EDSA KNOWLEDGE Short Course
Customized . Intensive . Real Experience

(ME#111) PIPING DESIGN & ARRANGEMENT

Turning GOOD Engineers into GREAT Engineers!

COURSE OVERVIEW

The course will review the basic requirements of Piping Arrangement & Pipe Support Design with emphasis on pipe routing design practices and requirements on compressor, pump, heat exchanger, air cooler, vessel, flare system piping layout. A general overview of piping material, pipe flexibility and pipe stress requirements will be included in this course. Application of these concepts include practical case studies on offshore piping layout, piping material selection, MTO review and general Piping Fit-For-Life (FFS) Study as per ASME B31.3 requirements. This course provides the necessary knowledge for those who are responsible for designing and constructing a new piping system, particularly on offshore environment, and those who oversee and ensure the integrity of existing piping system. The objectives of this course are to enable participants to:

- Understand Pipe Routing & Arrangement Design Concepts & Requirements.
- Understand Pipe Support Design Concept, and Pipe Span Requirements.
- Understand P&ID & PFD for Piping Arrangement Design.
- Understand Piping Stress Isometric for Pipe Support Design
- Understand General Pipe Flexibility and Pipe Stress Requirements.
- Understand General Piping Material Requirements.

WHO SHOULD ATTEND?

Engineer, Senior Piping Designer, Piping Designer, Plant Supervisors & Operator, Piping inspectors and parties with involvement on process piping working in Oil & Gas, Chemical Plant, Power industries, etc.

COURSE HIGHLIGHTS

- PFD, P& ID consideration
- General Piping Design Requirements
- Piping Design & Consideration for Common Platform/ Process Plant Equipment:
  - Compressor Piping Layout
    - Pump Piping Layout
    - Heat exchanger Piping Layout
    - Air Cooler Piping Layout
  - Vertical & Horizontal Piping Layout
    - Flow Line Piping layout
    - Flare Line Piping Layout
- Electrical/ Instrumentation Requirement – Vessel Trim, Level Sketch, Instrument, Hook-up drawings
- Standard & Special Pipe Support
- Piping Interface Management: Process/ Structure/ Mechanical /Electrical
- General PDMS Modeling Requirements & Consideration.
- Drawings Requirement: Piping GA, Isometric, & etc.

LEARNING APPROACH

Each session will be conducted in lectures, discussions and problem solving format. Upon completing this subject the participants should be able to:

- Perform piping arrangement and layout design as normal engineering practices & piping code requirements.
- Perform pipe support design.
- Generate, review and check of piping isometric drawings.
- Generate & review piping material take off (MTO)
- Perform simple pipe flexibility studies.