**About Mun Hean - Power Quality Division**

Mun Hean subscribes to the 3P PQM strategy coined by Janitza electronics, in that a complete PQM solution should entail PQ Monitoring, Power Management and Power Quality Solutions. With 30 years of experience in providing power quality solutions, Mun Hean ventured into an exclusive partnership with Germany’s PQM specialist, Janitza Electronics, in 2007 to provide one of the most sophisticated Power Monitoring Systems in Asia. This partnership resulted in several noteworthy Janitza Power Monitoring projects in Asia; including Gardens by the Bay (Singapore), NTU (Singapore), HSBC Data Centre (Hong Kong).

In Power Quality Solutions, Mun Hean boasts an extensive range of expertise from Power Factor Correcting Solutions; Filter Reactors, Active Harmonic Filters to Static var Compensation FACTS Solutions. The products and services that Mun Hean offers are tied with exclusive partnerships with leading manufacturers internationally. Notably, Vishay ESTA, Sinexcel Solutions and Hans Von Mangolt.

**What Participants Will Get out of Seminar**

1. The 7 key factors in understanding network Power Quality analysis
2. Latest development and solutions in Power Quality Management
3. Understanding design caveats for Critical Facility network
Harmonics & Power Quality:
A Technical Seminar by Mun Hean

Program:
<table>
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<th>Time</th>
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<tr>
<td>8.30 am</td>
<td>Registration</td>
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<tr>
<td>9.00 am</td>
<td>Presentation by Mr. Chee Khar Chit</td>
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<td>10.30 am</td>
<td>Tea Break</td>
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<td>11.00 am</td>
<td>Presentation by Mr. Chee Khar Chit [cont’d]</td>
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<td>12.30 pm</td>
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Topics:
1. Emerging Problems in Electrical Network - Nuisance Tripping, Over Heating, Capbank Fire, Motor Tripping, Transformer burnt, Computer Logic Fault
2. Sources of Power Quality Issues - Non Linear Loads, Rapid Changing Reactive Loads, Computer & PLC, Unequal Phase Loading
3. Identifying & Analysing PQ Problems – Advanced PQ Monitoring, Predictive Monitoring, Transient Waveforms Analysis, IEC standards guideline on Harmonics Assessment
5. Solving Problems with Low Voltage FACTS (Flexible AC Transmission System) – IGBT Current Source Generator solutions
6. Active Harmonics Filter – Removing harmonics pollution with 95% effectiveness
7. Introducing “SVG” – Power Factor Correction in harmonics polluted network, 3-Phase Load Balancing to increase Transformer utilization capacity, Leading PF Correction in Data Center
8. Case Study - Data Center server logic fault, Diesel Genset stability in an Oil Drilling Rig, Increasing Distribution Transformer utilization capacity
9. Demo & Hands-on - Advanced PQ monitoring System with Auto Reporting, Predictive Alarms, Live Dash Board. AHF/SVG wall and rack mounted PQ solution & supporting instruments e.g. protection relay, surge protection devices.

About The Speaker: Mr. Chee Khar Chit
Mr. Chee is the Power Quality Specialist from Mun Hean Singapore Pte Ltd. He holds a Degree in Electronics & Electrical Engineering from Loughborough University UK. Mr Chee is a specialist in Power Quality Solution. He has over 15 years of engineering experience in designing and implementing complex projects ranging from utility smart grid to solar power efficiency enhancement. Mr. Chee is leading the Power Quality Division in Mun Hean and working together with the product principles, to help customers overcome challenges in power quality issues and build robust electrical distribution network.
# REGISTRATION FORM

For enquiry, please call Lilian Lean/Jennifer Quek at Tel: 6324 2682, please email your registration form to registration@aces.org.sg

<table>
<thead>
<tr>
<th>Title</th>
<th>Fee per pax</th>
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<tr>
<td>Harmonics &amp; Power Quality: A technical seminar by Mun Hean</td>
<td>Member [ACES/YPC/M&amp;E RE/RTO]: $30 per pax, Non-member: $70 per pax</td>
<td>6 May 2015 (Wed) 9.00 am to 12.30 pm</td>
<td>18 Sin Ming Lane #06-01 Midview City Singapore 573960</td>
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Company:

Address:

Postal code:

*Contact Person:

*Mobile No.:

*Email:

## PAYMENT

Enclosed is a Cheque No: _______________________ (Cheque should be made payable to Association of Consulting Engineers Singapore and mailed to ACES Secretariat, Association of Consulting Engineers Singapore.

## Terms and Conditions

By submitting and signing this application form, the company and individual applicant agree to the following:

a) The company and individual applicant has read and understood the terms of the flyer (if available) and the application form.

b) Payment for the course must be made before the course commencement date.

c) ACES reserves the right to amend any details relating to the course, revise the course fees without prior notice, cancel or postponed the course.

d) Request for withdrawal or replacement must be made in writing. Requests are subject to approval by ACES.

- Written request for replacement must reach ACES before the course commencement date. There will be no additional charges for suitable replacement.
- Written request for withdrawal that reaches ACES
  - At least at least 7 working days before course commencement: Full Refund
  - 4 to 6 working days before course commencement: 50% of the course fee Refund
  - 3 working days before and upon course commencement: No Refund

To be completed by Company and Individual Applicant

### COMPANY APPLICANT

Name: __________________________

Signature: ________________________

Date: ____________________________

Company stamp (for company application)

### INDIVIDUAL APPLICANT

Name: __________________________

Signature: ________________________

Date: ____________________________