TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000086

MECH013 - Pipeline systems overview

There are millions of kilometres of onshore and offshore pipelines spread across the world.



Learn from the Best in the Business!

Course overview

Foundation level

Why take this course

There are millions of kilometres of onshore and offshore pipelines spread across the world. With the expansion and addition of new staff, there is an increasing need for full appreciation of the engineering design of these pipeline systems. A long with this is a growing need for expanded training, to supply qualified personnel, and hence opportunity for pipeline technicians, technologists and engineers in onshore and offshore installations. Also, many personnel involved in pipeline operations do not receive even basic pipeline engineering training, while some are exposed only to specialised areas.

The Pipeline systems overview course will provide participants with a high level understanding of the International Oil and Gas Pipeline Systems Standards, with an emphasis on practical application of the standard to oil and natural gas pipelines and facilities over the complete lifecycle from design, construction and operation in onshore areas. The course will discuss how the international standards and pipeline regulations act together.

Who it is for and how it helps

The course is designed for pipeline engineers, technologists, inspectors or other professionals who require a working knowledge of the international standards and regulations.

What you will learn

- Describe the standards requirements for the safe design, construction and operation of pipeline systems
- Understand the differences between the mandatory safety and loss management requirements and the integrity management requirements
- Recognise the integrity management issues relating to all aspects of the pipeline lifecycle
- Learn the requirements for competency and traceability issues relating to staff and contractors
- Understand the inter-relationships among the various elements of a pipeline system
- Discover compliance approaches satisfactory to regulatory authorities
- Understand the challenges facing risk management in upstream pipeline operators

Curriculum

Modules 01–06

01 Scope

- Oil industry fluids
- Gas industry fluids

02 Terminology

- Critical terms
- Newly defined terms

03 Management Systems

- Safety and Loss Management
- Integrity Management
- Engineering assessments

04 Risk management

- Risk Acceptance Criteria
- Risk Assessment, including hazard identification, risk analysis, and risk evaluation
- Risk Control
- Risk Monitoring and Review
- Communication and Documentation

05 Pipeline Design

- Pressure containment
- Area Classification
- Component design
- Compressor and pump station design
- Operational control

06 Materials

- Notch toughness
- Material Qualification

Curriculum

Modules 06–09 · Module 06 — continued

- Reuse of Materials

07 Construction

- ROW activities
- Field Bending
- Inspection techniques

08 Installation

- Activities on pipeline rights-of- way
- Clearing, grading, and ground disturbances
- Pipe and components handling
- Bends and elbows in steel piping
- Alignment and welding
- Protective coatings

09 Joining

- Arc and gas welding — General
- Arc and gas welding — Joint configurations
- Welding details of opening with localized type of reinforcement
- Welding details for branch-to-run pipe connection
- Arc and gas welding — Materials
- Pipe and components
- Filler metals and fluxes
- Shielding gases
- Arc and gas welding — Qualification of welding procedure specifications
- Welding procedure specifications
- Welding process and method

Participation and contacts

Joining the programme

Contact the Academy and quote course code 000086 to confirm dates, delivery format, prices and enrolment terms.

Training for your team

Tell us your business goals, the roles and number of participants, and your preferred dates and location. This will help us discuss the right training option.

Preparing for the programme

The published programme does not specify any prerequisites. Contact us before enrolling to confirm how to prepare.

Discuss your training needs

mail@tecedu.org
www.tecedu.academy

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