



GEOTECHNICAL SEMINAR

JOINTLY ORGANIZED BETWEEN
GEOTECHNICAL SOCIETY OF SINGAPORE (GEOSS)
& CENTRE FOR SOFT GROUND ENGINEERING



Concerns of Grouting in Soils

by

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Date: Tuesday, 30 June 2009
Time: 6:30pm Reception
7:00pm Seminar
Venue: **Engineering Auditorium**
Faculty of Engineering
National University of Singapore

SYNOPSIS

Grouting of soils for purpose of improving its properties is becoming more frequently used today for deep excavations. Over the years the increase of the use has raised the number of grouting methods introduced into the industry.

Initially, when grouting was discussed in the industry, the most frequent option available was jet grouting piles (JGP). With time, other forms of soil grouting methods introduced include Grout Mixed Piles (GMP), Deep Soil Mixing (DSM), Deep Cement Mixing (DCM), RasJet, Enhanced Grout Mixed Piles (EGMP), Jet Mechanical Mixing (JMM) and Mechanical Soil Mixing (MSM)- just to name a few.

The end result of all these methods of grouting are identical i.e. the soil is improved to a required strength and stiffness. However, the process of installation could cause changes in soil properties and or stresses in retaining structures. Very often, these changes are not picked up by the designer or overlooked for convenience. The end result could cause displacements or stresses on the temporary earth retaining structures (TERS) which do not reconcile with the design.

A brief on the different methods of grouting for excavation used in Singapore will be presented together with the effects of these methods of grouting to the soil and structures. Attempts will also be made to highlight the effect of these grouting methods on the design parameters used for analysis.

THE SPEAKER

Dr Indrayogan Yogarajah graduated with a degree in Bachelor of Engineering in 1989 with first class honors from the University of Strathclyde, Glasgow and went on to complete his PhD in 1993 from the same University. He then went on to work for specialist construction firms for 8 years where he led the technical team for the Singapore, Brunei, Thailand and Philippines Offices. In 2002, he started his own consultancy firm specializing in geotechnical works and now leads one of the largest geotechnical consultancy firms in Singapore. He also has a LLB (Hons) Degree from the University of London and a MBA from the Helsinki School of Economics and Business Administration. He is presently a Fellow of the Singapore Institute of Arbitrators. He has obtained his PE(Geo) from the Singapore PE Board and is a AC(Geo).

For catering purpose, please confirm your attendance by reply e-mail to: geoss@nus.edu.sg

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