

Course Content

Title: Buried Metallic Pipe Analysis and Integrity Evaluation

Potential PDH: 16

Code: BTT013

Description:

A two-day course that addresses the design and analysis of buried metallic pipe, their technical basis and practical application. We will develop the design loads: normal and transient pressure, temperature, soil and surface loads, flood loads, settlements, and seismic. We will perform design calculations using simplified formulas, and have an introduction to more advanced analysis methods. The course will then provide an example for evaluating the integrity and remaining life of corroded buried pipe.

Outline:

Part 1: Design Analysis

- Categories of buried pipes and pipelines
- Regulations, Codes and standards overview
- Technical references
- Loads applied to buried pipe
- Pressure design
- Soil and surface loads design
- Constrained thermal effects
- Flood and flotation
- Ground settlement
- Seismic wave passage and anchor motions

Part 2: Integrity Evaluation

- Run-or-repair decision process
- Damage mechanisms
- General metal loss evaluation
- Local thin area evaluation
- Pitting evaluation
- Cracking evaluation

Instructor:

Mr. George Antaki, PE, Fellow ASME, Becht Engineering, Aiken SC USA, has over 43 years of experience in design, qualification, fabrication, trouble-shooting, fitness-for-service, and repairs of ASME pressure equipment and piping systems. He is past vicechairman of API 579/ASME FFS joint committee, and past member of ASME PCC-2. He is currently member of several ASME Code Committees, and a master instructor for ASME. He is the author of three textbooks on integrity and repairs of pressure equipment and piping systems.