



Integrity Management of Subsea Pipelines

Course Introduction:

This course is designed to provide participants with a comprehensive understanding of the principles and practices involved in ensuring the integrity of subsea pipeline systems. As the demand for offshore oil and gas production increases, maintaining the safety and reliability of subsea infrastructure becomes critical. This five-day theoretical course will explore the challenges and methodologies associated with the integrity management of subsea pipelines, including risk assessment, inspection techniques, and maintenance strategies.

Participants will delve into the factors affecting pipeline integrity, such as environmental conditions, material degradation, and operational stresses. The course will also cover the regulatory frameworks guiding subsea pipeline integrity management and the latest technologies used for monitoring and assessment. By the end of the course, attendees will be equipped with the knowledge and skills necessary to implement effective integrity management programs for subsea pipelines.

Course Objectives:

By the end of the program, participants will be able to:

- Understand the principles and importance of subsea pipeline integrity management.
- Identify and assess risks associated with subsea pipeline operations.
- Apply various inspection techniques and technologies for pipeline monitoring.
- Develop maintenance and repair strategies to ensure pipeline integrity.
- Explore future trends and innovations in subsea pipeline integrity management.

Who Should Attend?

This course is intended for:-

- Pipeline engineers and integrity management professionals.
- Subsea operations personnel and project managers.
- Corrosion engineers and materials specialists.
- Safety and compliance officers in offshore operations

Course Outline:

Day 1: Introduction to Subsea Pipelines

- Overview of subsea pipeline systems and their significance in offshore projects
- Common materials and construction methods used in subsea pipelines
- Factors influencing pipeline integrity: environmental, operational, and mechanical
- Regulatory frameworks and industry standards for pipeline integrity management

Day 2: Risk Assessment and Management

- Introduction to risk assessment methodologies for subsea pipelines
- Identifying potential hazards and failure modes
- Techniques for evaluating risk and prioritizing integrity management actions
- Developing risk management plans and strategies

Day 3: Inspection Techniques and Technologies

- Overview of inspection methods for subsea pipelines: visual, ultrasonic, and magnetic flux leakage
- The role of remotely operated vehicles (ROVs) in pipeline inspection
- Emerging technologies in pipeline monitoring and data collection
- Case studies on successful inspection programs

Day 4: Maintenance and Repair Strategies

- Best practices for maintenance and repair of subsea pipelines
- Techniques for managing corrosion, erosion, and other forms of degradation
- Emergency response planning and contingency measures
- The role of coatings and inhibitors in pipeline maintenance

Day 5: Future Trends in Integrity Management

- Innovations in integrity management technologies: sensors and data analytics
- The impact of digitalization and automation on pipeline monitoring
- Case studies on advanced integrity management programs
- Future directions in research and development for subsea pipeline integrity

Course Methodology:

A variety of methodologies will be used during the course that includes:

- (30%) Based on Case Studies
- (30%) Techniques
- (30%) Role Play
- (10%) Concepts
- Pre-test and Post-test
- Variety of Learning Methods
- Lectures
- Case Studies and Self Questionnaires
- Group Work

Course Fees:

To be advice as per course location. This rate includes participant's manual, Hands-Outs, buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Certificate:

International Center for Training & Development (ICTD) will award an internationally recognized certificate(s) for each delegate on completion of training.

Course Timings:

Daily Course Timings:

08:00 - 08:20	Morning Coffee / Tea
08:20 - 10:00	First Session
10:00 - 10:20	Coffee / Tea / Snacks
10:20 - 12:20	Second Session
12:20 - 13:30	Lunch Break & Prayer Break
13:30 - 15:00	Last Session