

PIPELINES 101 – BASIC PRINCIPLES OF ONSHORE PIPELINES

December 7-8, 2015

Houston Marriott West Loop by The Galleria
Houston, TX



EUCI is authorized by IACET to offer 1.0 CEUs for the course.

OVERVIEW

This is an introductory course to pipelines. The history of pipelines, definitions and terminology, and how pipelines work will be included in the discussion on the first morning. The focus will then move to natural gas and crude oil pipelines from the planning, design, and construction to the operation, safety, and maintenance of the pipelines.

The intent of this course is that participants will be able to apply the information learned when they return to their jobs. The instructors all have years of experience in pipelines. This course will also allow support staff to better understand and effectively interface with their business development, engineering, marketing and operating colleagues.

LEARNING OUTCOMES

- Compare the major differences in the types of pipelines
- Verbalize the vernacular related to pipeline terms of design, construction and operation
- Summarize how pipelines work
- Describe the route selection process
- Articulate the right of way acquisition process
- Recognize the types of pipeline equipment
- Explain the types of pipeline facilities
- Review the requirements for proper maintenance activities
- Discuss safety practices that need to be put in place
- Describe SCADA
- Demonstrate familiarity with the major codes and standards as well as pipeline regulatory agencies

WHO SHOULD ATTEND

- Technical and operations professionals who are new to pipelines
- Midstream professionals new to technical or operations roles
- Operations, maintenance, engineering, technical, permitting, SCADA, controls, and other professionals who want to gain a better understanding of how pipelines operate
- Anyone else who would like to learn more about oil & natural gas pipelines

AGENDA

Monday, December 7, 2015

8:00 – 8:30 a.m. Registration and Continental Breakfast

8:30 a.m. – 4:30 p.m. Course Timing

12:00 – 1:00 p.m. Group Luncheon

History of Pipelines

Pipeline Definitions and Distinguishing Differences

- Crude oil pipelines
- Natural gas pipelines
- Refined product pipelines
- Petrochemical and NGL pipelines
- Gathering lines
- Distribution lines
- Water, sewer and other types of pipelines

How Do Pipelines Work?

- Physics of fluid flow
- Friction losses
- Pipe lengths
- Elevation gain/losses
- Flow rates
- Hydraulic properties of hydrocarbon fluids

Basic Pipeline Design Requirements

- Design factors and class Locations
- Pipeline sizing
- Road and water body crossings
- Terrain considerations
- Permitting requirements

Introduction to Pipeline Facility Engineering, Design, and Construction

- Route selection and route survey
 - Traditional and emerging methods
- Right-of-way/easement negotiations
- Pipeline construction (Pictorial Display)
- Other pre-construction actions

“

The course provided a great foundation for professionals new to the pipeline industry.”

– Field Engineer, COP

AGENDA

Monday, December 7, 2015 (Continued)

Pipeline Equipment and Facilities

- Pipeline equipment
 - Mainline valves
 - Pig launchers
 - Pig receivers
- Pipeline facilities
 - Meter stations
 - Pump stations
 - Compressor stations
 - Separation and dehydration
 - Processing equipment

Pipeline Maintenance and Safety

- Operations and maintenance activities
 - Smart pigging
 - DOT required tasks
 - Ground surveillance
 - Preventative maintenance
 - Reconditioning
- Safety practices
 - Communication with public, other utilities, county & local governments
 - Codes & regulatory standards
 - PHMSA regulations
 - Integrity management
 - Operator driven

Introduction to SCADA, Communication, and Controls

- Basic vocabulary
- Overview of the control scheme

AGENDA

Tuesday, December 8, 2015

8:00 - 8:30 a.m. Continental Breakfast

8:30 a.m. – 12:00 p.m. Course Timing

Introduction to Pipeline Regulation

- Environmental permitting
 - US Army Corps of Engineers
 - US Fish and Wildlife Service
 - Migratory Bird Treaty Act
 - National Historic Preservation Act – Section 106 compliance
 - Pipelines on Tribal lands
 - Federal land management agencies (BLM, USFS, BOR)
 - NEPA compliance
- Introduction to the FERC process and compliance
- State regulations
- Environmental compliance during construction

