

Pipeline Protection

| Date | (\$)Fees | |
|--------------------------------------|----------|------------------------------|
| 24 March -28 March 2024 Kuala Lumpur | 3500 | Register Now |

Why Choose This Training Course?

This training course will provide an overview of main aspects of pipeline protection and safety management. The emphasis in the course will be on the mechanical integrity of pipelines and the protection methods against corrosion and erosion of above ground, underground and subsea pipelines. The selected topics will cover the most efficient maintenance methodologies and techniques for pipelines in various applications.

The training course will also deal with pipeline safety management, including pipeline inspection, testing, and prevention of potential failures. Presented will be the procedure for root cause analysis and other risk reduction measures and prevention methodologies.

Important features of fitness for service analysis (FFS) will be presented and explained as well as the procedure for calculation of the remaining life of equipment

The training course will include various real practical problems and case studies from the existing engineering practice, which will be solved in the form of several workshops.

The training course will feature:

- Practical issues related to pipeline operation, monitoring and analysis
- Root cause analysis of pipeline problems leading to failures
- Guidelines to diagnose the level of fitness for service according to existing standards
- Best practices for predictive maintenance and safe operation of equipment
- Methodologies for problem solving and troubleshooting

What are the Goals?

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

- Be familiar with operation, maintenance and protection of pipeline systems
- Gain the knowledge about the most appropriate methodology for pipeline protection
- Select the best program for maintenance and repair
- Learn to identify potential safety problems that affect the pipeline structure integrity
- Implement results of inspection and condition monitoring

Who is this Training Course for?

This training course is designed to benefit all levels of Technical Personnel in industry who deal with Piping System operation and maintenance.

- Plant professionals dealing with operation pipeline systems
- Engineers responsible for the reliability of operation
- Engineers and technical staff in charge of condition monitoring
- Professionals involved in technical support and maintenance

How will this Training Course be Presented?

This course will be conducted along workshop principles, which will combine lectures with active delegate participation including problem solving and discussions. Several practical examples and will be analysed and illustrated with video presentations. The focus will be on physical principles and clear technical reasoning.

Several workshops will be based on the teamwork and will include selected case studies. The problems will be presented with explanation on operational problem solving methodology. Various examples from real-life technical practice will be included and combined with video animations to help gain the confidence in making right decision regarding efficient predictive maintenance and long operational life. All course material will be provided to the participants.

The Course Content

Day One: Overview of Pipeline Configurations

- Overview of Pipeline Configurations: Above ground, Underground and Subsea
- Material Selection and Pipeline Construction
- Fabrication Methods and Welding Technologies
- Material Corrosion and Erosion Resistance
- Pipeline Materials for Sour Service and Intensive Chemistry
- Workshop: Examples and Solutions

Day Two: Monitoring of Pipeline Material Degradation

- Stress Corrosion Cracking: Metallurgical & Environmental Factors
- External Corrosion Direct Assessment (ECDA) Methods
- Internal Corrosion Direct Assessment (ICDA) Methods
- Cathodic Protection Monitoring of Outer & Inner Surface
- Successful Pigging of Complex Pipelines
- Workshop: Examples and Solutions

Day Three: Pipeline Protection Technologies

- Strategies for Minimising Pipeline Corrosion and Erosion
- Prevention Methods for Internal and External Corrosion
- External & Internal Maintenance Techniques
- Consideration of Marine Environment
- Coating and Thermal Insulation of Pipelines
- Workshop: Examples and Solutions

Day Four: Pipeline Safety and Inspection

- Pipeline Structural Design and Analysis: Code Requirements
- Safety Instrumentation, Control Valves and Other Safety Accessories
- Failures, Root Cause Analysis and Prevention Techniques
- Inspection (RBI), Testing and Maintenance
- Remediation & Repair Technologies
- Workshop: Examples and Solutions

Day Five: Pipeline Integrity Management

- Pipeline Integrity Assessment & Management Process
- Optimization of Integrity Programme for Pipelines
- Fitness for Service (FFS) API 579 and Remaining Life Estimate
- Data Collection and Evaluation
- Summary and Overview



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