TEEAM Series of Technical Talks 01/2024

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Mr. Tay Hao-Giang
"Fire Risk Management of 21st Century Emerging Risk – Lithium-ion Battery"



Ir. Chew Shee Fuee *KMN*
"Challenges and Opportunities Caused by the Introduction of EVs"

DATE:
13th March 2024 (Wednesday)

TIME:
09.30am - 01.00pm

VENUE:
TEEAM Seminar Hall
No. 5-B, Jalan Gelugor,
Off Jalan kenanga,
55200 Kuala Lumpur.

PROGRAMME:

09.30am	Registration
10.00am	Welcome Remarks
10.05am	Fire Risk Management of 21st Century Emerging Risk - Lithium-ion Battery by Mr. Tay Hao-Giang
11.30am	Coffee Break
11.45am	Challenges and Opportunities Caused by the Introduction of EVs by Ir. Chew Shee Fuee
12.30pm	Q & A
01.00pm	End

Registration Link: https://forms.gle/UGesjg88i1HPKoFe7
by 08/03/2024
(Pending for CIDB CCD Points)

SYNOPSIS

"Fire Risk Management of 21st Century Emerging Risk – Lithium-ion Battery"

Global warming induced climatical changes has accelerated green energy movement. This has resulted in solar, wind, hydro and other renewable power generation globally. Renewable energies required large battery storage to power townships since coal power generation contributes to carbon footprint and pollution. Globally we have moved into an electric era with the switch from ICE (Internal Combustion Engine) to Hybrid to EV (Electric Vehicles). The lithium-ion battery industry has flourished to fulfil market demand for EV, handphone, electrical scooter, electrical tools for energy storage and for ease of operation. Though the demand for large batteries for EV is just the beginning considered the history of EV market, there has been International EV car fire cases which expose the fire risks and hazards of Lithium-ion batteries beyond comprehension. Of late, large MW renewable energy storage facilities in different countries also present interest case studies of the exposure to fire risk and hazard of Lithium-ion battery. Many countries have also banned e-scooter due to the explosive fire caused by batteries while charging. Statistical increase of burning handphone and power bank during flight is another concern on aviation safety. While the world is focusing on green and renewable movement, it seems life and fire safety has not been incorporated into the design and development of battery. This Talk will review some of the above case studies and proposed mitigation measures.

"Challenges and Opportunities Caused by the Introduction of EVs"

Over 26 million electric cars were on the road in 2022, up 60% relative to 2021 and more than 5 times the stock in 2018. Increasing sales pushed the total number of electric cars on the world's roads to 26 million, up 60% relative to 2021. Malaysia is picking up this Electric Vehicle (EV) trend at more than 10% annual growth. Home charging and fast charging requirements will be greatly increased as the EV population grows. Planning for such growth has to be carefully done especially in condominiums. There will be some upgrading of power supply requirement to cater for this increase in charging stations. The talk will touch on ST Guide for Electric Vehicle Charging Station (EVCS).

Speaker's Profile

Mr. Tay Hao-Giang CFIFireE, B.Sc. (Hons), M. Sc. Fire Safety Engineering. Mr. Tay is a qualified and experienced Fire Engineer. He is a graduate with a Master of Science Degree in Fire Safety Engineering from the University of Edinburgh, Scotland. He is also a certified HRD Corp Trainer. As the principal fire consultant of Fire Safety Engineering Sdn Bhd, he has over 30 years of experience in fire safety engineering. His company is currently providing fire safety engineering consultancy services for corporate clients. His firm also provides fire risks assessment and management services for occupied buildings for property and asset management corporate in loss prevention and business continuity. Mr. Tay is the Past International President and is a current Trustee and a member of the Board of Directors of Institution of Fire Engineers (IFE). He is the current Deputy President of Institution of Fire Engineers Malaysia Branch. Currently he represents IFE Board of Directors in the steering committee for development of United Nation chartered program IFSS (International Fire Safety Standards) – Global Plan for a Decade of Action in Fire Safety. Mr. Tay is a member of National Standard Committee for Fire Safety (NSC13) in Department of Standards Malaysia for developing of Malaysian Standards. He chairs the Technical Committee for Fire Properties of Building Materials. He was nominated by Department of Standards Malaysia as the fire expert representing Malaysia in ISO Technical Committee for ISO Standard development. He is one of the authors for the technical reference book "Guide to Fire Protection in Malaysia". He was a visiting lecturer for Master of Science degree courses in Building Services Engineering at IIUM (International Islamic University Malaysia). Over the years, he has been invited to give fire safety lectures to undergraduate and postgraduate degree students of Built-environment Faculty of many Universities in Malaysia. He is a panel CPD lecturers for Fire and Rescue Department Malaysia, IEM, PAM, LAM, BEM, Chartered Institution of Building Engineers (CABE), IFE, IFE Malaysia Branch and CIDB.

Ir. Chew Shee Fuee, KMN B Sc (Hons) (Strathclyde), 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. He 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.