Integrity Assessment of Early Generation (Pre-1970) Pipe

PRCI

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Why: The US has most of the world's oldest pipelines still in operation. For the purpose of this course, ”early generation” is considered to include pipelines constructed from 1910 through about 1970. Early generation pipe presents industry with unique problems related to material identification, analysis and proper integrity management planning.

The focus of the training will be on the unique characteristics of early generation pipelines, the influence of those characteristics on pipeline integrity, and inspection and analysis techniques that support the assessment of early generation pipeline segment integrity.

This course will introduce you to these challenges and how they affect both the design and operation of your pipelines. After completing this course you will have an understanding of how early generation pipe affects the integrity and safety of your pipeline. You will have an understanding of the special problems resulting from the presence of early generation pipe segments particularly with respect to corrosion analysis and prediction of growth rates. Most importantly you will have an understanding of how the problems created by early generation pipe must be addressed during the operation and continued maintenance of the pipeline.

The course is designed for:

- Pipeline Integrity management and operational personnel
- Pipeline Compliance and Safety personnel
- Materials analysis and selection personnel
- Engineering contractors and inspection service providers.

Where:

Structural Integrity
16912 Gridley Pl
Cerritos, CA 90703

When: TBA

Price: $825 per person

Instructor: Bill Amend is an Associate with the Pipeline Services group of Structural Integrity Associates Inc. Structural Integrity provides engineering and technical services related to the prevention and control of structural and mechanical failures, with emphasis on support of the pipeline industry and the power generation industry (fossil and nuclear). Bill has a B.S. in metallurgical engineering from Cal Poly at San Luis Obispo (Calif.) and 28 years experience providing metallurgical, welding, and corrosion engineering support for natural gas pipelines, oil&gas production, and geothermal energy production. Before joining the staff of SI in 2004 Bill was a Sr. Research Engineer at Unocal's Science and Technology Division, and was Principal Engineer in Southern California Gas Company's Pipeline Integrity Management Dept. While at SoCalGas Bill managed a variety of research projects for various supervisory committees of Pipeline Research Council International, (PRCI), and served as chairman of research emphasis areas related to degradation and assessment of early generation pipelines and welding on in-service pipelines.

Terms and conditions: One registration is required per person. Upon receipt of your above registration an invoice will be generated for payment. Payment is due 30 days from receipt. ½ of the course fee will be refunded provided written cancellation is received within 48 hours of the course start.
All attendees will receive a copy of the following

TECHNICAL TOOLBOXES

reports:

Field Nondestructive Examination of ERW Pipe Seams
A Limit States and Reliability-Based Girth Weld Assessment Framework for Long Pipeline Segments
Database of Mechanical and Toughness Properties of Pipe
Optimized Sampling Frequencies for Weld Reliability Assessments of Long Pipeline
Factors Influencing Girth Weld Reliability in Older Pipelines
Low Frequency ERW and Lap Welded Longitudinal Seam Evaluation
Fracture Arrest Assessment Program (FRAAP) – User's ManualTraining

Training Course Agenda/Outline

Start: 8:15AM

Resources for Technical Support

Failure Mechanisms and Incidents; when “stable” manufacturing or fabrication flaws are no longer stable.

Pipeline Integrity Management regulatory requirements, alerts and other issues related to early generation pipelines.

Early Generation Pipe Characteristics and Their Influence on Integrity and Modern O&M Practices

- The evolution of pipe metallurgy and its effect on mechanical properties, damage tolerance, and selection of damage assessment and repair methods
- Pipe manufacturing methods, pipe seam characteristics, and related vulnerabilities to failure
- The evolution of API specification 5L

Early Generation Pipeline Design, Fabrication, and Maintenance Practices

- The evolution of pipe welding practices
- Early inspection and testing practices and their influence on the current integrity of the pipeline
- Early repairs and rehabilitation practices; identification in the field, related vulnerabilities to failure, assessing their fitness for continued service

Lunch

- Wrinkle bends, expansion joints, and other odd features; their history of use, the related vulnerabilities to failure, and assessing their fitness for continued service

Indirect Examination in the Field; gathering useful field data to support integrity management of early generation pipelines

Laboratory Testing and Analysis; extracting useful information from pipe samples, and the challenge of applying traditional test methods to very old pipe
Pipe of Unknown Origin or Grade; approaches toward determining what is in the ground, with and without use of destructive testing

The issue of low toughness pipe and its effect on flaw assessment

Using Field and Lab Data to Assess Integrity of a Single Localized Feature versus a Long Pipeline Segment; An introduction to probabilistic analysis of long pipeline segments

End: 4:30- 5:00PM

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Please complete the attached form and fax to TTI at 713-630-0560

Course Date: TBA **Course Cost: $825.00**

Name/Title _____

Company _____

Address _____

Address _____

City, State, ZIP _____

Country _____

Phone/Mobile _____

Fax _____

E-mail _____

Payment by Credit Card

Circle One: VISA MasterCard AMEX

CC Number _____

Expiration Date _____

Signature* _____

* By signing above I commit to paying the course fee when invoiced

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