

# THE INSTITUTION OF ENGINEERS, MALAYSIA

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### HALF DAY TECHNICAL SEMINAR ON POWER FACTOR CORRECTION BASICS (RTR - SPAIN) (Organised by Electrical Engineering Technical Division, IEM)

| Date:  | 4 <sup>th</sup> November 2014 (Tuesday)                                |
|--------|--|
| Time:  | 9.00am – 2.00pm  |
| Venue: | C&S & TUS Lecture Room, 2 <sup>rd</sup> Floor Wisma IEM, Petaling Jaya |

SYNOPSIS

The purpose of this course is to introduce the latest development in power factor correction and capacitor technologies; discuss the design and installation aspects of capacitor banks and illustrate the applications of different solutions.

### SPEAKER'S BIODATA

**Subhash Sharma** holds the position of Export Manager in RTR Energía. He graduated from the Technical Board of Education of Jodhpur (India) with a Bachelor Degree in Electrical Engineering. Subhash Sharma has accumulated more than 15 years of experience in theoretical and practical applications in the power factor correction industry. He has worked in the Power Factor Correction and Capacitors manufacturing industry for ten years and has gained in depth knowledge in capacitor design and applications.

Subhash was recruited by RTR Energía in 2007 to expand their export business. He is responsible for the export business in India, China, Russia and Southeast Asia. In fulfilling his objective of the internationalization of the company, the exports have growth representing the 55% of the turnover and RTR Energía is present in more than 60 countries.

## <u>Tentative</u>

| 0830- 0845  | Registration  |
|-------------|---|
| 0850-0900   | Welcome Speech by Session Chairman  |
| 0900- 0945  | Part 1 – Power Factor Correction (PFC)  |
|             | <ul> <li>Reaction Energy :cos (φ) vs PF</li> </ul>                                      |
|             | <ul> <li>Problems caused by reactive energy. What is the ideal PF?</li> </ul>           |
|             | <ul> <li>Economic impact of PFC in different countries</li> </ul>                       |
|             | <ul> <li>Why using capacitors and Benefits of PFC</li> </ul>                            |
| 0945-1000am | Coffee Break  |
| 1005-1130am | Part 2 – Capacitor technology   |
|             | <ul> <li>MKP capacitors: Metalized Polypropylene film</li> </ul>                        |
|             | <ul> <li>Over Pressure disconnection Systems</li> </ul>                                 |
|             | <ul> <li>One capacitor for each application</li> </ul>                                  |
|             |   |
| 1130-12.00  | Part 3 – PFC Solutions : Capacitor banks  |
|             | <ul> <li>Individual compensation</li> </ul>   |
|             | <ul> <li>Centralized compensation</li> </ul>  |
|             | <ul> <li>Capacitor bank components and design principals</li> </ul>                     |
|             | <ul> <li>Selection: voltage, harmonic filters, power, steps and<br/>capacity</li> </ul> |
|             | ii) Design : parallel connection, contactors, discharge                                 |
|             | resistors   |
| 1205- 1245  | Lunch   |
| 1245-0115   | Q&A   |

BEM APPROVED CPD/PDP HOURS: 3 Ref No: IEM14/HQ/316/S

#### **REGISTRATION FEES**

| IEM Student<br>Member   | RM 70.00 (online)  | RM 80.00 (normal)   |  |  |  |  |  |
|-------------------------|--------------------|---------------------|--|--|--|--|--|
| IEM Graduate<br>Member  | RM 150.00 (Online) | RM 180.00 ( Normal) |  |  |  |  |  |
| IEM Corporate<br>Member | RM 200.00 (online) | RM 230.00 (normal)  |  |  |  |  |  |
| Non IEM<br>Member       | RM 300.00 (online) | RM 330.00 (normal)  |  |  |  |  |  |
| IMBODTANT NOTES         |                    |                     |  |  |  |  |  |

## IMPORTANT NOTES

## Closing Date : 31st October 2014 (Friday)

For **ONLINE REGISTRATION**, payment **MUST BE MADE VIA ONLINE PAYMENT** [via RHB Now and Maybank2u -Personal Saving & Personal Current; Any Credit Card - Visa/Master]. If payment is not received within the stipulated time, the registration fee will automatically be reverted to the normal fee.

Payment via <u>CASH/CHEQUE/BANK-IN TRANSMISSION/BANK</u> <u>DRAFT/MONEY ORDER/ POSTAL ORDER/LOU/LOG/WALK</u> –IN will be considered as <u>NORMAL REGISTRATION</u>

For online registrations, please note that payment  $\ensuremath{\textbf{MUST}}$  be made before the closing date at the latest.

**FULL PAYMENT must be settled before commencement of the event**, otherwise participants will not be allowed to enter the hall. If a place is reserved and the intended participant fails to attend the course, the fee is to be settled in full. If the participant failed to attend the course, the fee paid is non-refundable. IEM reserve the right to reject any LOU/LOG not in accordance with these instructions.

The Organising Committee reserves the right to alter or change the programme 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.

#### **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

#### Ir. Lam SING YEW

Chairman, Electrical Engineering Technical Division

### REPLY SLIP (FAX TO : 03-7957 7678)

### HALF DAY TECHNICAL SEMINAR ON POWER FACTOR CORRECTION BASICS (RTR - SPAIN) Chairman, Electrical Engineering Technical Division, IEM

I/We wish to enroll the following person(s) to the Seminar on 4<sup>th</sup> November 2014 (Tuesday)

| NAME(S) | MEMBERSHIP NO. | GRADE | <b>REGISTRATION FEES</b> |
|---------|----------------|-------|--------------------------|
|         |                |       |                          |
|         |                |       |                          |
|         |                |       |                          |
|         | TOTAL RM       |       |                          |

Enclosed herewith a cash/crossed cheque/bank draft/money order No. ...... for the amount of RM ...... issued in favour of "The Institution of Engineers, Malaysia" account and crossed "A/C Payee only". I/We understand that the fee is not refundable if I/we withdraw after my/our application is/are accepted by the Organising Committee but substitution of participants will be allowed. If I/we fail to attend the Course, I/we will still settle the registration fee in full.

| Contact Person | : | Designation : |   |
|----------------|---|---------------|---|
| Organisation   | : | Tel no. :     |   |
| Address        | : | Fax no.       | · |
|                |   | Handphone :   |   |
|                |   | Email         | · |
| Signature      | : | Date          |   |

(Photostat copies are acceptable)