

Pipeline Crossings Practices & Procedures

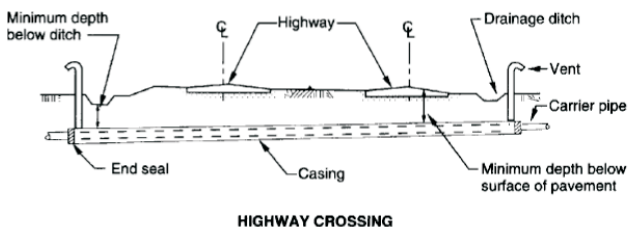
Overview of Temporary & Permanent (API 1102) Crossings



Why: Minimize pipeline crossing liability and preserve corporate assets. Discover tools to assist you in solving pipeline crossing issues

This course will provide your company personnel with an understanding of design and assessment of stresses induced on pipeline by surface loading: theory, historical methods such as Spangler, IOWA formulae, GPTC, and contemporary assessment and design techniques including API 1102/PC-Pisces and Battelle, with their scope and limitations, regulations requirements, and recommended practices.

One of the more common problems faced by pipeline professionals today involves pipeline crossings. Published documentation and recommended practices and procedures regarding pipeline crossings have not kept up with research and technology, and engineers are constantly faced with problem solving in this arena. API RP 1102, Steel Pipelines Crossing Railroads and Highways, gives primary emphasis to provisions for public safety. It covers the design, installation, inspection, and testing required ensuring safe crossings of steel pipelines under railroads and highways. However it does not cover temporary pipeline crossings, which many engineers and managers must deal with every day.



HIGHWAY CROSSING

This course will address gas and liquid pipeline crossings under typical and non-typical conditions, with particular emphasis on regulation/compliance review, recommended practices for design and construction and case studies. It will also cover research done by GTI (formerly GRI), the Pipeline Research Council International, Inc. (PRCI) and other

organizations. This Pipeline Crossings Course is structured for all pipeline personnel and provides an understanding of the theory and practices regarding crossings, but most importantly how to solve pipeline crossing problems under various conditions.



The course is designed for:

- Pipeline engineers and gas distribution engineers
- Engineers, technicians, and service professionals involved with construction, maintenance, inspection, and repair of liquids, gas, and products pipelines.
- Project managers with oversight for third party engineering or maintenance.
- Project and facility managers concerned with system integrity and maintenance.

Where: Technical Toolboxes, Inc. offices located at 3801 Kirby Drive, Suite 520, Houston, TX 77098. Inside Loop 610 close to the intersection of I-59 and Kirby (map to be provided).

Price: \$795 per person

Instructor: Wayne Wildenradt, BSCE, Purdue University; MBA University of Wisconsin ; Texas Professional Engineer #33030, Texas Registration to offer and perform engineering services #F-2773. Forty- eight (48) years global experience in the design, engineering and project management services for oil, gas and refined product systems and components. In addition, Mr. Wildenradt was an Instructor, Economics of Pipeline Transportation at the University of Texas School of Pipeline Technology.

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. 1/2 of the course fee will be refunded provided written cancellation is received within 48 hours of the course start.



**Pipeline Crossings - Practices & Procedures
Training Course Agenda/Outline**

Start: 8:15AM

- I. Introduction and History
- II. Permanent Crossings - API RP 1102
 - Uncased Crossings
 - Applicable Regulations
 - Loading Factors
 - Pipe/Soil Interaction
 - API 1102 Design Steps
 - Pipeline Stresses
 - Cased Crossings
 - Applicable Regulations
 - Installation Requirements
 - Required Design Input
 - API 1102 Case Studies
- III. Temporary Right of Way (ROW) Crossings
 - Background
 - Point Loading (Wheel Loading)
 - Distributed Loading (Track Loading)
 - Required Assessment Input
 - Wheel Loading Examples
 - Track Loading Examples
- IV Summary Discussion

END Scheduled for 4:30PM

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

Course Cost:

Course Date:

Name

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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