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PHYSICAL TALK

Full Displacement Columns: Effective Alternative to Conventional Soil Improvement Solutions and Piled Embankments

DR.-ING. PHILIPP SCHOBER

28 NOVEMBER 2024, THURSDAY

5.00PM - 7.00PM

MALAKOFF AUDITORIUM, WISMA IEM, PETALING JAYA

Registration Fees
Student Members : Free
IEM Members : RM 15.00
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SYNOPSIS

Soil improvement is an efficient solution for infrastructure projects to reduce foundation costs and project duration. Especially for applications where the load is distributed over a large area, soil improvement solutions are more economic than deep foundation solutions and an effective alternative to piled embankments. Soil improvement is frequently used at infrastructure project below embankments for roads, railways or runways. A relatively new soil improvement technique which was developed in Europe over the past decades and is now commonly used in most parts of the world are Full Displacement Columns as Rigid Inclusions. Due to its effectiveness also in very soft soils like peat, where most other improvement methods are little effective, soil improvement by Full Displacement Columns is becoming recently also a well-established technique in Southeast Asia. This technique consists of a Full Displacement Column network associated with a granular earth platform (so-called Load Transfer Platform, LTP), added between the reinforced soil and the embankment. The load is transferred partially onto the inclusions through arching effect occurring in the load transfer platform due to the internal friction. Generally, the Rigid Inclusions are embedded into a competent soil layer. In the presentation the advantages of this solution will be explained and the installation process and design principles will be shown on the basis of project examples.

SPEAKER'S PROFILE

Dr.-Ing. Philipp Schober is the Head of the International Department and Soil Improvement for BAUER Spezialtiefbau GmbH in the Asia Pacific Region. Philipp has over 15 years' experience as geotechnical engineer, including research work and lectures at the University of the German Federal Armed Forces in Munich. During the past 8 years working with BAUER, he has focused on soil improvement solutions for construction projects. He has been responsible for the tender, design, execution, and technical support of various soil improvement projects in different parts of the globe, including major infrastructure and industrial projects.