MERCURY

Pigging and In-Line Inspection Training Course

28 February – 4 March 2027
Cairo (Egypt)



Dubai - UAE: +971 4 450 5697
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Ref: 15478_309418 **Date:** 28 February – 4 March 2027 **Location:** Cairo (Egypt) **Fees:** 4000 Euro

Introduction:

Utilizing in-line inspection and cleaning tools ensures the security and functioning of all pipeline systems. Regulations necessitate internal inspections utilizing geometry pigs to pinpoint alterations in the pipeline circumference and employ tools like magnetic flux leakage MFL pigs, ultrasonic pigs, and/or electromagnetic acoustic transducers EMAT to identify anomalies, metal loss, and flaws within the pipe or welded sections.

Pigging technology and chemical treatments are a primary strategy for operators pursuing flow assurance and combating substances like paraffin, black powder, hydrates, and asphaltenes in maritime environments. In-line inspection technology encompasses a range of tools and methods used to assess pipeline integrity.

This Pigging and In-Line Inspection training course is crafted to offer an exhaustive introduction to all facets of utility and in-line inspection pigging. With fully illustrated content, hands-on demonstrations with actual pigs and models help to facilitate a comprehensive understanding and address any complexities.

Intelligent pig pipeline inspections and smart pigging pipeline inspection approaches are instrumental in detecting and quantifying defects that could undermine pipeline safety. These advanced in-line inspection tools, including magnetic flux leakage MFL and ultrasonic devices, represent the cutting edge of in-line inspection in quality control and in-line inspection manufacturing, thus underpinning the safeguarding of pipeline infrastructure.

Targeted Groups:

- Project managers.
- Engineers.
- Maintenance and technical personnel.
- Personnel responsible for pipeline integrity assurance, flow assurance, corrosion control, and safety.

Course Objectives:

At the end of this Pigging and In-Line Inspection course, the participants will be able to:

- Understand the fundamentals of pigging operations and their importance in pipeline maintenance.
- Learn the different types of pigs and their specific applications in various pipeline conditions.
- Gain knowledge of in-line inspection tools and techniques used to assess pipeline integrity.
- Develop skills to analyze data obtained from pigging and in-line inspections.
- Explore best practices for planning and executing pigging operations safely and efficiently.
- Understand the regulatory and safety standards related to pigging and in-line inspections.
- Learn how to troubleshoot common issues encountered during pigging and inspection activities.
- Gain insights into advanced pigging technologies and their applications in the industry.

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Targeted Competencies:

By the end of this Pigging and In-Line Inspection training, participants competencies will:

- Pipeline Integrity Assessment.
- Pigging Operation Techniques.
- In-Line Inspection Data Analysis.
- Pipeline Maintenance Strategies.
- Safety and Regulatory Compliance.
- Troubleshooting and Problem-Solving.
- Advanced Pigging Technologies.
- Inspection Planning and Execution.

Course Content:

Unit 1: Pigging for Operation and Maintenance:

- Pigging during construction.
- Pigging during operation.
- Utility Pigs.
- Cleaning pigs.
- Sealing pigs.
- Gauging pigs.
- Dual diameter pigs.
- Magnetic cleaning pigs.
- Designing a Pipeline for Pigging.
- Pig traps and pigging stations.
- Location and tracking devices.

Unit 2: Designing and Implementing an In-line Inspection ILI Program:

- Selecting an ILI Tool.
- Specific Design Considerations for Running ILI Tools.
- Launch and Receive trap design.
- Bends, tees, and valves.
- Issuing an Inquiry.
- Schedule requirements.

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Unit 3: Preparation for ILI:

- Controlling Operational Parameters During the Inspection Run.
- Strategy for Contract Development and Negotiations.
- Developing a good specification.
- Contingency Planning for a Stuck Pig.
- Offshore risers.
- Onshore flowlines, gathering systems, main sections, or laterals.

Unit 4: In-line Inspection ILI Tools - Theory, Performance, and Detection Limits:

- Metal loss In-line Inspection.
- Other In-Line Inspection Tools.
- Crack detection pigs.
- Mapping.
- Geometry and bend-detection pigs.
- Wax deposition measurement.
- Spanning pigs.
- Semi-intelligent pigs.

Unit 5: Post In-line Inspection Issues:

- Quality Assurance Check of the Data.
- Development of Protocols for Response.
- Prioritization of the Dig Plan.
- US regulatory requirements.
- Criteria for corrosion-caused metal loss.
- Criteria for dents.

Unit 6: Validation of Results:

- Planning and preparation for field NDE.
- Comparison between ILI, field NDE, and actual:
- Corrosion.
- Dents and effects of re-rounding.
- Establish a level of confidence.

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Unit 7: Fitness for Purpose: Assessment:

- Assessment of defects.
- Establish a long-term integrity management program.
- Incorporation of results in risk programs.
- Potential Repair Consideration.

Conclusion:

This Pigging and In-Line Inspection training course explores in-line inspection techniques in depth, offering participants practical knowledge and expertise crucial for maintaining and inspecting pipeline systems. Professionals will ensure safe, efficient, and compliant operations across various facets of pipeline integrity management.