

NORTHWEST FORUM ON TRENCHLESS TECHNOLOGY

Clark Regional Wastewater District, 8000 NE 52nd Court, Vancouver WA, 98668
Operations Building, Board of Commissioners - Hearing Room

Thursday, November 5, 2009

AGENDA

Joint Session with Invited Industry Participants

- 8:30 Coffee and reception
- 9:00 Welcome and introductions
- 9:15 TECHNICAL PRESENTATIONS/FIELD DEMONSTRATIONS
- 9:15 - 9:45 **Coatings and Linings for Underground Structures**
 ... Rocky Capehart, *Sprayroq*
- 9:45 - 10:15 **Manhole Rehabilitation Decision-Repair or Replace?**
 ... Peter van Arkens, *Environmental Coatings/Sewer Shield Composites*
- 10:15 - 10:30 Break
- 10:30 - 11:00 **New Installation, Slipline and Pipe Burst Rehabilitation Options with Fusible PVC™...** Cal Ogle, *Underground Solutions*
- 11:00 - 11:30 **Microtunneling in the Pacific Northwest: The Contractor's Role**
 ... Donald Gonzales, *Northwest Boring Co*
- 11:30 - 12:00 **Manhole Inspection: Existing Challenges and New Technologies**
 ... Eric Sullivan, *Atlas Inspection Technologies Inc*
- 12:00 - 12:15 **Field Demo: Panoramo 3D Optical Pipeline Scanning**
 ... Eric Sullivan, *Atlas Inspection Technologies Inc*
- 12:15 Lunch
- #### **Municipal Participants only Session**
- 1:00 Discussion and information sharing
- 3:00 Adjourn

PRESENTATION SUMMARIES

Coatings and Linings for Underground Structures

By Rocky Capehart, *Sprayroq*

Coatings and linings used in wastewater, potable water, gas and industrial facilities for infiltration/inflow control, corrosion protection and structural enhancement will be discussed. Recommendations will be given on how to select the right systems and to match problems with solutions. Different products options will be discussed for corrosion protection, infiltration/inflow control & structural renewal. Public agencies (e.g., City and County of LA, City of Houston), Trenchless Technology Center, ASTM, and NACE have reviewed & tested many available coating systems for structural capabilities and corrosion resistance. Some underground coating installation variables include ambient & time related conditions, facility accessibility, certified equipment for quality installation & required coating thickness for service requirements & longevity. The presentation will demonstrate that successful coating installations typically focus on surface preparation for proper adhesion of the material resulting in a monolithic or pin-hole free installation. Some recommended installation objectives are included, i.e. proven & tested products & equipment, quality assurance & quality control during construction, qualified contractors, specific inspection parameter, trained inspectors and third party testing.

Manhole Rehabilitation Decision-Repair or Replace?

By Peter van Arkens, *Environmental Coatings/Sewer Shield Composites*

The Sewer Shield repair process for manhole rehabilitation will be presented. The process has been used successfully for over 28 years. Composite manhole inserts made of Sewer Shield 100 epoxy resins build free-standing manholes, designed and engineered to replace/rehab deteriorated manholes due to corrosion. Inserts vary in length as needed, providing maximum flexibility.

New Installation, Slipline and Pipe Burst Rehabilitation Options with Fusible PVC™

By presenter TBA, *Underground Solutions*

The development of Fusible PVC™ pipe, with fully restrained, gasketless, leak-free joints, having the same strength as the pipe, allows Fusible PVC™ pipe to be used in trenchless applications. The benefits of using this pipe are lower overall installed costs and reduced long-term operation and maintenance programs necessary for conventional piping systems. The presentation will discuss the material properties and technology behind this joining method for PVC pipe. Regional projects that have utilized this innovative product will be outlined: Mukilteo, WA (2,600 LF sanitary sewer replacement project installed by on-grade HDD using 20" FPVC™ pipe), Bremerton, WA (41,000 LF force main rehabilitation project using 8", 10" and 16" FPVC™ pipe installed by sliplining, HDD and direct bury), Miles City, MT (4,800 LF potable water line rehabilitation using 6" Fusible C-900® pipe installed by pipe bursting), Waldport, OR (800 LF potable water line installation using 12" Fusible C-900® pipe installed by HDD).

Microtunneling in the Pacific Northwest: The Contractor's Role

By Donald Gonzales, *Northwest Boring Co*

This presentation will provide an overview of microtunneling and discuss things to look out for while designing or building a microtunnel project.

Manhole Inspection: Existing Challenges and New Technologies

By Eric Sullivan, *Atlas Inspection Technologies Inc*

This presentation will address the importance of inspecting, maintaining and rehabilitating manholes. This presentation will cover the traditional methods of manhole inspection and assessment, as well as newly introduced technologies. The emergence of inspection reporting methods and standards will also be discussed.

FIELD DEMO: Panoramio 3D Optical Pipeline Scanning

A 3D optical scanner for sewer pipe inspection will be demonstrated. The scanner consists of two high-resolution digital cameras at the front and rear of the crawler with 186° “fish-eye” wide-angle lenses. Both cameras are synchronized with the crawler wheels and cable reel to snap pictures every 2 in. at a rate of 70 ft/minute without stopping. In addition to producing real-time footage for the operator, the hemispherical photos are then stitched together to form a complete 360° interactive view of 100% of the pipeline where an inspection can then be performed virtually in an office. Images can be flattened to an increased resolution of 3,000 lines and allowing for point-to-point measurement.