TECHNICAL
EDUCATION
ACADEMY

School of Engineering

COURSE PROGRAMME

000085

MECH015 - Flow assurance for pipeline systems

This course is designed to provide an understanding of flow phenomena and pipeline optimization that can help participants avoid problems such as hydrates, corrosion or startup/shutdown issues.



Learn from the Best in the Business!

Course overview

Intermediate level

Why take this course

This course is designed to provide an understanding of flow phenomena and pipeline optimization that can help participants avoid problems such as hydrates, corrosion or startup/shutdown issues. This five days course will also address several critical problems in obtaining pipeline flow assurance.

Who it is for and how it helps

Those who wish to understand the technical issues in the Flow Assurance for Pipeline Systems, Engineers, Managers, Consultants and Contractors and Service Providers.

What you will learn

- Gain a systematic understanding of the concept of flow assurance.
- Apply the fundamental principles of multiphase flow and production chemistry to analyse typical flow assurance systems.
- Design for basic flow assurance and operability.

Curriculum

Modules 01–02

01 Flow Assurance for Pipeline Systems

- Introduction to oil and gas fluid transport properties
- Fluid property data and phase determination
- Single fluid flow analysis (Nikuradse’s friction measurements and Moody’s diagram)
- Multiphase fluid flow analysis
- Slug formation and prediction
- Surge analysis
- Corrosion – internal and external
- Hydrate formation and prevention
- Wax formation and deposition, including prevention and remediation
- Asphaltene prediction, scale precipitation and sand production
- Pigging operations
- Leak detection methods and SCADA
- Startup/shutdown issues

02 Pipeline optimisation

- Process of optimizing of a pipeline
- Economic analysis, Life-cycle analysis and optimization of pipeline systems
- Network analysis
- Structural analysis of pipes
- Dynamic analyses
- Pipeline component design
- Minimization of pipeline running cost
- Planning of cost efficient operations

Participation and contacts

Joining the programme

Contact the Academy and quote course code 000085 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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