1. Course Details:

Course Code : CSEN-002
Course Title : Structural Analysis and Design for Structural Steel Building
Course Duration : 5 Days

2. Course Overview:

- Structural Analysis and Design of Structural Steel Buildings Training course is a must for civil engineers working in Oil & Gas, Power plants, water treatment plants and residential projects. Participants of this course will gain advanced knowledge of structural engineering that includes principles of structures analysis and their application, behavior of materials under loading, selection of construction materials and design fundamentals for steel structures.

3. Learning Outcomes:

- Understanding the behavior of structural members under loading
- Learning how to apply design loads as per American codes of standard
- Analyze deformation of members under loading
- Understand the significance of material properties in design
- Undertake basic design of Steel Structures

4. Course Contents:

Introduction to Structural Engineering Principles

- Introduction to Finite Element Method
- Introduction to StaadPro, V8i
- Different Methods of Analysis
- Structural Layout
- Sectional Properties
- Deflection & Deformation
- Determination of Stress Functions (direct, bending & shear stresses)

Structural Analysis

- Creating a New File with Staad-Pro, V8i
- Recognizing Staad-Pro, V8i, Screen
- Dealing with an Existing File

Design Philosophies

- Analysis of Two-dimensional Continuous Beams
- Loads Affecting Beam Elements
- Analysis of Two-dimensional Frames and Trusses
- Loads Affecting Frames
- Working Stress Design
- Limit State Design

Post-Processing

- Analysis of Three-dimensional Frames and Trusses
- Loads Affecting Frames and Trusses
- Analysis of Plate Elements
- Loads Affecting Plate Elements
- Wind and Seismic Loading Calculations using IBC-03 and ASCE7-02
- Staad Manual Assigning Loads

Design Procedure of Steel Structures & Exporting BOQs

- Materials & Properties
- Design of Beams
- Design of Columns & Struts
- Design of Tension Members
- Design of Trusses
- Design of Built-up Sections
- Post Processing and Reading Results

5. Our Methodology:

- Make coaching and monitoring innovative and using modern
- Media training also using on the go training by using interactive means and focusing on
- The exercises, practical applications and real situations study.
- Live delivery method, instructor-led training.
- Experienced consultant, trainers, and professional.
- Qualified trainer with high-level experience

6. Attendance Reports:

- Send daily attendance reports to trainingdep

- Send full attendance report to training dep. by the end of thecourse
- Attend 100 % from the course days also providedaily
- Issue attendance certificate for participant who attend minimum 80% from the course duration

7. Pre/Post Reports:

- Pre- assessment before starting training.
- Post assessment after finish training
- Full report for the deferent between Pre-& Post assessment

8. Who Should Attend?

- Design Structural Engineers
- Civil Engineers working in Oil & Gas field
- Civil Engineers working in Power plants & Energy field
- Steel Fabricators
- Construction Engineers