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REGISTRATION FORM

One day Workshop on Testing, Certification and Compliance Verification for Bus Trunking Systems (Busways) Date : 26 June 2018 (Tuesday)
 (Closing Date: 23 June 2018)

No	Name(s)	M'ship No.	Grade	Fee (RM)*
SUB TOTAL				
ADD GST @6%				
Total Payable				

***Fees MUST be fully paid BEFORE the CLOSING DATE. Seats could only be confirmed upon payment.**
 Enclosed herewith a crossed cheque No: _____ for the sum of RM _____ issued in favour of "The Institution of Engineers, Malaysia" and crossed 'A/C payee only'. I/We understand that the fee is not refundable if I/We withdraw after my/our application is accepted by the Organising Committee as stated in the **cancellation term**. If I/We fail to attend the seminar, the paid registration fee will not be refunded.

Contact Person: _____ Designation: _____

Name of Organization: _____

Address: _____

Telephone No.: _____ (O) _____ (Fax)

_____ (H) _____ (HP)

Email: _____

 Signature & Stamp

 Date

Photocopies are acceptable

PERSONAL DATA PROTECTION ACT

I have read and understood the IEM's Personal Data Protection Notice published on IEM's website at <http://www.myiem.org.my> and I agree to IEM's use and processing of my personal data as set out in the said notice.



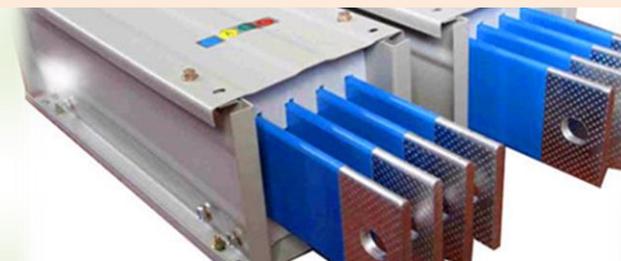
One Day Workshop on Testing, Certification and Compliance Verification for Bus Trunking Systems (Busways)

ORGANISED BY
 ELECTRICAL ENGINEERING TECHNICAL DIVISION, IEM
 IN COOPERATION WITH
 UL INTERNATIONAL SINGAPORE PTE LTD

26th JUNE 2018

BEM Approved CPD/ PDP hours: 7

Ref. No.: IEM18/HQ/187/W



Venue: Malakoff Auditorium, Ground Floor, Wisma IEM, PJ

Time: 8.30am – 5.30pm

Speakers: Mr. ChandraKumar. S (CK) and Mr. Bryan L. Tatum

REGISTRATION FEES (SUBJECT TO 6% GST)

	ONLINE	NORMAL (Offline)
IEM Student Member	RM 50.00	RM 80.00
IEM Graduate Member	RM 150.00	RM 200.00
IEM Corporate Member	RM 250.00	RM 300.00
Non-IEM Member	RM 500.00	RM600.00
<i>GST will be implemented with effect from 1 April 2015</i>		

CANCELLATION POLICY

IEM reserves the right to postpone, reschedule, allocate or cancel the course. Full refund if cancellation is received in writing more than 7 days before start date of the event. No cancellation will be accepted prior to the date of the event. However, replacement or substitute may be made at any time with prior notification and substitute will be charged according to membership status.

SYNOPSIS

Background

Safety Testing and Compliance Verification for Busways

The International Electro-technical Commission (IEC) 61439 series of standards provides a frame work to meet the needs of all associated stake-holders in today's Electrical assemblies Global Supply Chain trends (original manufacturer, assembly manufacturer, Component manufacturer, Installer, Specifier etc.). IEC 61439 series of standards considers a practical approach with multiple design verification options, clearly specifying the safety and performance requirements for reference and use by Engineering consultants, Manufacturers, planners, system engineers, testing lab and end users in order to define the protection objectives for people and plants in electrical installations. This standard has now been widely accepted Globally and more than 25 countries across the world have either adopted, or harmonized their national standards with the IEC 61439 series, making it truly international for testing and certification of assemblies including busways. The IEC 61439 series applies to low-voltage switchgear and control-gear assemblies, for rated voltage up to 1,000 V (AC) and 1,500V(DC).

UL Standard for Safety for Busways (UL 857)

In North America, UL 857 / NMX-J-148-ANCE / CSA C22.2 No. 27 is the harmonized tri-national Safety Standard for Busways with NMX-J-148-ANCE (3rd edition) for Mexico, CSA C22.2 No. 27 (6th edition) for Canada, UL 857 (13th edition) for USA. The first edition of UL 857 was published in 1948. The requirements have been developed to ensure compliance with the National Electrical Code (NEC), NFPA 70. Application within the NEC includes installations in accordance with Article 368 (2017 Edition) and use in Service Entrance applications (NEC Article 230). UL 857 was harmonized with the Canadian Standards Association (CSA) and the Association of Standardization and Certification (ANCE) in 2001 to ensure compliance with the Canadian Electrical Code (CE Code – CSA C22.1). UL 857 is the American National Standard for Busways as accredited by the American National Standards Institute (ANSI).

Benefits of UL Type Testing and Certification Services.

- Demonstrates Compliance / Verification to applicable safety standard as required by Engineering consultants / specifiers and end users.
- UL Type test certificates, Test Reports and UL mark certification are well accepted by stakeholders including regulatory organizations, Manufacturers, Specifiers and have International Recognition.
- Helps in Risk and Plant Safety Management for specifiers and Installers.
- Type test Flexibility: Specific type tests can be added or updated depending on the needs of the specifier / engineering consultant / end user or based on application if additional tests are required later or in case of standards revision in case of UL Selected type test programs after UL's engineering review.

