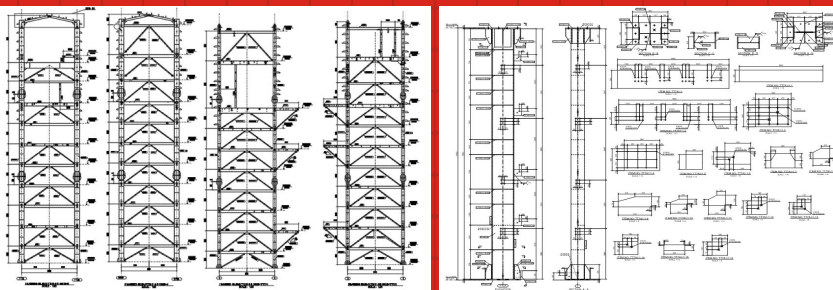
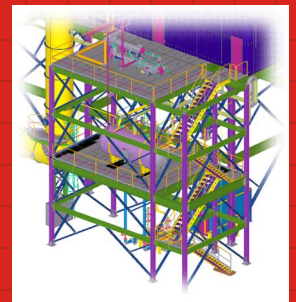
KIRKLARELI COMBINED CYCLE POWER PLANT



CLEAN FUEL PROJECT



INKOTEK INC



* Software related works are outsourced.



OUR TEAM
100 ++ ASSOCIATES



OPERATING FROM
4 INDIAN REGIONS



ACROSS
ASIA, MIDDLE EAST & AFRICA



OVER
500 ++ CUSTOMERS



GLOBAL PRESENCE

We are constantly expanding our market and globally present through various sales teams and associates.


We strive to create next generation, economical, sustainable and efficient engineering solutions to offer our engineering and services to all the parts of the globe.

SUSTAINABLE TODAY FOR BETTER TOMORROW

Through the advent of latest technology and engineering solutions, We at Dehu strive to design, engineer and manufacture cleaner & efficient products fulfilling the quality requirements of National and International benchmarks and customer satisfaction and to improve efficiency for a profitable future for the industry and create sustainable future.


Dehu Engineering & Services

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 Deipl Pune

 deiplpune

 Dehu Engineering & Boilers

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