



June 4-5, 2019

Helical Piles - Tiebacks - Anchors TRADESHOW & EDUCATIONAL SEMINAR

Hamilton County Fairgrounds | Cincinnati, Ohio

PRELIMINARY TECHNICAL PROGRAM*

DAY 1 – TUESDAY, JUNE 4, 2019

7:30 AM - 8:30 AM

Registration in Parking Area

7:30 AM – 8:30 AM

Networking Breakfast in Outdoor Exhibit Area

7:30 AM - 8:30 AM

Speaker Preparation Meeting

8:30 AM - 8:45 AM

Welcome to Tradeshow and Introduction to Day 1 Activities

Bill Bonekemper, Helical Pile World LLC

Gary Seider, P.E., Hubbell Power Systems, Inc. | CHANCE®

This presentation will outline the purpose and goals of the seminar including the schedule, layout, and content of the indoor and outdoor presentations and demonstrations.

8:45 AM - 9:15 AM

Introduction to the Pile Prediction Competition

Ron Lech, P.E., Terracon-Subsurface

Nick Farkas, GRIP-TITE MFG. CO. LLC

A pile prediction competition will be held during the seminar. The competition is a “game” in which attendees are invited predict the ultimate capacity of helical piles prior to a static load test based on provided geotechnical data. Subsurface exploration information (boring logs and laboratory index test results) will be provided to support predictions. The piles will be tested during the seminar, the results compared to predictions, and an evaluation of the variability of predicted capacities based on design method will be discussed. This presentation will describe the rules and process for submitting predictions prior to the load testing.

9:15 AM - 10:00 AM

Helical Pile Design 101 (use field demos as examples where possible)

Howard Perko, Ph.D., P.E., Magnum Piering, Inc.

This presentation will cover a broad range of topics related to helical pile design. Applications, material types and sizes, design methods (pre-construction prediction of resistance) and load-to-torque corrections (prediction of resistance during installation),

* Subject to change

grouting and the importance of quality control and assurance to verify designs and performance.

10:00 AM - 10:30 AM

Networking Break in Outdoor Exhibit Area

10:30 AM - 11:00 AM

Building Code and Specification Methods

Howard Perko, Ph.D., P.E., Magnum Piering, Inc.

Helical piles are governed by a variety of local and national building codes requirements. This presentation will highlight the helical-specific sections of the International Building Code (developed by the International Code Council (ICC)) which governs the majority of helical pile construction in the U.S. AC308 Acceptance Criteria for Helical Piles, the ICC's International Code Council Evaluation Service (ICC-ES) will also be presented including how to obtain AC certification for helical products. Other codes will be referenced, including AASHTO and the Canadian Building Code. Also discussed will be thoughts on whether common industry standards limit the innovation, new materials and installation methods, and how to develop specifications that encourage responsible yet competitive bids.

11:00 AM - 11:30 AM

Additional Design Consideration – Corrosion Potential

Marilyn Lewis, P.E., CPS, Lewis Engineering, PLLC

Typical corrosion mechanisms and mitigation methods will be presented that are specific to helical piles. Common laboratory test protocols will be outlined that can be used to identify corrosion potential and thresholds for identifying extreme conditions that warrant specialty consultation. Corrosion mitigation methods will be presented including sacrificial steel, galvanizing, coatings (epoxy or others, exterior and interior grout). Impacts of coupling type (e.g., welded vs threaded vs pinned connection) between segments on corrosion rate.

11:30 AM - 12:00 PM

Installation Quality Control and Assurance (QC/QA)

Raja El-Awar, P.E., MSCE, FES Group, LLC

John Pack, P.E., Heli-Pile®

This presentation will outline quality control procedures and documentation, highlighting the critical information that must be documented during installation. Pile construction data, grouting parameters, and techniques for collecting torque data for establishing torque versus depth relationships will be described. Quality assurance processes will be outlined with an emphasis on conducting the testing required to verify design assumptions and performance.

