PIPING SYSTEMS & ADVANCED MECHANICAL MAINTENANCE MANAGEMENT

MNE009

COURSE DESCRIPTION

This course is to help participants gain a comprehensive knowledge of elements that are essential for the design, operation, and maintenance of pipelines. The design of the gathering network, pressure drops, fluid pattern, and the network arrangement will be discussed in detail. To obtain the best operating and design conditions for the system. The course will also provide a practical way to learn about the elements considered in the design, code, factors, legislation, material selection, corrosion (internal and external) considerations, and management. Hydro testing, pigging (cleaning and smarts), pipeline integrity analysis using inspection survey, monitoring data, fitness for purpose, risk analysis, and predictive and preventative maintenance will also be covered.

COURSE GOAL

The training course will feature:

- Detailed understanding and knowledge of plant piping systems, including their design, operation, maintenance and repair.
- The required awareness and knowledge of relevant codes and standards to choose the correct piping material.
- The experience to understand required operations and decide the best piping systems.
- Adequate confidence and understanding to consider all challenges (including temperature and pressure) and work on setting up a system that could withhold these conditions.
- The knowledge and experience to train other professionals on essential aspects of piping systems.
- Adequate knowledge and experience to understand what size and fittings are needed as per the intended purpose.

COURSE OBJECTIVES

By the end of this training course, participants will be able to:

- Detailed knowledge and understanding of piping systems, including their designs, operation, maintenance and repair.
- Increased confidence and experience to train other professionals on best practices for managing piping systems.
- Better comprehension and skill to choose the appropriate piping system as per the intended purpose.

- Greater understanding and knowledge of acceptable standards and codes to make the right choice of material and fittings.
- Enhanced skill and capabilities to save organizational costs of maintenance and repair through regular audits of piping systems.
- Increased understanding and knowledge to ensure that piping systems are as per the standards and safety norms required internationally, thereby contributing to worker safety.

WHO SHOULD ATTEND

Pipeline engineers, operations and maintenance staff, surface facility design and operation engineers, production managers, and maintenance managers.

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. Pipeline Preparation
    - Pipeline code and standards
    - Preliminary survey
    - Flow of fluid in pipelines
2. Multiphase Flow
    - Two phase
    - Flow pattern maps
    - Flow system
    - Troubleshooting
3. Gathering System and Pipeline Design
    - Gathering system
    - Pipeline configuration
    - Pipeline design
    - Location classification
4. Pipeline Construction and Testing
    - Pipeline construction
    - Hydrostatic test
    - Corrosion considerations

5. Pipeline Operation, Inspection, Maintenance, and Integrity

- Pipeline operation
- Coating monitoring and inspection
- Pigging
- Integrity management