ORGANISED BY GEOTECHNICAL ENGINEERING
TECHNICAL DIVISION

WEBINAR TALK ON UNCASED BOREHOLE SOIL STABILIZATION SYSTEM USING POLYMER SLURRY

BEM Approved CPD/PDP: 2 Ref. No.: IEM21/HQ/273/T(w)

Speaker:
Ir. Sri Ram Ramankutty

26th August 2021, Thursday
3PM- 5PM

Registration Fees
(effective 1st August 2020)
Student Members: FOC
IEM Members : RM 15.00
IEM Non Members : RM 70.00
Register online I www.myiem.org.my

SYNOPSIS

Temporary support fluid or also known as drilling fluid is a major component of deep foundation construction in installing bored pile or diaphragm wall into ground, especially when it comes to wet process. It is so important that without a proper methodology in place can cause serious issues on the stability and quality of the foundation element. Apart from water and bentonite, which are more traditional, polymer slurries are being a popular choice in helping to complete the installation process. It wins the credit through its much simpler set up and application on-site.

However easy it may sound; poor control of the polymer slurries may lead to disastrous failure on the constructed elements. The failure, majority of the times, happens when the polymer slurry is being used as a product rather than as a stabilization system. A proper soil stabilization system is about converting a product into a workable system on site that is responsible to ensure the borehole stability and quality. A combination of deep understanding on how polymer works, and soil characteristics is essential to design the right slurry parameters that is meaningful. To make things worse, the market is flooded with polymer products 'meant' for soil stabilization and they all have different characteristics and capacities. A person should be equipped with sufficient knowledge and understanding about the limitations before going for the choices.

Slurry parameters checked on-site are not just numbers but a set of data to make important analysis and interpretation to overcome stabilization challenges. It is often overlooked and forgotten in the process and when stabilization is compromised, the easy way out - temporary casing extension or backfilling with mortar. The real solution could be much simpler than the two mentioned above. We will go through during this talk the important elements to check on the stabilization of uncased or unprotected section of a shaft. Hopefully, this comes in handy to all interested parties when decision is made to execute a deep foundation projects under polymer slurry as a choice of temporary support fluid.

SPEAKER'S PROFILE

Ir. Sri Ram obtained his Bachelor Degree in Civil Engineering from University Technology of Malaysia in 2006 and started his career with GEO Ground Engineering Operations, a specialized company in stabilising fluid technologies that develops innovative solutions and engineering services provider. He is currently the General Manager of GEO Ground Engineering Operations Malaysia. He has participated through technical services for over 100 projects of bored piles, diaphragm walls and micro tunnelling executing in Southeast Asia as well as in South Asia using the third-generation polymer since 2010. He has written article on usage of polymeric fluid for an international construction magazine and been invited for multiple technical talks on usage of polymer slurry for mega infrastructure projects in Malaysia such as KVMRT Line 1, KVMRT Line 2 and LRT3. He has also presented technical paper on polymer slurry during annual conference of Deep Foundation Institute of India. He is an Affiliate member of Master Builders Association of Malaysia (MBAM) and an active member of Deep Foundation Institute (DFI) of India.