



SUMMER 2022

TRENCHLESSTECHNOLOGY.COM/CANADA

Trenchless TECHNOLOGY

CANADA

THICKWOOD TRUNK SEWER INSTALL

Project Increases Resiliency of Storm, Sanitary Systems

ALSO
INSIDE

CUIC Launches at
University of Alberta

2022 Directory of Canadian
Trenchless Contractors

COVER STORY



28 THICKWOOD TRUNK SEWER – DIRECT PIPE INSTALLATION

The Regional Municipality of Wood Buffalo (RMWB) has experienced several environmental events that have caused significant damage to the region over the last decade. Working with the RMWB, Associated Engineering was retained to design major upgrades for the water, sewer and storm across the Thickwood Neighborhood. *By Christopher Lamont, Mason Ross and Jason Lueke*

ON THE COVER

An aerial shot of the Thickwood Trunk Sewer Direct Pipe installation. Innovative Pipeline Crossings (IPC) – now Bothar – handled the trenchless component.



PUBLISHER
Kelly VanNatten | kvannatten@benjaminmedia.com

FOUNDER
Bernard P. Krzys | bkrzys@benjaminmedia.com

EDITORIAL
Editor:
Sharon M. Bueno | sbueno@benjaminmedia.com

Managing Editor:
Mike Kezdi | mkezdi@benjaminmedia.com

Editorial Consultant:
James W. Rush | jrush@benjaminmedia.com

Contributing Staff Editors:
Andrew Farr • Pam Kleineke • Brad Kramer

SALES+MARKETING
Trenchless Ambassador:
Dan Sisko | dsisko@benjaminmedia.com
Advertising Account Manager:
Hannah Schiffman | hschiffman@benjaminmedia.com
Advertising Account Manager:
Maura Bourquin | mbourquin@benjaminmedia.com
Sales Coordinator / Webinar Specialist I:
Meghan Squires | msquires@benjaminmedia.com
Sales Coordinator
Chelsea Ulmer | culmer@benjaminmedia.com

PRODUCTION+FULFILLMENT
Design Specialist II / Production Coordinator:
Deborah McManus | dmcmanus@benjaminmedia.com
Web / Digital Marketing Director:
Mark Gorman | mgorman@benjaminmedia.com
Audience Development Coordinator:
Allison Holt | aholt@benjaminmedia.com

EDITORIAL ADVISORY BOARD
Mark Knight, PhD, P.Eng., executive director for the Centre for Advancement of Trenchless Technology (CATT)
Alireza Bayat, PhD, P.Eng., professor at the University of Alberta and director of the Consortium for Engineered Trenchless Technologies (CETT)
Gordon R. Henrich, owner and president, Pipeline Integrity Technology Associates
Ian Doherty, P.Eng., president, Trenchless Design Engineering Ltd.
Benoit Coté, vice president, Aqua-Pipe/Sanexen Environmental Services
Jason Lueke, PhD, P.Eng., national practice leader for trenchless services, Associated Engineering
Ashley Rammeloo, P.Eng., City of London, Ontario

REPRINTS
Wright's Media
Ph: 877-652-5295 • Fax: 281-419-5712



Chief Executive Officer:
Bernard P. Krzys | bkrzys@benjaminmedia.com
President:
Robert Krzys | robk@benjaminmedia.com
Controller:
Marianne Saykes | msaykes@benjaminmedia.com

10050 Brecksville Rd.
Brecksville, OH 44141 USA
330-467-7588 • Fax: (330) 468-2289
www.benjaminmedia.com
e-mail: info@benjaminmedia.com

TRENCHLESS TECHNOLOGY CANADA

CONTRACTOR DIRECTORY

16 CANADIAN TRENCHLESS CONTRACTORS DIRECTORY

We are pleased to present the *Trenchless Technology Canada* Contractor Directory, a yearly resource focused on helping find the right contractor for upcoming trenchless projects. From new installation, to cleaning and rehabilitation projects, we've got it covered on these pages whether the project is in Dartmouth, Nova Scotia; Richmond, British Columbia; or every point in between.

FEATURES

14 INNOVATING UNDERGROUND INFRASTRUCTURE

Officially launched in April, the Canadian Underground Infrastructure Innovation Centre (CUIIC) is a new research, innovation and education hub based in the Faculty of Engineering at the University of Alberta. *By Mike Kezdi*

24 TACKLING TWIN CASING PIPE RAMS IN BANFF

For the Lake Louise Water and Sewer Upgrades project, guided pipe ramming with pilot tube was specified for installing the casings under the Trans-Canada Highway. *By Jim Schill*

32 GPR AND THE IMPORTANCE OF A MULTI-METHOD UTILITY LOCATING TOOLKIT

This article will discuss one of the key components of the SUE toolkit, Ground Penetrating Radar (GPR) and how it can help keep both your employees and your bottom line healthy and happy. *By Dan Welch*

