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REGISTRATION FORM

**Industrial Seminar on IEC 61439-1 and IEC 61439-2 for
 Power Switchgear and Controlgear Assemblies**

Date : 12th February 2020 (Wednesday)

(Closing Date: 8th February 2020)

No	Name(s)	M'ship No.	Grade

***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



**Industrial Seminar on
 IEC 61439-1 and IEC 61439-2 for Power
 Switchgear and Controlgear Assemblies**

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

12th February 2020
 BEM Approved CPD/ PDP hours: 4.5 Ref. No.: IEM19/HQ/593/S

Venue: Auditorium Malakoff, Wisma IEM

Time: 8.30am – 3.00pm

Speaker: Mr. Raghunath Gopalakrishna Rao



REGISTRATION FEES (SST shall be at 6% with effect from 1 Mar 2019)		
	ONLINE	NORMAL (Offline)
IEM Student Member	RM30.00	RM50.00
IEM Graduate Member	RM50.00	RM100.00
IEM Corporate Member	RM80.00	RM100.00
Non-IEM Member	RM100.00	RM150.00



SYNOPSIS

Background

Safety Testing and Compliance Verification for Switchgear

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 and 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, test 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 member countries have either adopted, or harmonized their national standards with the IEC 61439 series, making it truly internationally accepted certification for assemblies. The IEC 61439 series applies to low-voltage switchgear and control-gear assemblies, for rated voltage up to 1,000V (AC) and 1,500V (DC).

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 (Type Examination Certificate - TEC), Test Reports and UL mark certification are well accepted by stakeholders including regulatory organizations, manufacturers, specifiers and comes with international recognition.
- Enhances 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 / documentation of 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 via on-line traceability and verification of certification at www.ul.com

Who Should Attend

- Government Building/Electrical Officials and Policy Makers
- Engineering Consultants and Practitioners
- Power Switchgear and Control-gear Assembly manufacturers planning for ASEAN and Global Market Access
- Operations and maintenance personnel
- Electrical Competent Persons

Scope

IEC 61439-1 and IEC 61439-2

This standard applies to all ASSEMBLIES (switchboards and panelboards) whether they are designed, manufactured and verified on a one-off basis or fully standardized and manufactured in quantity.

IEC 61921

This standard applies to low-voltage AC shunt capacitor banks intended to be used for power factor correction purposes, possibly equipped with a built-in switchgear and control-gear apparatus capable of connecting to or disconnecting from the mains part(s) of the bank with the aim to correct its power factor.

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.

SPEAKER'S PROFILE

Mr. Raghunath Gopalakrishna Rao holds a diploma in Electrical and Electronics Engineering, and an MBA in Marketing and Human Resource Management. Prior to joining UL, he worked for Westinghouse HV Lab, GE Power Controls, Canadian Standard Association (CSA) and Intertek. He was Business and Operation Manager (Asia region) for Intertek for 11 years.



Overall, Mr. Raghunath has 26 years of experience in International Testing and certification, with involvements as:

- Technical advisor for the local utilities (India and Middle East countries).
- NCB Technical reviewer for Low voltage directive and Machinery Directive.
- Approved inspector for various Middle East Authorities with Jurisdiction (AHJs) such as ADDC, SEWA, DEWA and SEC.
- 6-sigma Green belt certified holder, and having patent in designing of lighting contactor with GE

Mr. Raghunath is currently UL's Engineering Leader for Middle East, North Africa region, and specializes in LV and MV switchgear and control-gear segments. At UL, he planned and developed state of the art testing facility for low voltage switchgear and control-gear products in Abu Dhabi, UAE. He is also a technical spoke person for the local utilities in UAE, qualified reviewer for the IEC 60947 and IEC 61439 standards, and a motivational speaker for the many OEMS such as ABB and GE.

Tentative Program

Time	Description
8.30am – 9.00am	Registration and welcome reception
9.00 am – 9.05am	Welcome address by UL
9.05 am – 9.10am	Introduction speech by IEM
9.10am – 10.30am	Overview of IEC standard for low-voltage switchgear and control-gear assemblies IEC 61439-1: General rules IEC 61439-2: Power switchgear and control-gear assemblies <ul style="list-style-type: none"> • Overview of construction requirements for switchboard
10.30 – 11.00am	<i>Tea Break</i>
11.00am – 12.30pm	Type Testing of LV switchboards: <ul style="list-style-type: none"> • Design verification by comparison with reference design • Design verification by assessment • Optimization of test plan
12.30pm – 2.00pm	<i>Lunch</i>
2.00pm – 3.00pm	Round table discussion / Case study & analysis
3.00pm	End