NEW ZEALAND GEOTECHNICAL SOCIETY INC

Wellington Branch Presentation
Wednesday 21 November 2018
Miyamoto, 175 Cuba Street
Refreshments 5pm
Presentation 5:30pm

Effective Risk Management for Piles and Deep Foundations
Presented by Dr. Martin Larisch

Geotechnical Engineering Manager, Miyamoto International NZ

The design of deep foundation elements like piles or permanent basement walls, require the comprehensive understanding of the required performance criteria and the selected construction methods. Defect piles or basement structures have caused significant delays and financial damages to clients, contractors and consultants in the past.

But how do we verify deep foundation elements and ensure they were constructed in compliance with the project specifications? The installation of piles is a 'blind process' which heavily relies on solid construction methodologies, reliable construction monitoring and transparent QA.

Project specific construction verification is another effective risk management tool to assess the performance of piles and deep foundations. The presentation will introduce some common approaches of pile load testing and pile integrity testing methods. It will also highlight the advantages and limitation of some selected verification methods and will introduce innovations like thermal integrity profiling or remote dynamic load testing.

This presentation will highlight how different construction verification methods can be used as an effective risk management tool to reliably and efficiently assess the performance of deep foundation elements like piles or basement structures. The presentation will also introduce some 'common' and re-occurring defects observed in bored piles and the presenter will briefly discuss potential remediation strategies.

Dr. Martin Larisch:

Martin Larisch is the Geotechnical Engineering Manager of Miyamoto International New Zealand. He provides technical advice and engineering solutions for clients and projects across New Zealand and internationally.

He obtained his University Degree in Civil Engineering in Germany and has completed his PhD at the University of Queensland in Brisbane where he has also been appointed as an Adjunct Associate Professor. He is also a Chartered Professional Engineer in New Zealand and Australia and has published numerous technical papers for international conferences and journals.

With more than 20 years of experience in the construction industry, he has worked for some of the leading geotechnical firms in Germany, Australia and currently in New Zealand. He was also involved in the implementation of various new technologies and innovations in the areas of piling and deep foundations with a special focus on forensic investigations and defect remediation works, hard rock drilling, drilling support fluids, concrete technology and ground improvement methodologies.

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