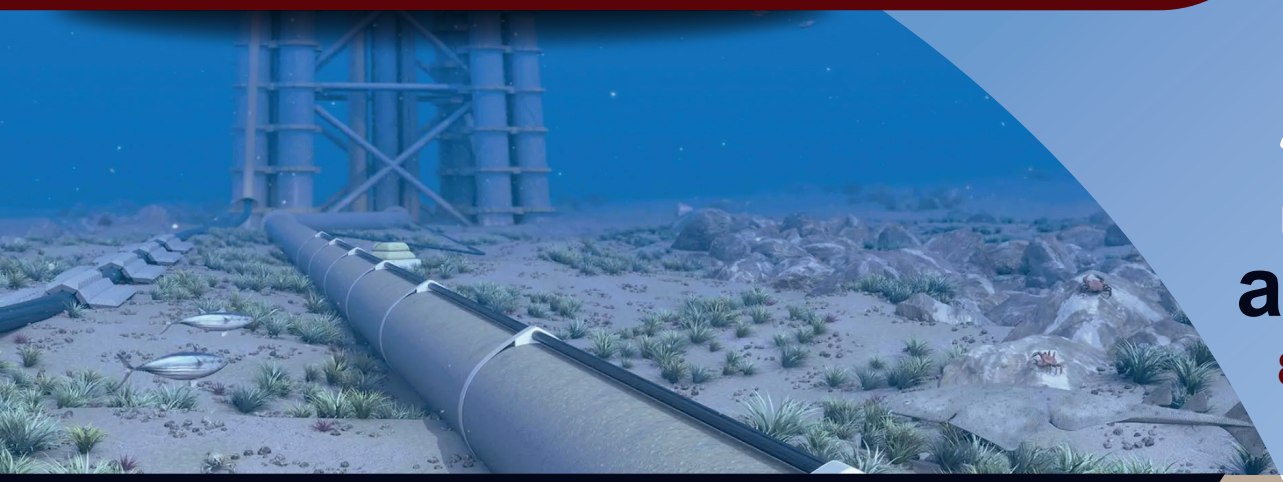
COLEGIO DE INGENIEROS DEL PERÚ

CONSEJO DEPARTAMENTAL DE LIMA
CAPÍTULO DE INGENIERÍA QUÍMICA



Inicio
24
agosto
8:30 a.m. a 4:30 p.m.

CURSO INTERNACIONAL

AN INTRODUCTORY SHORT COURSE ON SUBMARINE PIPELINE DESIGN, CONSTRUCTION AND OPERATION

Prepared by

Dr. Alan Murray, P Eng F ASME

Chief Engineer and Chief Safety Officer at the Canadian Energy Regulator. Professor at the University of Calgary Pipeline Engineering Centre.

Capacidad limitada de participantes

Programación del curso:

Jueves 24, viernes 25, lunes 28 y martes 29 de agosto 2023

Horario: 8:30 a.m. a 4:30 p.m.

Presencial
CIP CDLima. Calle Barcelona N° 240, San Isidro

Traducción simultánea Inglés-español

www.cdlima.org.pe/quimica

Course Outline and Method of Delivery

Powerpoint presentations on the following topics with videos. Class Discussion of some case studies of Interesting Projects (All in English). The Course Material will be presented in 8 Modules over three days. The Course Material will be provided to the Colegio de Ingenieros in both Powerpoint and pdf file format suitable for distribution to attendees.

Topic One

Offshore pipeline design and material selection.

Fabrication, installation and pre commissioning of subsea pipelines.

Topic Two

Umbilical, risers and flowlines design and installation.

- Facility interface with offloading systems such as FPSO and FLNG.
- Buoys (Recommended practice DNVGL-RP-N103, CALM, SALM).

Cathodic protection, SCADA systems and leaks detection system.

Topic Three

Setting up activity & certifying.

Operation & maintenance, including hoses & breakaway valve.

Topic Four

Risks assessment.

Threats to integrity and safety.

- Integrity management and maintenance on offshore pipelines.
- Pipeline inspection and repair.

Topic Five

Regulatory Oversight (ASME B31.4, ASME B31.8 API 1111, 49CFR192, 49CFR195 and DNV).

Summary of How Oversight is conducted in The Gulf of Mexico, North Sea and Offshore Australia. Use of Certification Authorities as the Regulator's Agent Comments on the U.S. Bureau of Ocean Energy Management.

Appendix A

Detailed Course Content

Offshore Pipeline and Riser Design

- This session will be an overview of the following topics
- Pipeline system layouts inter-field and export lines
- Geotechnical route survey
- Mechanical Design
- The Importance of Codes and standards DNV-RP-N103, DNV-ST-F101 , Lloyds Register
- Recommended Practice for Subsea Pipelines and US Bureau of Ocean Energy Management
- Design methods working Stress and Limit States Wall thickness according to DNV OS-F101
- Free Spanning and on bottom stability
- Pipe–soil interaction
- Expansion and global buckling. Upheaval buckling and its prevention.
- Buoyancy Considerations. Concrete coating

Loading and Offloading Systems

- Buoys: Catenary anchor leg mooring (Calm) designs and single point moorings (SPM); Articulated
- Loading platforms
- Use of flexible risers and marine bonded hoses connecting pipelines to loading manifolds
- Permanent installation on the field
- Use of dynamically positioned shuttle tankers for offshore product transfer
- Installation and connection considerations of hose umbilicals for (LNG and crude oil transfer) risk

Regulatory Oversight

- The role of the Regulator or Certifying Authority in ensuring Fitness for purpose in each part of the life of the pipeline system life in ensuring Safety, nd System Integrity
- Loading and Offloading Systems
- If time permits we will discuss:
- Pre-commissioning
- Flooding and hydrotesting.
- Cleaning. De-watering. Drying of the submarine pipeline elements
- Nitrogen purging
- Custody Transfer
- Metering

Prepared by

Dr. Alan Murray, P Eng F ASME

Chief Engineer and Chief Safety Officer at the Canadian Energy Regulator. He was a senior manager with a major Canadian pipeline operating company with responsibilities for Pipeline Construction, Maintenance, Procurement and System Design. His work experience spans research, regulation, third-party assessment, design and development in steam plant, pipelines and offshore structures. He has worked extensively in the areas of Pipeline Operations and System Integrity including developing Standards and Regulations and was a long-standing member of the CSA Oil and Gas Steering Committee.

Alan was the founding chairman of the American Society of Mechanical Engineers (ASME) Pipeline Systems Division and is the co-author of the ASME textbooks “Pipeline Design and Construction – A Practical Approach” and “Pipeline Integrity Assurance”, as well as a contributor to the “Companion Guide to the ASME Boiler and Vessel Code”.

He is an adjunct professor at the University of Calgary Pipeline Engineering Centre.

Forma de pago:

Anticipado al Titular: Colegio de Ingenieros del Perú - Consejo Departamental de Lima

- Depósito BCP Soles

Cta. Cte. 193-1206618-0-59
CCI 002-193-001206618059-12

- Depósito BCP dólares

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Costo por participante *(Inc. IGV 18%)*

A todo costo. Incluye material digital e impreso, y refrigerios durante los días de clase.

Ing. Colegiados	**S/ 2,824.00 (US$ 780.00)**
Público en general	**S/ 3,500.00 (US$ 960.00)**

INSCRIPCIÓN:

https://n9.cl/zl4cy

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Horario de atención: L - V 8:00 a.m. a 8:00 p.m.