



Malaysian Geotechnical Society

## WEBINAR TALK ON AN EFFECTIVE SOLUTION TO MINIMIZE LEAKAGE OF GEOMEMBRANE LINER

Approved CPD Hours: 2 Ref. No.: IEM21/PP/006/T (w)

18<sup>th</sup> May 2021 (Tuesday), 5.00 pm – 7.00 pm

### SPEAKER'S PROFILE

**Ir. Ng Hoe Boon (Hermann)** graduated in Civil Engineering from the National Cheng Kung University, Taiwan and obtained Master of Engineering in Geotechnical Engineering at Asian Institute of Technology (AIT), Thailand. Ir. Ng practiced as a geotechnical engineer in Malaysia for almost a decade before joining GSE Lining Technology Co. Ltd. – a leading geosynthetic manufacturer, he is currently Sr. Technical Manager of Solmax Geosynthetics Group. Ir. Ng has been involving in the geosynthetics business for 15 years, providing engineering advices and support to engineers, consultants, contractors, authorities and his clients in Asia Pacific. He is a Professional Engineer registered under Board of Engineers, Malaysia, and an active committee member of International Geosynthetics Society – Malaysia Chapter (MYIGS). Ir. Ng is also members of institutions include BEM, MYIGS, and ACIGS, he has published more than 20 papers in numerous conferences and journals.



### SYNOPSIS

Polyethylene, particularly high-density polyethylene (HDPE) geomembrane is widely recognized as the primary barrier and leakage prevention to the environmental containments, chemical storage ponds and liquid impoundments. A secured composite liner system, which can considerably reduce the effects of leakages, is commonly constructed for the environmental containments such as waste landfills, mining heap leach pad and tailing ponds, liquid containments like dams and reservoirs, industrial wastewater ponds. The on-site construction process will inevitably cause damage to the geomembrane liner, which could occur during the process of installation, field welding and cover soil backfilling. An appropriate leak detection method is thus essential to locate the holes & defects at post-construction and repair them to ensure the integrity of the liner system. Liner leakage not only causes serious environmental pollution, it also endangers the stability of the liner system, end up with a law suit and property loss. A good Construction Quality Assurance (CQA) therefore plays an important role in producing a quality containment. Conventional geomembrane CQA program focuses only on quality of welded seams through traditional destructive and non-destructive seam tests. To ensure the sealing integrity of the installed geomembranes and long-term performance of the liner system, leak inspection and liner integrity surveys are implemented to serve as validation at post-construction and before the facilities are in operation. An advanced leak location liner system that has been developed to facilitate a comprehensive liner leak testing and integrity survey will be presented. The lecture will also present a case study in a waste landfill project utilizing the leak location conductive liner and leak location survey at post-construction. Field investigations performed by third party surveyors have successfully and accurately located the holes/damages and have repaired before backfilled with cover soils. Results from the field tests demonstrated that the improved leak location liner system associated with leak survey can further reduce the risk of loss of containments, potentially enhances the environmental and economy sustainability of geomembrane lined facilities.



Scan event into calendar

**Registration Fees**  
**MGS / IEM / GeoSS Members: FOC**  
**Non Members: RM20.00**

For non members, please make the payment to the following:

Payee: **Pertubuhan Geoteknikal Malaysia**  
Bank Account No.: **281-00-01231-6**  
Bank Name: **Hong Leong Bank Berhad**

The Zoom link will be emailed to registered participants prior to the event.

[CLICK here to register](#)

**Ir. Liew Shaw Shong**  
**President**  
**Malaysian Geotechnical Society**

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