UL mark certification programs to IEC and UL standards consider unique product safety due diligence approach through

- Detailed product construction review / documenting product construction, ratings, marking and critical components.
- Follow-up verification of products at manufacturer's facility through un-announced inspections for construction compliance to the ones originally evaluated.
- Mitigation of risk of counterfeits.
- On-line traceability and verification of certification at www.ul.com

This workshop will provide you with the first hand, real time, industry critical information. It not only covers IEC and UL standards but also address specific topics intended to help you create and/or install safe products, increase efficiency and provide a faster time to market.

Who Should Attend

- Government Building/Electrical Officials and Policy Makers
- Engineering Consultants and Practitioners
- Busways and Switchgear Assembly manufacturers planning for ASEAN and Global Market Access
- Engineering Competent Persons

Terms & Conditions:

- For **ONLINE REGISTRATIONS**, only **ONLINE PAYMENT** is applicable [via RHB and Maybank2u –Personal Saving & Personal Current; Credit Card - Visa/Master].
- Payment via **CASH / CHEQUE / BANK-IN TRANSMISSION / BANK DRAFT / MONEY ORDER / POSTAL ORDER / LO / WALK -IN** will be considered as **NORMAL REGISTRATION**.
- **FULL PAYMENT** must be settled before commencement of the course, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participants fail to attend the course, the fee is to be settled in full.
- Fee paid is not refundable. Registration fee includes lecture notes, refreshment.
- The Organizing Committee reserves the right to cancel, alter, or change the program due to unforeseen circumstances. Every effort will be made to inform the registered participants of any changes. In view of the limited places available, intending participants are advised to send their registrations as early as possible so as to avoid disappointment.

Mr. ChandraKumar. S (CK) has over 26 years of experience in Product Testing and Certification to National and International standards and is a Distinguished Member of Technical staff – William Henry Merrill society. His current responsibilities include:

- Asia Regional Lead for Global Market Access Programs
- Product Safety Investigations and review based on National / International standards including: IEC 61439 and IEC 60947 series – Low Voltage Switchgear and Control-gear assemblies / Equipment

CK is a certified UL University instructor and has delivered technical presentations on Product certification at various technical forums in Countries including Asia, Europe and USA and is an UL Mark of Excellence award winner. He was responsible for establishing UL's Short Circuit, Power and Controls Test laboratory in India. Prior to his joining UL in 2000, CK worked for over 9 years at the 50kA Short Circuit Laboratory, Central Power Research Institute CPRI, Bangalore as Engineering Officer. CK graduated from University Visvesvaraya College of Engineering, Bangalore, India in 1996 with a Bachelor of Engineering Degree in Electronics.

Mr. Bryan L. Tatum has over 20 years of experience in Product Testing and Certification, with a primary focus in North American Standards. His current responsibilities include: UL's Regional Lead Reviewer for:

- 891 / CSA C22.2 No. 244 – Switchboards, UL 67 / CSA C22.2 No. 29 - Panelboards
- UL 857 / CSA C22.2 No. 27 - Busways
- UL 1558 / ANSI C37.51 / ANSI C37.20.2 / CSA C22.2 No. 31 - Metal-Enclosed Low-Voltage Power Circuit Breaker Switchgear
- UL 489 / CSA C22. 2 No. 5 - Molded-Case Circuit Breakers, Molded-Case Switches and Circuit Breaker Enclosures
- And many other low voltage (1000 V or less) power distribution categories

Bryan graduated from the University of North Carolina at Charlotte with a BS in Electrical Engineering in 1996 and is a Licensed Professional Engineer in the State of North Carolina.

Tentative Programme

Time	Description
8.30am – 9.00am	Registration
9.00 am – 9.15am	Welcome Address and Introduction to IEC Standard for Busways
9.15am – 10.45am	Overview of IEC standard for Low-voltage switchgear and Control-gear assemblies IEC 61439 Standard Series IEC 61439-1: General Rules IEC 61439-6: Bus-bar Trunking Systems (Busways) <ul style="list-style-type: none"> • Busways: High Level Overview of Construction requirements • Busways: High level Overview of Performance and test requirements • Establishing a Test plan
10.45am – 11.00am	Tea Break
11.00am – 12.15noon	Overview and Value Proposition of different UL Testing and Certification programs for IEC61439-6 <ul style="list-style-type: none"> • UL Full Type Test Certificate • UL Selected Type Test Certificate • UL Test Report • UL Classification Mark Certification for Busways in accordance with IEC standards • UL Listed Mark Certification in accordance with UL/CSA/ANCE standards Validation of Test Certificate, issues with counterfeit certificates and mitigation Key Highlights of Type Test Certificate and Test Report
12.15noon – 1.00pm	UL Verified Mark Certification UL's Global Market Access Program
1.00pm – 2.00pm	Lunch
2.00pm – 3.00pm	Introduction to UL Standard for Busways Overview of UL/CSA/ANCE standard for Busways – UL 857/CSA C22.2 No. 27, NMX-J-148-ANCE Application of Multiple Standards Busway Fittings: UL 98; CSA C22.2 No. 4 and UL 489 Discrete Components such as UL 486A-486B and UL 746C;
3.00pm – 3.30pm	Busways: High Level Overview of Construction Requirements Busways: High Level Overview Performance
3.30pm – 3.45pm	Tea Break
3.45pm – 5.00pm	Establishing a Test Plan and Certification UL Certification Program for “Busways and Associated Fittings” (CWFT), and “Busways and Associated Fittings Certified for Canada” (CWFT7)
5.00pm – 5.30pm	Question and Answer Session
5.30pm	End of Workshop