

Pipeline Inspection, Maintenance, and Integrity

Oil & Gas Engineering
Munich (Germany)
13 - 17 Jan 2025

UK Training

PARTNER



Pipeline Inspection, Maintenance, and Integrity

Ref: 321812_147399 **Date:** 13 - 17 Jan 2025 **Location:** Munich (Germany) **Fees:** 4400 Euro

Introduction

Pipeline systems for the oil and gas industry play an important role in modern industrial operations. The purpose of this training course is to present the basic characteristics of efficient operation of pipelines in various engineering applications.

This training course will cover the interaction of pipelines with flow moving equipment, i.e. pumps and compressors, and technical characteristics of operation of pump and compressor stations.

The participants will be introduced to the main points of inspection and testing according to relevant API standards. They will also develop familiarity with methods of cleaning and other maintenance activities, including necessary repairs as prevention of failures

Course Objectives

At the end of this course the participants will be able to:

- Identify basic principles of safe operation & efficient maintenance of pipelines for various industrial applications
- Develop deep understanding & familiarity with the practical aspects of operation and maintenance activities
- Illustrate the concepts discussed and be provided with the necessary experience in applying them
- Use & follow the guidelines & best industrial practices related to operation, control, inspection & testing of pipelines

Course Outlines

1 Day

Overview of Technical Characteristics of Pipelines:

- Selection & sizing of pipelines: flow rate, MAWP, pumping power: ASME B31.3
- Selection of pipeline material and interaction with working fluid
- Operation of pump and compressor stations
- Pipeline flow control and measurements: custody transfer

A graphic of a chessboard with several chess pieces (a king, a queen, a rook, and a knight) on it, set against a background of concentric circles. The text 'UK Training PARTNER' is overlaid on the right side of the board.

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Day 2

Operation & Material Degradation:

- Pipeline material aging: erosion, corrosion & stress corrosion cracking
- Corrosion Direct Assessment: External ECDA and internal ICDA Methods
- Cathodic protection, coating and other technologies: outer & inner surface
- Metal loss inline inspection ILI and smart pigging NDT monitoring
- Pipeline fatigue, cracks, seam defects and ruptures

Day 3

Operation & Safety Management:

- Safety Instrumentation, Control Valves and Other Safety Accessories
- Transient operation and effects and water hammer
- Pipeline failure prevention & root cause analysis
- Leak detection methods LDAR and patrolling & surveillance: SCADA
- Inspection RBI, Hydrostatic test methodology

Day 4

Maintenance Technologies:

- Pipeline maintenance & cleaning technologies: pipeline reconditioning
- Monitoring of pipeline vibrations and support integrity
- Repair technologies: welding of composite sleeves and segment replacements
- Maintenance of valves, fittings and accessories
- Valve repair: hot tapping, temporary plugging stopple

Day 5

Testing & Monitoring in Operation:

- Hydrostatic testing: allowable operating pressure and hydrostatic test pressure
- Reliability and availability of pipelines in operation
- Risk-based inspection RBI
- Fitness for Service FFS
- The estimate of remaining life of equipment

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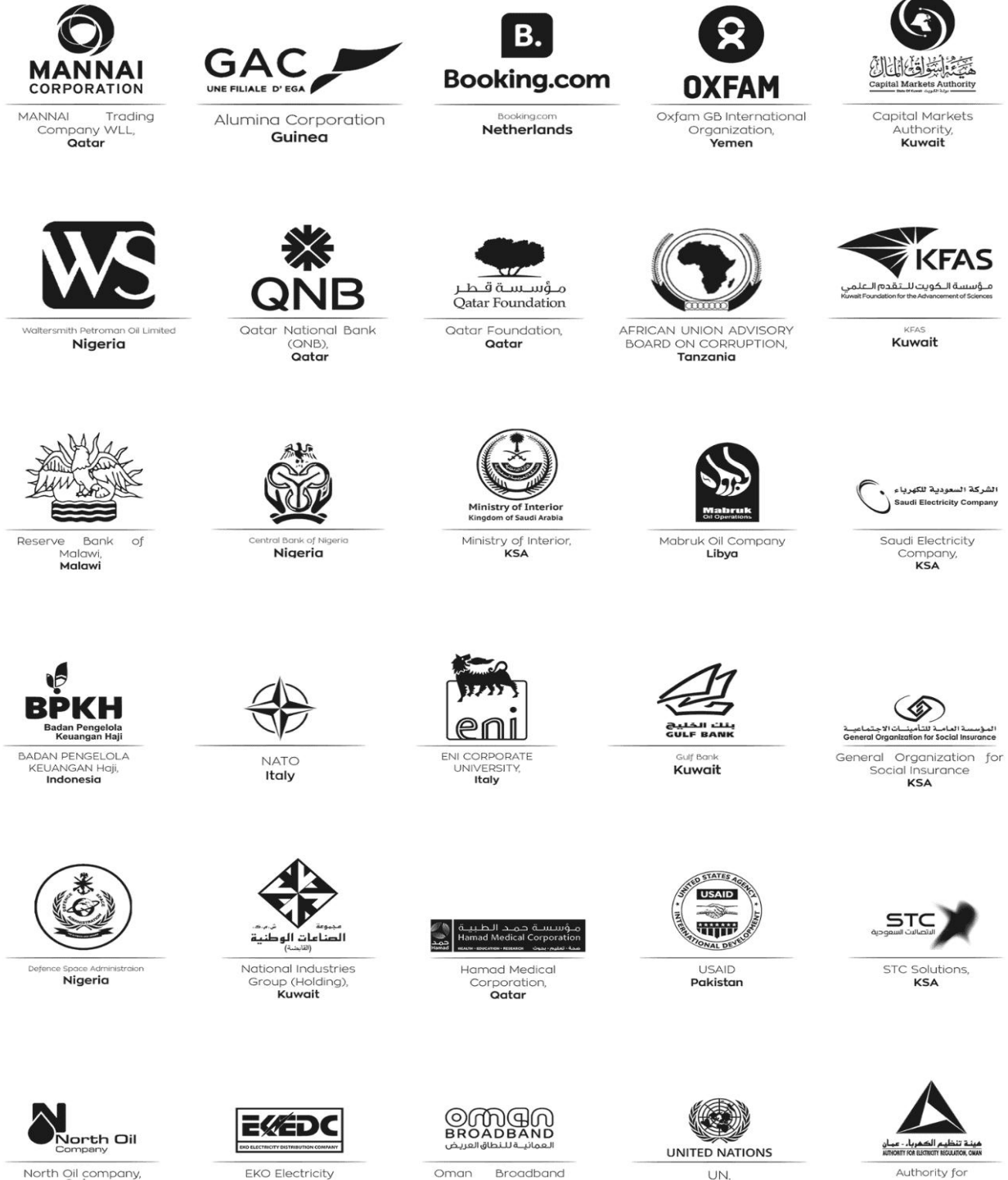
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www.blackbird-training.com



training@blackbird-training.com



+44 7480 775526 / +44 7401 177335