GSI W-20 Webinar Entitled:
"Geosynthetic Drainage Materials: Applications, Design, Installation and Performance"

Webinar Overview

Geosynthetic drainage materials consist of a drainage core (geonet or geospacer) with geotextiles bonded to one or both surfaces. Their in-plane flow capacity is equivalent to 300 mm (12 in.) of sand with permeability of 0.01 cm/sec or higher. The associated cost of these materials and their installation greatly favors this type of geosynthetic alternative on myriad applications. For example, solid waste liner and cover applications, plaza decks and green roofs, retaining walls and slopes, tunnel linings, etc., all have successful history in this regard. Design considerations will be described and focus on flow rates and compressive behavior, both being standardized ASTM/ISO test methods.

Critical in their proper performance are connections and attachments along edges and ends for proper field performance. A major successful field project is presented as well as four unsuccessful projects. Lastly, a laboratory study on plastic cable ties (used to join most types of geosynthetic drains) will be presented along with appropriate commentary.

Learning Objectives

Participants of this webinar will be exposed to the plethora of geosynthetic drainage materials that are currently available vis-à-vis the various applications that they service. Design and testing issues will be illustrated and explained. Methods of field connections and attachments will be described, particularly the use of plastic cable ties. Successful field projects, as well as four unsuccessful ones, will be illustrated in the context of "lessons learned".

Webinar Benefits

1. Understand various types and differences of geosynthetic drainage materials
2. Understand the many applications where these drainage products are used
3. Learn the essential test methods for design as counterpointed to the applications
4. Learn how to properly accomplish connections and attachments
5. Be exposed to successful and unsuccessful field projects using geosynthetic drainage materials
6. Learn how to test plastic cable ties insofar as installation is concerned

Intended Audiences

- Consulting engineers and designers involved in the controlled flow of all types of liquids and even gases
- Geosynthetic and soils testing laboratory personnel
- Field CQA and CQC personnel for both materials and installation practices
- Owners and operators of solid and liquid waste facilities as well as many other public facilities
- Federal, state and local regulators in both environmental and transportation sectors of their respective mandates

Specific Topics Covered

1. Overview and Applications
2. Properties and Design Considerations
3. Installation Connections and Attachments
4. Several Field Case Histories
5. Test Results on Plastic Cable Ties
6. Recommendations and Conclusion

Webinar Instructor

Dr. George R. Koerner is the current director of the Geosynthetic Institute, a position that he has held since 2014. George's interest in geosynthetics spans his entire professional life from undergraduate work in the 1980's to the present. He holds his PH.D. in Civil, Architectural and Environmental Engineering from Drexel University in Philadelphia. George's master thesis was on direct shear testing of geosynthetic interfaces and his doctoral dissertation was on landfill leachate clogging of soil and geosynthetic filters. Both are regularly cited to this day.
Dr. George Koerner is a Professional Engineer in both Pennsylvania and New Jersey, and is an ASQC Quality Auditor. During his 30-years of geosynthetic activities, Dr. Koerner's output has been tremendous and he has to his credit the following publications:

- Books Edited or Co-Edited – 15
- Journal Papers – 18
- Symposium and Conference Publications – 40
- Book Chapters and Published Reports – 4
- Miscellaneous Articles – 30

The Geosynthetic Institute is a nonprofit research and development organization dedicated to the proper use of geosynthetics in its myriad applications. As director of the Geosynthetic Institute, Dr. George Koerner is also in charge of the laboratory accreditation and inspection certification programs.