



Malaysian Geotechnical Society

Webinar – Talk On “The Application of Prestressed High-strength Concrete (PHC) Pile as Foundation for Marine Structure”

By Mr. Calvin Ng Chew Woei

1st September 2022 (Thursday) 4.00 p.m. to 6.00 p.m.

**BEM Approved CPD Hours: 2 Ref. No.: Applying
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Synopsis

Prestressed high-strength concrete (PHC) piles are getting popular in marine construction. During this webinar, the Speaker will briefly explain the concerns in foundation design for marine structures. The Speaker will also be discussing and comparing the available options for deep foundations of marine structures. The suitability of PHC piles over different types of foundations in marine structures will also be covered.

Two project experiences will be shared in this session, i.e. a container terminal project and a marine viaduct. For the container terminal project, analysis of the performance of PHC spun piles will be assessed in terms of the soil profile, MLT and PDA tests. The pile load test results will be discussed and compared to the design criteria. Insights will be shared in terms of the installation process, overcoming the problem of handling, pitching and positioning the long and heavy big diameter concrete piles at marine condition, and also solutions for overcoming other construction problems.

The second project covers the application of PHC piles in a marine viaduct. The soil profile and challenges faced in conducting piling works at different sections will be discussed. The piles were installed using a flying hammer method. The Speaker will share on the piling method adopted. The pros and cons of the adopted method will be discussed, along with solutions for overcoming some of the construction problems experienced during piling.

About The Speaker

Mr. Calvin Ng was a First-Class degree holder of Bachelor of Civil Engineering (Hon), graduated in University Tun Hussein Onn Malaysia, year 2002. He is currently the Assistant General Manager in sales and technical services in Industrial Concrete Products Sdn Bhd (ICP). He has served the company for almost 20 years, involving in the supply chain of construction industries, and specializing in providing solutions to pile foundations for various structures, from the designing stage up to project implementation stage.

From Year 2005 to 2013, he was extensively involved in marine projects in China, as he was transferred to ICP’s China operation, specialized in producing marine piles for offshore engineering. Started as a project engineer in ICP’s new factory construction in China, he was then involved in the supply chain of the marine construction industry in southern China. He was specialized in providing technical solutions to clients and consultants in applying PHC piles in their project foundation design, switching from steel piles, bored piles, caissons etc. In year 2010, a research team led by Mr Calvin to develop super large diameter PHC piles. In year 2012, China’s first dia. 1400mm PHC pile was developed and was applied in the foundation for a Container Terminal Project in Zuhai, China, which was a terminal with berthing capacity of 100,000ton.

Back in Malaysia from 2013 till now, Calvin mostly involved in the supply chain of construction especially marine projects in Malaysia, South East Asia and even up to Bangladesh. Projects experience includes the foundation for a 24km long bridge, various port terminals, oil terminals, container terminals, bridges for rail crossing, cruise terminals, breakwater and marinas and etc.



Registration Fee:

MGS / IEM / GeoSS / CTGS Members: **FREE**
Non Members: **RM20.00 per person**



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- ✓ After the payment has been completed, please email the transaction receipt to mgs@mygeosociety.com.
- ✓ Each approved registrant will receive a unique Zoom link for the webinar.
- ✓ Minimum 75% attendance is required in order to obtain a certificate of attendance.

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