Design, Inspection and Testing of Electrical Installations in Compliance with SS638(Formerly CP5)

The Electricity (Amendment) Bill 2018 was passed in Parliament on 1 Oct 2018. This course will dissect the amendments and discuss how they may impact the work and services of developers, consultants, site staff, contractors and LEWs.

Introduction

The Electricity and Workplace Safety Heath and Safety regulatory frameworks stipulate, inter alia, the need for electrical installations to comply with the CP5 requirements. Subject to the relevant provisions of the Act and Regulations under the respective regulatory framework, the Regulator can take the responsible party to task for non compliance.

This short course is structured to introduce participants to the regulatory environment, the design principles, inspection and testing of electrical installations in customer premises, including the specific CP5 requirements pertaining to low voltage electrical installations.

The course is conducted through lectures and case studies to enable the participants to progress with the basic electrical installation design procedures, inspection and testing processes. Practical hands-on sessions are carried out in class to enhance the learning experience.

Objectives

The participants will learn through this short course the regulatory frameworks in respect of electrical installations, roles and responsibilities of LEW and licensee of an electrical installation as well as liabilities for non-compliance.

The participants will be guided through the key requirements in CP5 and other codes of practice where applicable, just name a few, in protection against electric shock, over current, faults and under voltage as well as inspection, testing, etc.

Demonstration on verification of final circuit design, cable sizing and MCB rating selection, etc. will be carried out to enable the participants to acquire the skills to ensure the compliance of the electrical installations.

Outlines

Electrical Installation and Regulatory frameworks (1/2 day)

- The relevant Act, Regulations and CP5
- Roles and Responsibilities of LEW and Licensee of Electrical Installation
- Pre-commissioning checks and turn-on procedures
- Lessons learned from court case judgments on electrical installation incidents

***SSG Approved Courses**

Eligible for SSG & SkillsFuture Credit (T&C apply)

*SSG funding is available for this course. Prior to registration, companies are required to enrol their staff (Singaporean or Singapore Permanent Resident) through the SSG's Skills-Connect system @ www.skillsconnect.gov.sg. Eligible applicant only pays the balance of course fee after SSG course fee support.

COURSE DETAILS

Date: 19 - 20 August 2019

Time: 9.00 am to 5.30 pm

Venue: HDB Centre of Building Research, 10 Woodlands Ave 8, Singapore 738973

***Fee: S$790 Nett**
GROUP DISCOUNT:
SIGN UP 2 DELEGATES AND 3RD ONE ATTENDS FREE

- **Refreshment and lunch will be provided.**
- **Complimentary parking lots are available on first-come-first-served basis**

CPD POINTS
PEB — Pending

REGISTER ONLINE:
http://bit.ly/CP5_Register

For assistance, please call or WhatsApp Michelle at 91388967
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Laures Academy
Empowering Your Business Through Knowledge

Course Directors

Er. Nicholas Lee Poh Choo
PEng, BEng (Electrical), Consultant, Carlo Solutions
Er. Lee has more than 40 years' experience in the public utility sector, holding several senior positions when he worked in SP Power Grid. He was involved in the predictive and conditioned based maintenance to improve network reliability and power quality in the power distribution network. Er. Lee is experienced in the operation of power generators; as well as planning, development and management of electrical transmission and distribution networks. He had carried out consultancy works for utility companies in India, China, South Africa and the Middle East. Current ly, he is an advisor to several companies. Er. Lee obtained his degree in Electrical Engineering from University of Singapore in 1972.

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BEng (EE), MSc (IE), LLB (Hons), BSc (Economics) Hons, P.Eng, C.Eng, Sr MIES, MIET, ACS, ACIS is Principal Consultant of Pinnacle Engineering and Management Consultancy, a translator, an advisor for parties In adjudication as well as a certified ACTA trainer and assessor. He also holds Dip BA, SDipECT, SDipFMA, ADipMD, CDipAF and GCIA. In dispute resolution aspect, he is a SOP accredited adjudicator, fellow of the Singapore Institute of Arbitrators and an accredited mediator of SISV Panel of Mediators. He was Director (Contracts) of the Network Devel opment Division, SP PowerGrid before venturing into training and management consultancy services. He has had more than 30 years experience in the transmission and distribution network development, operations and maintenance, street lighting operations, management of safety and security units and support services for the company's operation.

Design Concept of Electrical Installations (1/2 day)

- Assessment of general characteristics of electrical installations
- Isolation and isolation devices
- Protective devices and conductor sizing
- Characteristics of protective devices and their making and breaking capacities
- Cable installation methods and current rating
- Cable rating correcting factors
- Voltage drop tolerance and voltage drop calculation
- Temperature correcting factor for resistance

Over Current and Fault Protection, selection of protective conductors (1/2 days)

- Protection against overcurrent faults and earth leakage
- Fault current calculation
- Separated extra low voltage system
- Understanding earthing and protective conductor sizing
- Earth leakage protection devices
- Protection against shock
- Earth fault loop impedance and touch voltage

Installation design procedure, inspection and testing, and worked examples (1/2 day)

- Shunt trip and direct acting trip
- Characteristic of IDMTL relays and relay setting
- Protection grading and discrimination
- Protection against direct and indirect shock
- Worked examples and computer-based wiring design application & demonstration
- Inspection and testing
- Location specific application
- Solar Photovoltaic power supply system
- Outdoor applications
- Cable capacities of conduit and trunking