

## TRAINING SYLLABUS

### Piping Basics

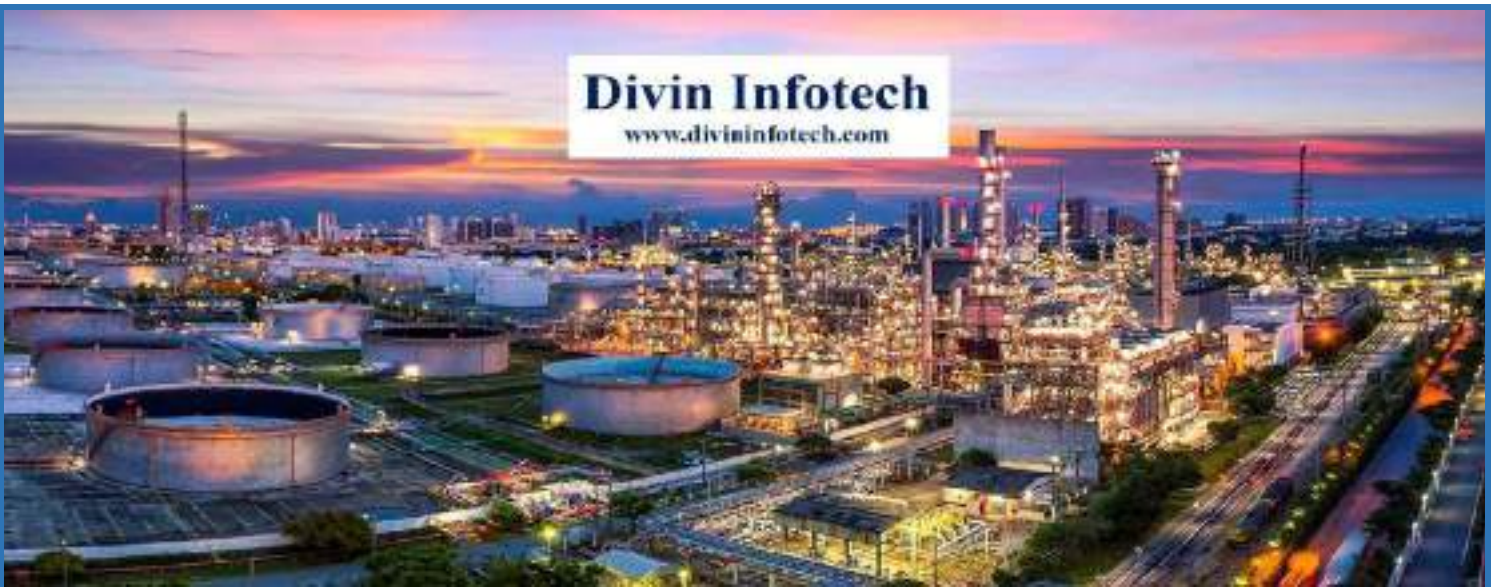
- Introduction of piping engineering-role of piping engineers in EPC & various Industries
- Introduction to Process Plant engineering, Piping in Process Plant
- Classifications of Pipes -Process pipe, Line Pipe, Structural Pipe - Manufacturing methods
- Piping engineers' interaction with various departments
- Engineering flow diagrams- BFD, PFD, PUD, etc.
- Piping Instrumentation diagram
- Piping codes and standards (ASME, IS, ANSI, DIN, BS)
- Pipe fittings
- Pipe class components
- Statutory Regulations in piping
- Pipeline Sizing
- Pumps and Compressors (All Types Included)
- Process Instrumentation from Piping
- Perspective

### Piping Materials

- Piping Material and selection procedure
- Valve selection and specification (fluids and hydraulic]
- Pipe Supports and span calculations
- Pipe fittings Selection procedure
- Piping Design Codes  
ASME B 31.3  
ASME B 31.1  
ASME B 31.4  
ASME B 31.8

### Reinforcement Pad Calculation

- Reinforcement Pad & Requirements.  
R.Pad Calculations Formula  
As per ASME B 31.3 Stress & strain Diagram.  
Calculations for Various Cases.



## Piping System Design & Layout

- Equipment Layout
- Plot Plan Design & Requirement as per OISD
- Dyke Wall/Tank from layout
- Piping G.A
- Isometric Drawings
- Bill of Material, Costing.
- Column Piping /Tower Piping Layout
- Condenser / Exchanger Piping Layout
- Tank Piping & Pump Piping
- Plot plan /Plant Layout/Legends P& ID/Equipment Layout/Piping Plan & Elevation
- General Arrangement of Pipe Racks
- Piping Plot Plan Calculations.

## E3D OR SP3D Software

- Equipment
- Piping
- Structure
- Electrical
- HVAC6
- Hangers Supports
- Report (MTO)
- Spooler & ISO Draft
- Draft
- Commands

**Duration: 90 Hours**