34 EDFPS: THE MUD ENGINEER, YOU NEVER KNEW YOU HAD

Engineered Drilling Fluid Programs (EDFPs) act as a guide for tank hands, a bidding tool for contractors and as an educational tool for owners. *By Brandan McGuire*

38 GET TO KNOW GROUTING

With an eye on educating new technicians and reinforcing training in more experienced grouting crews from Quebec and Ontario, Aries Industries Inc., Logiball and Prime Resins joined together to host a Municipal Grout School. *By Marc Ancil*

40 WINNIPEG PRESSURE PIPE REHAB

Through a routine inspection, the Winnipeg Water and Waste Department found that a pair of 450-mm steel and asbestos cement siphon lines under Sturgeon Creek were beginning to fail. *By Mike Kezdi*

DEPARTMENTS

- 8 News
- 42 Products
- 43 Industry Happenings

COLUMNS

- 6 Editor's Message

MARKETPLACE

- 43 Index of Advertisers



Promoting Technology in the Utility Construction Industry



VISIT US ON

 @TrenchlessTech

 @TrenchlessTech

 linkedin.com/showcase/trenchless-technology-magazine

TRENCHLESS TECHNOLOGY CANADA, a supplement of TRENCHLESS TECHNOLOGY (ISSN 1064-4156) is published quarterly, Copyright 2022, Benjamin Media, Inc., 10050 Brecksville Rd., Brecksville, OH 44141. All rights reserved. No part of this publication may be reproduced by any means without written permission from the publisher. Subscriptions to TRENCHLESS TECHNOLOGY CANADA are complimentary in Canada. Classified advertising and subscription address changes should be addressed to the Brecksville office.

Get to Know Grouting

Education Canada on one of the Oldest Trenchless Methods

By Marc Ancil



With an eye on educating new technicians and reinforcing training in more experienced grouting crews from Quebec and Ontario, Aries Industries Inc., Logiball and Prime Resins joined together to host a Municipal Grout School.

tions and demonstrations have evolved and are continuously refined so that technicians can better understand and operate grouting equipment for optimal results. A large section of time is spent on troubleshooting, as it is an essential component in the chemical grouting process and it is important to give the attendees the tools needed to be efficient in the field.

Industry specialists can agree that education is key. The two-day class is

now in its 16th year, with at least two classes per year. Now called the Municipal Sewer Grout School, this educational class has been held more than 40 times throughout North America with more than 1,000 attendees over the years.

The most recent gathering – taking place the week of May 9 – was held at the Aries Canada headquarters in Vaughan, Ontario. Hydreau Environnement graciously drove their Aries CCTV/Grout to the class. The two-day class is a mixture

More than 15 years ago, Dick Schantz, a product manager for Aries Industries and former chairman of NASSCO's Infiltration Control Grouting Committee (ICGC) had the idea of gathering grout equipment manufacturers and chemical grout suppliers to organize what was then called the Grout Boot Camp.

Schantz saw a need for educating grouting technicians, municipal operators, engineers and inspectors on the benefits and mechanics of grouting and grout mixing for predictable results for inflow and infiltration (I/I) control in municipal sewers.

The first class was held in 2006 in Pompano Beach, Florida at the Aries Industries Service Center.

Since then, the agenda, presenta-



of presentations, hands on breakout sessions, demonstrations and exchanges.

Whether attendees are new or existing operators, municipal engineers, inspectors or simply taking a deeper dive in the technology, they leave with a much better understanding of the process and the tools to make this technology work for their I/I control.

NASSCO's ICGC has just published two new specifications for sewer grouting. The first, "Pipeline Packer Injection Grouting Master Specification" is the culmination of a six-year effort to define the process of capital grouting. This technique of testing and sealing mainline joints and laterals is a stand-alone process aimed at creating a cradle-like grout formation promoting pipe stabilization in the bedding and a volumetrically significant, long-term, water seal outside the pipe, increasing the life cycle of a sewer system. Capital grouting methods are soundly based on actual soil-grout matrix formations observed while sealing pipes in different bedding materials using various gel times and solids concentrations. Included with the new release is an interactive grout goal calculator which will help engineers and inspectors determine the correct gel times and installation amounts necessary to achieve the expected long-term results.

The second document, "Pipeline Packer Injection Pre-Rehabilitation Grouting Master Specification" redefines the process of stopping infiltration for the purpose of installing other rehab methods – for example: Cured-in-place pipelining. These practices focus on placing a minimum amount of grout in the pipe gasket space and immediately outside the pipe defect.

In the last half of 2021, the ICGC released a new video that provides an overview of sewer grouting and the processes that are employed to eliminate I/I while creating pipe stabilization. The six-minute video (which can be viewed



at nassco.org/videos) is filled with new animations, pictures and more that help visually describe the processes that are involved in mainline, lateral and man-hole grouting.

With the newly released guidelines from NASSCO, the video, grout test cell white paper to come and updating the website, it's an understatement to say that municipal grouting is on the rise.

Educating the industry on the benefits of grouting is complimentary to these actions.

Marc Anctil is the president of Logiball.

