

VALVES

(Selection, Maintenance & Repair)

MCE050

COURSE DESCRIPTION

A valve is one of the most basic and indispensable component of any application. It is essential to virtually all manufacturing processes and every energy production and supply system.

Right selection, effective maintenance, inspection and troubleshooting programs and skilled staff are essential factors for prolonged pump & valve life. All the above can be achieved only via deep understanding of the valve. This course is intended to provide the participants with theoretical and practical topics of valves to achieve this required understanding.

COURSE GOAL

To enhance the participants' knowledge, skills and abilities necessary to effectively select, maintain, inspect and repair valves.

COURSE OBJECTIVES

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

- Classify valve types.
- Understand valve functions and characteristics.
- Be familiar with basic valve parts and valve body attachments.
- Select petroleum and process Industry.
- Be familiar with the specification and applied codes.
- Install maintenance guidelines.

WHO SHOULD ATTEND

Valve concerned personnel R&D, piping designers, engineers, technicians, inspectors & repair-men.

COURSE DURATION

5 Working Days

COURSE OUTLINES

1. **Classification of Valve Types.**
 - Valve Functions and Characteristics.
 - Basic Valve Parts.
 - Valve Body Attachments.

2. Valve Selection for Petroleum and Process Industry.

- Principles of Valve Operations.
- Specifications.
- Body Materials and Dimensions.
- Pressure and Temperature.
- Wear, Galling, and Leakages.
- Flow Characteristics & Noise.
- Sizing, Including Actuators.
- Which Valve for On-off Service?
- Which Control Valve to Specify?

3. The Specification and Applied Codes.

- API.
- ASME.
- French, British and German Regulations.

4. Critical Valve Choices.

- Internal Workings.
- End Connections.
- Bonnets.
- Actuator.

5. Installation Maintenance Guidelines.

- Cleaning and Inspection Guidelines.
- Cautions for Every Type.
- Fouling Leakage.
- Wear Leakage.
- Maintenance of Special Valve Types.
- Lining Up Valves for a System Start Up.
- Using Plant Procedures and Drawings.
- Lubricating Valves.
- Safety Aspects.
- Acceptance Procedure for In-House Valve Testing and Verification.
- Noise Abatement for Valves.

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