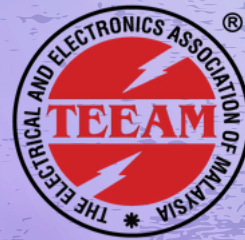


TEEAM Series of Technical Talks 01/2025

"Foundation Earthing System & Electrical Protection"



Since 1952



IR. CHRIS SF CHEW



IR. TOH LEONG SOON

Approved with
BEM 3 CPD hours
&
CIDB 5 CCD points

Programme:

- 09.00 am : Registration
- 09.30 am : Welcome Remarks
- 09.35 am : Is the current electrical protection for homes safe enough?
What are the added measures that can be implemented to enhance it?
- 10.45 am : Coffee Break
- 11.00 am : From Theory to Practice – Mitigating Real – World Risks in Foundation Earthing System
- 12.30 pm : Q & A
- 01.00 pm : End



20TH FEBRUARY 2025
THURSDAY



09.00AM - 01.00PM



TEEAM SEMINAR HALL,
NO. 5-B, JALAN GELUGOR,
OFF JALAN KENANGA, KUALA
LUMPUR

Fee : RM30 for TEEAM Member
RM60 for Non-TEEAM Member

Registration: bit.ly/40k159X



Ir. Chris S F Chew

**Topic: Is the current electrical protection for homes safe enough?
What are the added measures that can be implemented to enhance it?**

Synopsis:

Electrical safety is always the most important issue in a building. Protection has been improved over the years. Unfortunately there are still occurrences of electrical incidents and some fatal. The talk will consider the various important issues involved in the protection principles. It will also cover the fundamental theory in the implementation of various protection measures.

There will be a trace of the progress in protection over the many decades. Some discussion on possible future progress in smarter protection than what is conventional.

CV:

Ir. Chew Shee Fuee KMN B Sc (Hons) (Strathclyde), PEng, CEng, FIEM, MIEE Member, IEEE Member, 1st Grade Electrical Engineer (Competent up to 500 kV). Ir. Chew was President of The Electrical and Electronics Association of Malaysia (TEEAM) for 2001-2005 and 2013-2017. He was the President of the ASEAN Federation of Electrical Engineering Contractors (AFEEC) for 2016-2018. He is the Immediate Past Chairman of The Institution of Engineering & Technology (IET) Malaysia Local Network. Ir. Chew is the Managing Director of G H Liew Engineering (1990) Sdn Bhd and Chris Chew Electrical Consultant. He graduated from the University of Strathclyde, Glasgow with a B Sc (Hons) in Electrical & Electronics Engineering. He is a Professional Engineer and is also licensed by the Energy Commission as a Competent Engineer (without voltage limits) and a Service Engineer to carry out electrical testing up to a voltage of 500 kV. Ir. Chew has more than 30 years of industry experience in electrical control and relay protection. He is also specialised in electrical site tests on power equipment, electrical fault investigation, service and maintenance of electrical switchgears and relays. His work also includes electrical supervision of sub-stations and electrical audit. He also presents lectures on electrical apparatus and the protection system. He was Vice-Chairman of MyENC (Malaysian Electro-Technical National Committee) and is a Member of Technical Committees (TCs) and Working Groups (WGs) in Standards Development. He can be reached at E-mail: sfchew@ghliew1990.com

Ir. Toh Leong Soon

Topic: From Theory to Practice – Mitigating Real – World Risks in Foundation Earthing System

Synopsis:

Earthing system is important in electrical system, to enable automatic disconnection of power supply in the event of electrical fault. Low resistance to ground is desirable for quick and effective disconnection of power supply and protect lives. Foundation earthing system greatly reduces the resistance to ground as compared to individually driven earthing rods. However, special care must be given in the application of foundation earthing system to terrace houses and shop lots, where common ground slab steel reinforcing bars are used throughout the entire row of houses or shop lots. If the earth resistance is not sufficiently low, in case of earth leakage in one of the houses or shop lots with faulty Residual Current Device (RCD), the fault current may flow through the foundation steels to other houses or shop lots. The RCD of other houses or shop lots will not operate as the fault current is from external and thus not detected by the RCD. The level of touch voltage poses as electrical hazard to the occupants of the house or shop lot with the earth leakage, as well as the other houses or shop lots. In this technical sharing session, the field test and findings of terrace houses with foundation earthing system, the requirements of the design and installation of foundation earthing system, and the importance of such installation to achieve low resistance to ground, to be able to operate the protective devices for supply disconnection during fault condition will be shared.

CV:

Ir. Toh Leong Soon is a Professional Engineer with Practising Certificate (PEPC), Member of The Institution of Engineers, Malaysia (MIEM), Qualified Person of National Water Services Commission (SPAN QP), ASEAN Engineer, ASEAN Chartered Professional Engineer (ACPE), APEC Engineer and International Professional Engineer (Int. PE). He has been working as a consulting engineer since 2007 and is currently a Director of a M&E engineering consultant firm in Perak, Malaysia. His area of expertise includes MV and LV electrical system, ELV system, Supervisory Control and Data Acquisition (SCADA) system, motor drives, renewable energy and energy efficiency projects, technical due diligence and building condition assessment. Ir. Toh is the winner of the Tan Sri Ir. Hj. Yusoff Price in 2024 for publishing an outstanding technical paper in the IEM Journal entitled "Foundation Earthing System – Its Application and Electrical Safety Considerations". He is currently a Technical Advisor of Persatuan Kekompetenan Penjaga Jentera & Pemandu Elektrik Perak (PKPPE).