

IRON STRONG

TRAINING & PRESENTATION TOPICS

1. Ductile 101 - Introduction to Ductile Iron Pipe

A conversational presentation covering Ductile Iron Pipe (DI pipe) manufacturing, design, installation, hydrostatic testing, and things you never thought you'd see when ... you're just building a pipeline.

2. Ductile Iron Pipe Design - Internal & External

A behind-the-scenes look inside the AWWA C150 DI PIPE design standard utilizing the power of the McWane Pocket Engineer. Brings the math alive, permitting quick comparisons towards your most efficient and effective pipeline materials selection.

3. <u>Basics of Corrosion & Protections for DI Pipe – Guided by</u> <u>the Updated DIPRA-Corrpro Design Decision Model™</u> (DDM[™])

Corrosion principles are simple. Yet the application of such is often confounded by rhetoric, nuanced agendas, or other influences outside the needs. We present the knowns; you decide how they work best for you.

4. Preliminary Engineering Report (PER) Template

This template provides applicants and professional consultants submitting a PER for USDA funding with engineering data that will justify the use of DI pipe. Formatted to follow provisions of Bulletin 1780-2, Section 1, which clearly indicates the analysis of alternative materials, is applicable when preparing the PER.

5. Internal Corrosion Prevention for DI Pipelines

Corrosion has many contributors. Today's DI pipe offers many preventive options. Sources of internal corrosion and the proven resolve for each are detailed in this presentation.

6. Ductile Iron Pipe Restrained Joints - Basics and Design

How much restraint joint DI pipe to use and where can become complicated. Not so if you follow the procedures outlined in the DI PIPERA Design Guide using the McWane Pocket Engineer.

7. Bridges, Casings, and Joints ... Oh My

A comprehensive review and experienced suggestions for using DI pipe in non-buried installations such as bridges, casings, on-piers, and/or temporary bypass lines. An engineering perspective of common-sense solutions.

8. Sustainable Pipeline Design / Life Cycle Cost Analysis

Simply call it a DI pipe vs. ALL costs & concerns engineering comparison of pertinent factors towards selecting your proper pipeline material.

9. ENVISION[™] and Ductile Iron Pipe

Some call this the ASCE version of LEEDS. Yet Envision digs deeper towards a sustainable and overall environmentalfriendly focus for planning, design, construction, and the lasting operation of all types of utility systems.

10. The Total Cost Equation of Pipeline Material Selection

A real-world analysis of a model pipeline project comparing the actual costs of using DI pipe vs. PVC from a contractor's perspective. It's more than just pipe costs.

11. <u>DI PIPE, PCCP, HDPE, PVC, STEEL & FRP – A Comparative</u> <u>Narrative</u>

Factual analysis of true differentials when selecting pipeline materials in utility systems. Internal and external design parameters, energy savings, construction variables, and service lives are examined in the appraisal of these alternates.

12. Horizontal Directional Drilling Using Ductile Iron Pipe

Principles, practices, and problems to avoid when designing or constructing trenchless installations of DI pipe. Highlighted with videos of actual HDD installations across the USA. The McWane PE HDD Variable Profile Calculator is also featured.

13. Ductile Iron Pipe Certifications - What They Provide

Examining the rigorous and certified product evaluations that are in place to ensure the use of high-quality low-risk products in utility systems. AWWA, NSF, FM, ISO, and UL are among the certifications presented and discussed.

14. Generational Attitudes in the Utility Workplace

Presented by / from the perspective of a prestigious University faculty member, this case-study based presentation explores the effective management of differing generational attitudes and values in today's workplace.

15. Seismic Resilience for Buried Pipelines

Designing or retrofitting for seismic resilience can play a major role in mitigating damage to buried pipelines due to seismic hazards. Recent developments will be discussed that provide additional protection options.