THE INSTITUTION OF ENGINEERS, MALAYSIA

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TALK ON
"OFFSHORE GEOTECHNICAL INVESTIGATION TECHNIQUES FOR SHALLOW AND DEEP SEA OIL EXPLORATION & PRODUCTION"

(Organised by the Engineering Education Technical Division, IEM in collaboration with Geotechnical Engineering Technical Division and Engineers Australia Malaysia Chapter (EAMC), and Institute of Mechanical Engineers Malaysia Branch (IMechE))

BEM Approved CPD/PDP: 2 hours **Ref: IEM15/HQ/247/T**

Date : **13 August 2015 (Thursday)**
Time : **5.30 pm – 7.30 pm** *(Refreshments will be served at 5.00 pm)*
Venue : **Tan Sri Prof. Chin Fung Kee Auditorium, 3rd Floor Wisma IEM**
Speaker : **Dato' Ir. Mohd Helmi Zulkawi**

SYNOPSIS

The need for offshore developments stems from a gradual depletion of hydrocarbon reserves onshore or near the coastlines, as new fields are being developed at greater distances offshore and in deeper water, with a corresponding adaptation of the offshore site investigations. Today, there are more than 7,000 offshore platforms operating at a water depth up to and exceeding 2000 m. A typical field development extends over tens of square kilometers, and may comprise several fixed structures, infield flowlines with an export pipeline either to the shoreline or connected to a regional trunkline.

Offshore geotechnical investigation involves the collection of subsoil data to provide the engineers with the design parameters for foundation of human-made structures in the sea. Oil platforms, jack-up oil drilling rigs and submarine pipelines are examples of such structures. The seabed has to be able to withstand the weight of these structures and the applied loads.

Geotechnical investigations involve a combination of sampling, drilling, in situ testing as well as laboratory soil testing that is conducted offshore and/or onshore. They serve to ground truth the results of the geophysical investigations; they also provide a detailed account of the seabed stratigraphy and soil engineering properties. Depending on water depth and metocean conditions, geotechnical investigations be conducted from a dedicated geotechnical drillship, a semi-submersible, a jackup rig or other means. They are done at a series of specific locations, while the vessel maintains a constant position. Dynamic positioning and mooring with four-point anchoring systems are used for that purpose.

This talk will give the overview of the offshore geotechnical investigation industry in general and vessels and platforms that typically being used for carrying out the geotechnical drilling, sampling and soil testing. It will also cover the typical industry techniques currently being used in shallow and deep penetration geotechnical investigation which generally involves seabed and surface drilling tools.

SPEAKER BIODATA

Dato' Ir. Mohd Helmi Zulkawi graduated with degree in Civil Engineering from San Diego State University, California, USA. He also holds an MBA from Cranfield University, United Kingdom. He has over 27 years of working experience with 25 years in the offshore geotechnical investigation and site survey industry. He is the founder and Managing Director of an offshore geotechnical investigation and geophysical survey company called Asian Geos Sdn Bhd (AG). AG is currently operating in Southeast Asia with past involvement of offshore geotechnical projects in Europe and the Caspian Sea and with ongoing projects in the Middle-east. Prior to setting up AGSB, Dato' Helmi served Teknik Lengkap Sdn Bhd (TL), a company which provides almost the same services as AGSB. While with TL he had hands-on experience working as Geotechnical Engineer on board the MV Teknik Samudra to work on projects throughout the SEA region.

Ir. Prof Dr Vinesh Thiruchelvam
Chairman
Engineering Education Technical Division

ANNOUNCEMENTS TO NOTE:

- Preferential admission to talk shall be accorded to IEM members (pre-registration and online registration are NOT required). Telephone and/or fax reservation will NOT be entertained.
- **Non members** may also attend the talk but will need to pay a registration fee of **RM50** and an administrative fee of **RM15.** GST is inclusive.
- For members of affiliated organisations, there will be no registration fee payable. However, they are requested to produce their membership card as proof of membership. For the list of affiliated organisations, please refer to IEM website at **www.myiem.org.my** under International/MoU.
- Limited seats are available on a "first come first served" basis (maximum 100 participants).
- IEM members are required to produce membership cards for confirmation of attendance (CPD purpose).
- Latecomers will not be allowed to enter if the lecture hall is full nor be entitled to CPD.
- *IEM members who fail to produce their membership cards will be charged a fee of RM25.00. GST is inclusive.*

ADMINISTRATIVE FEE

- Kindly be informed that an administrative fee of **RM15** is payable for talks organized by IEM. GST is inclusive.
- The fee would be used to cover overhead costs, building maintenance expenses as well as contribute to Wisma IEM Building Fund.
- All contributions will be deeply appreciated by IEM.
- Student Members are however exempted.

CPD HOURS CONFIRMATION

Name: .....

Membership No: .....

Signature: ……..……..