Q & A and Adjournment

INSTRUCTOR

Jim W. Best / Vice President / REM Pipeline Consultants, LLC

Mr. Best has more than thirty one years of experience in domestic and international engineering management support for gas processing/oil/refining plants and facilities, project management of onshore and offshore pipeline and compression projects, and project/business development of the early stages of major international projects. His experience also includes five years of E&P operations and maintenance management of three gas processing plants in the Permian Basin of west Texas. Projects have included onshore pipelines in the USA-Middle East & Arctic, offshore pipelines in the Middle East and North Sea, large integrated gas processing plants, LPG fractionation plants, NGL related transportation facilities, refinery relief systems, compressor and pump stations, and offshore compression and topside facilities.

The majority of Mr. Best's career was been with Amoco which later was acquired by BP. His operating company management responsibilities have included large ad-hoc engineering teams, project and business development teams, and directly managed company engineering teams teamed with engineering contractors. He has a thorough understanding of the project management process from inception, conceptual design, design selection, detail design, construction execution, and operations.

Mr. Best holds a BSME from Texas Tech University.

INSTRUCTIONAL METHODS

PowerPoint presentations will be used in this program in addition to videos and example scenarios.

PROCEEDINGS

The proceedings of the course will be published, and one copy will be distributed to each registrant at the course.

REQUIREMENTS FOR SUCCESSFUL COMPLETION OF PROGRAM

Participants must sign in/out each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

CREDITS



EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

EUCI is authorized by IACET to offer 1.0 CEUs for the course.

EVENT LOCATION

A room block has been reserved at the Houston Marriott West Loop by The Galleria, 1750 W Loop S Fwy, Houston, TX 77027, for the night of December 6-7, 2015. Room rates are \$159, plus applicable tax. Call 1-713-960-0111 for reservations and mention the EUCI course to get the group rate. The cutoff date to receive the group rate is November 6, 2015, but as there are a limited number of rooms available at this rate, the room block may close sooner. **Please make your reservations early.**

REGISTER 3, SEND 4TH FREE

Any organization wishing to send multiple attendees to these conferences may send 1 FREE for every 3 delegates registered. Please note that all registrations must be made at the same time to qualify.

REGISTRATION INFORMATION

EVENT LOCATION

Mail Directly To:

Electric Utility Consultants, Inc. (EUCI)
4601 DTC Blvd., Ste. 800
Denver, CO 80237
OR, scan and email to: conferences@euci.com

WWW.EUCI.COM
P: 303-770-8800
F: 303-741-0849

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PLEASE REGISTER THE FOLLOWING

- PIPELINES 101 – BASIC PRINCIPLES OF ONSHORE PIPELINES**
DECEMBER 7-8, 2015: US \$1395
EARLY BIRD ON OR BEFORE NOVEMBER 20, 2015:
US \$1195

ENERGIZE WEEKLY

EUCI's Energize Weekly e-mail newsletter compiles and reports on the latest news and trends in the energy industry. Newsletter recipients also receive a different, complimentary conference presentation every week on a relevant industry topic. The presentations are selected from a massive library of more than 1,000 current presentations that EUCI has gathered during its 28 years organizing conferences.

- Sign me up for **Energize Weekly.**

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

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Job Title

Company

What name do you prefer on your name badge?

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List any dietary or accessibility needs here

CREDIT CARD

Name on Card

Account Number

Billing Address

Billing City

Billing State

Billing Zip Code/Postal Code

Exp. Date

Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

OR Enclosed is a check for \$ _____ to cover _____ registrations.

All cancellations received on or before November 6, 2015, will be subject to a US \$195 processing fee. Written cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event or publication. This credit will be good for six months. In case of event cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at 303-770-8800. EUCI reserves the right to alter this program without prior notice.



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