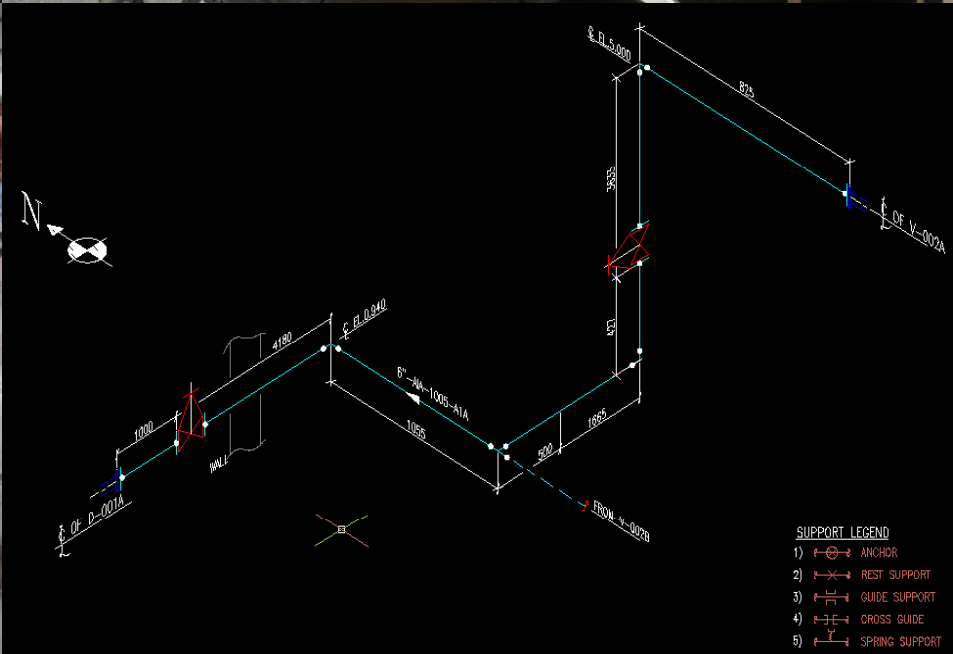


EXTREME ENGINEERING ENGINEERING EXCELLANCE



DESIGN & ENGINEERING / CONSULTING SERVICES

Heat exchanger design / Analysis
Pressure vessels design / Analysis
Fea analysis
Material selection
Optimization Study
Pipe stress Analysis
Structure analysis
System design

Shell & Tube Heat Exchangers

- Thermal design of shell & Tube heat exchangers.
- Mechanical calculation as per ASME Section VIII Div1, TEMA Standards & API 660 of all TEMA Type & Class (BEM, NEN, AEU, BEL, AEL, AES, BKU,BFU 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.
- Fatigue Analysis to calculate the fatigue life of Heat Exchangers with pressure cycles, temperature cycles and start-up / shut-down cycles.
- Calculation of minimum retirement thickness values for existing Heat Exchangers / Heat Exchanger components to maximize the remaining safe and useful life.
- General arrangement drawing & detailed fabrication drawing.
- Detailed Bill of material.
- Heat Exchanger Costing for bidding.

Horizontal Pressure Vessel, Vertical Pressure vessel, Columns, Reactors & Tanks

- Design & Analysis as per ASME Section VIII Div 1 & 2, Section II , API 650 & Pd5500 etc.
- Fatigue Analysis to calculate the fatigue life of Pressure Vessels with given pressure cycles, & temperature cycles and start-up / shut-down cycles
- Finite Element Analysis for Pressure Vessels and Pressure Vessel components.
- Fitness-for-service evaluations for pressure vessels to assure the structural integrity of equipment.
- General arrangement drawing & detailed fabrication drawings.
- Detailed Bill of material.
- Equipment costing for bidding.

Fea Analysis

- 3-dimensional structural analysis using Finite Element Modelling for thin shell structures (where D/t ratios are relatively large) eg Pressure vessels, Tanks and Nozzles.

Material Selection

- Our experienced engineers can offer you proper materials in high temperature & for high corrosive working conditions.

Optimization Study

- We can offer optimized heat recovery exchangers to increase your profits.

Piping

- Piping Stress Analysis and piping flexibility calculations for new piping systems for code compliance issues.
- Design, analysis and re-rating of piping systems based on ASME/ANSI B31.3.
- Fatigue Analysis to calculate the fatigue life of Piping Systems with pressure cycles, temperature cycles and start-up shut-down cycles.
- Finite Element Analysis for Piping and Piping components.
- Preparation of P & ID, PMS and key plan.
- Pipe routing and layouts
- Pipe support design
- Piping Isometric
- MTO
- Piping Costing for bidding

Structure Design

We can provide structure design as per customer requirements. We will do following things:-

- Structural engineering calculations per AISC (American Institute of Steel Construction) to design, analyze and check the load carrying capacities of various structural components.
- Structural Analysis and Design of special structures and non-pressure parts (e.g. platforms, ladders, clips and other attachments) attached to various parts of Pressure Vessels and Heat Exchangers.
- Analysis & Design of Pipe-rack/Pipe Bridge, Equipment Supporting Structures, Supports for Pipes & platforms for Oil & Gas Industry.
- Finite Element Analysis of various structural components.
- Design of Foundations (Dynamic & Static).
- Drawings review and detail drawings preparations.
- Designs & calculations Review.
- Drawing Preparation of Layouts & Review.
- Skid stress analysis.
- Skid piping, tubing & Instrumentation.
- Skid sizing.
- Skid layout.

System Design

We can provide system design as per customer requirements. Following are some examples:-

- Biogas recovery
- CO2 recovery
- Hydrogen purification & filling system
- Air separation system

We are using following Commercial Software's

- Pv-Elite 2010
- Code-calcs
- Compress
- FE-Pipe
- Nozzle-Pro
- Caesar-II
- Staad-Pro
- HTRI
- Auto Cad 2011 & 2012

**“EXTREME ENGINEERING WILL PROVIDE HIGH QUALITY DESIGNING ENGINEERING
AT LOW COST TO PROVIDE COMPETANCY TO OUR CUSTOMER”**

X-Block 8/27A, Street No-7 Brahampuri

Delhi – 110053 (INDIA)

M- 91-9811964916, 9968714703

F - 01143105912

URL- www.extremeengineering.co.in

E-Mail: Jaideepgupta@extremeengineering.co.in,

Ja@extremeengineering.co.in,

Engineering@extremeengineering.co.in,

Info@extremeengineering.co.in
