



### Detail Engineering Design Services

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Transindia has rich experience in providing detail engineering design services for various sectors of industries like *Pharmaceutical, Bulk Drug & Intermediate, Agrochemicals, Auto Industries, Textiles, Oil & Gas Refineries, Rig Project, Minerals & Metallurgical project*. We offer complete mutli-disciplinary Engineering Design Solutions using advanced software for process design, Mechanical design, E&I design, Architectural Design, 3D plant modeling, drafting & detailing services.

We are a Nasik based firm started to make a name ever since we started to provide low cost consultancy services in the country. We have also started expanding its business abroad and has been gaining its foothold in international market. Our aim to provide our clients most effective detail engineering design solutions at very low cost prices and with the latest technology.

Right detail engineering design services or Front End Engineering Design Services (FEED) is most important design aspect for any Greenfield or Brownfield project. Our in-house team of experienced engineers & CAD designers from various disciplines understand value of correct design & offer integrated design approach for successfully completing any project.

#### Detail Engineering Design Services Includes:

##### **Civil, Structural & Architectural Design:**

- Submission of the architectural drawing to be local statutory authority
- Plot plan and area demarcation
- Structural analysis & design calculations for various buildings.
- Preparation of G.A. & detailed Working Drawings (RCC & Steel) for Construction of buildings
- Preparation of bulk Material Take Off for Cement, Rebar & Structural Steel for structure
- Preparation of structural fabrication Drawings
- Preparation of Bar Bending schedules
- Preparation of the "AS-BUILT Drawings" at the end of the Project.
- Prepare doors & windows schedules.
- Design of Pipe racks structure
- Road, drains Specifications and design.

- Tender document preparation for selection of Contractors.

### **Process Design:**

- Development of Process Flow diagram
- Mass & Energy Balance
- Preparing Intelligent AutoCAD Process & Instrumentation Diagrams (P&ID's)
- Utility Line Diagrams & Utility Sizing.
- Preparing Line list, Valve list, Equipment list, etc..
- Hazop & Plant Safety.
- Process Simulations.
- Hazardous Area Classification
- Effluent Treatment and Disposal Mechanism

### **Mechanical Design:**

- Our mechanical design department delivers design and detail engineering of static and rotating equipment, packages, and HVAC for wide spectrum of industries. We have good experience designing static equipments like Tanks, Reactors, Distillation Columns, Pressure Vessels Designs, Heat Exchanges & Evaporators, etc. Rotary equipments like Pumps, Compressors, Package Equipments like Centrifuges, Filters, ANF, Scrubbers, Vacuum Systems, etc. designed as per standard codes and standards.

Utilities package designs for Boilers, Cooling Towers, Brine Plants, Chilling Plants, Nitrogen Generator etc.. Our key design includes

- Preparing Mechanical datasheets.
- Preparing equipment layout drawings & detailing.
- HVAC & Piping Design Basis
- Preparing package tender design documents.
- Pipe sizing & pressure drop calculations
- Detail manufacturing drawings
- Heat load calculations.
- Detailed 2D Plant layout drawings.
- Material take-off list
- As built drawings

### Piping Design:

Transindia Piping Engineering team offers wide range of piping design services for Industrial projects like:

- Preparing Piping material specifications
- Preparing Piping GA drawings.
- Equipment modeling
- 3D Piping models with clash detections.
- Generating piping isometrics.
- Preparing piping BOQ, piping support drawing, tie-up points
- Stress analysis

### Electrical & Instrumentation Design Services:

Transindia Electrical & Instrumentation team offers complete solutions for your project E&I design system like:

- Electrical design for H.T. electrical system design for transformers, switchyards, PCC, metering room.
- Preparing Single line diagrams (SLD) & Electrical load list.
- MCC design specification.
- Cable size calculations & cable schedules
- Lighting layouts & flux level calculations
- Emergency system, back-up power, earthing layout
- Tender documents & BOQ generations for Electrical design
- Field instrument datasheets
- Control systems drawings & logics
- Block diagram & Loop diagram preparation
- PLC / DCS system specifications
- Tender document & BOQ generation for instrumentation design

Transindia has made a lot of great and fine advancements in the field where services are provided in relation to **Detail Engineering Design**. Our high-caliber cross functional team offer complete range of engineering services for piping, mechanical, civil and structural, electrical, instrumentation, and process discipline.