

Construction Inspection Training for Trenchless Rehabilitation Projects—

How One Class May Save Your Project

By John Jurgens

“Trenchless Pipeline Rehabilitation”

Imagine for a moment that you're a buyer for a large, well-known, international corporation. You've had responsibility for buying a lot of things for this company over the years – your newest task is to purchase airplanes.

You've been working with a firm you believe provided the lowest responsible bid package per your specifications. You're not entirely sure if they were because you've never dealt with submittals for airplanes before. Saying he can explain everything, the company representative for the airplane-manufacturing firm has asked to meet you. You've agreed.

It's a damp, foggy day, and you're standing out in your corporation's parking lot. The rep is very excited, telling you what a wise decision you've made in working with his company. He's holding a picture of an airplane in his hand and is gesturing at it excitedly while talking about the features and benefits of this aircraft.

You're cold, you're standing outside and you're wishing for a hot cup of coffee. As you listen to the rep's sales pitch, you begin to hear the sound of airplane engines. You soon realize they are approaching where you're standing, then hear them pass by you. You've just had a fly-over.

The representative beams, “That's your new plane!” He again gestures to the photograph he's been holding since you came out into the cold. His dialogue continues, “Here's a picture of it. Nice isn't it? It's going to your facility in Europe right now!”

You smile and say, “Great, I'll go back to the office and process this paperwork so you're paid”.

Is this the formula for keeping your job? Replace

the word “airplane” with “pipeline rehabilitation” and you'll begin to see the similarities. In the trenchless industry, acceptance on a project's materials and workmanship is often based exclusively on an assumption that something has happened underground – maybe you've had a quick glimpse – and a picture has been furnished to verify the job is complete.

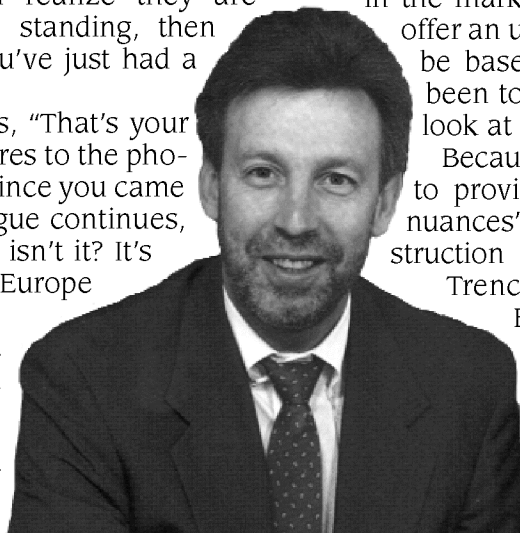
Unfortunately, many people are experienced in buying products but few are accustomed to buying a process.

In the airplane example, how many times could the buyer have verified exactly what it was he had purchased? Should the fly-over be his only means of final acceptance? Of course not. The wise buyer will also depend upon feedback from those in his organization who will be using the plane.

With trenchless pipeline rehabilitation, how should this type of collaboration be done? In 1995, after years of working in the field on a variety of trenchless pipeline rehabilitation projects, my partner Dave Gellings and I decided the industry needed a means of educating inspectors and engineers in the marketplace. This education, which would offer an unbiased approach to education, was to be based on field experiences. Our goal has been to help agencies breathe oxygen as they look at rehabilitation.

Because we believe the need is most critical to provide unbiased training in “construction nuances” for inspectors, engineers and construction managers, we began partnering with Trenchless Technology Inc. to offer our Engineer & Inspector Awareness Training at all **TFS** Rehab Road Shows.

The industry has experienced significant changes and the **TFS** seminars, continue to adapt. The one-day program strives to provide a balance between understanding the specifica-



tions of a project and a project's on-site installation procedures.

We try to steer clear of design issues and product evaluations in the course. Our goal is to emphasize fundamentals of system maintenance and construction rehabilitation, not theory.

Let's face it - not every repair method is appropriate for every situation. Certain processes will work marginally, others will fail completely when used in the wrong type of repair. Unfortunately, incorrect choices are often made, whether due to inexperience or ignorance.

We've watched as repair methodologies have been chosen, installed and failed in use only to have both the specifying engineer and the owner of the system vow to never use the product again. With so many tools in the toolbox for rehabilitation, we didn't want to see stereotypes and misconceptions occur with cured-in-place-pipe (CIPP), fold-and-formed, sliplining, annular space grouting, chemical grouting, pipe bursting, spot repairs and manhole restoration.

We have seen how projects have occurred, where a solution to a problem is identified, specified and then employed. Basically, three things can happen to make a project fail in the field:

1. Poor identification of the problem.

Understanding what the problem is and investigating ways to repair it's much more effective than specifying the repair method first and assuming it will be appropriate for the problem. What happens is that perhaps the wrong solution is identified as a fix. Perhaps you can use a wrench as a hammer but will it do the job as well?

2. Poor understanding of the project.

The contractor doing the work was able to bond the work, but does he understand the goals of the project? Just because you can paint a house, what are the steps you need to take prior to painting? What if it's raining the day you decide to paint the house? Should you go ahead and do the work?

3. Poor application of the process.

Does the inspector understand all of the subtleties that go along with this work and is he or she able to make proper decisions? Do the inspector and engineer understand all the steps that must be taken? How can an inspector be certain a completed job has been done properly if he or she hasn't inspected the project before, during and after construction?

Experience is critical. If you've only seen a handful of projects how do you know if the work is being done poorly? Are you depending upon tax dollars to allow for your learning curve? Even if you follow the letter of a poorly written specification, your project will likely turn out to be a failure.

What else could you as the airplane buyer have done to verify the plane issue? Of course, you should have had someone at the plant keeping an eye on the construction and delivery of the aircraft. If you had worked with an inspector at the plant, what type of education or prior knowledge would have been appropriate? Obviously, a first-time inspector would not have been ideal.

That's the goal of this training: to help agencies understand the steps needed to ensure success on a project. Our training aims to educate agencies regarding a manufactured product's or procedure's nuances in field applications. Our classes teach you to create benchmarks for inspection during the course of a project that will help enable you to avoid costly, discouraging or dangerous failures.

For additional information or to register for this training session or other **TFS 2000** Rehab Road Show Seminars.

CONTACT: Tammy Nelson or Dick Krzys at ttmag@ttmag.com or call (330) 467-7588

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