12:00 PM – 1:00 PM

Networking Lunch in Outdoor Exhibit Area

1:00 PM - 1:15 PM

Introduction to Outdoor Demonstrations

Matt Conte, CPC, Conte Company

This session will present the layout, schedule and safety procedures for the outdoor installation demonstrations.

1:15 PM - 4:15 PM

Outdoor Demonstrations

Day 1 outdoor demonstrations will focus on helical pile materials, installation methods, quality control procedures and documentation, torque measurement practices, and connections.

4:15 PM - 4:30 PM

Closing of Day 1

4:30 PM - 6:00 PM

Networking Reception in Outdoor Exhibit Area

DAY 2 – WEDNESDAY, JUNE 5, 2019

8:30 AM - 9:30 AM

Registration in Parking Area

8:30 AM – 9:30 AM

Networking Breakfast in Outdoor Exhibit Area

8:30 AM - 9:30 AM

Speaker Preparation Meeting

8:30 AM - 8:45 AM

Welcome to Day 2

Karen Dawson, P.E., Jacobs

Welcome to the Day 2 activities. Pile prediction competition entries due no later than end of coffee break.

8:45 AM - 9:30 AM

Additional Design Considerations – Cyclic Loading and Helical Pile Groups for Lateral Resistance

Amy Cerato, Ph.D., P.E., University of Oklahoma

Additional design factors for helical piles subject to cyclic and lateral loading due to wind, machine loads, seismic forces will be discussed. Other considerations will be addressed including when finite element modeling of soil-structure interaction is needed, procedures for designing lattice towers or monopoles, how to develop alternate designs using helical pile systems that can meet structural loading and allowable deformation demands.

9:30 AM - 10:15 AM

Static Load Testing

Wayne Thompson, P.E., CTL|Thompson, Inc.

Static load testing will be described and demonstrated in detail during the seminar. An overview of the equipment, test setup, safety procedures, instrumentation, and data collection equipment, techniques and documentation will be presented. Interpretation of load test results will be discussed, including typical acceptance criteria specified in codes and procedures for defining “failure.”

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| 10:15 AM - 10:45 AM | Networking Break in Outdoor Exhibit Area |
| 10:45 AM - 11:15 AM | <p>Dynamic Testing Benjamin White, P.E., GRL ENGINEERS, INC. <i>Dynamic load testing techniques used for helical pile foundations will be presented. Strategies for developing an optimal load test program that uses dynamic load testing to supplement static load testing will be described. Dynamic testing equipment, procedures, analyses and special conditions will be overviewed.</i></p> |
| 11:15 AM - 12:00 PM | <p>Innovations and Advancements Various <i>Recent advancements in the use of helical pile foundations will be highlighted in these hot spot presentations. Topics to be confirmed, but could include connections, grouting, energy foundations, use of helical piles for transmission tower foundations, limited access applications, large diameter helical pile capacities.</i></p> |
| 12:00 PM - 12:15 PM | <p>So you want to be a helical contractor... Matt Conte, CPC, Conte Company <i>This session will overview strategies for entering the construction market as a helical contractor, including becoming a certified installer, and insurance and equipment requirements.</i></p> |
| 12:15 PM - 1:15 PM | Networking Lunch in Outdoor Exhibit Area |
| 1:15 PM - 1:45 PM | <p>Introduction to Outdoor Demonstrations Howard Perko, Ph.D., P.E., Magnum Piering, Inc. <i>This session will present the layout, schedule and safety procedures for the outdoor installation demonstrations.</i></p> |
| 1:45 PM - 3:45 PM | <p>Outdoor Demonstrations <i>Day 2 outdoor demonstrations will focus on load test set ups, static load testing procedures, dynamic load test methods, and quality assurance procedures.</i></p> |
| 3:45 PM - 4:45 PM | <p>Pile Prediction Summary and Results <i>The results of the static load tests will be presented and discussed. Pile predictions will be compared to the actual test results and the attendee who entered the most accurate prediction will be invited to discuss the process used to develop the prediction.</i></p> |
| 4:45 PM - 5:15 PM | Closing Remarks |