



One Day Seminar On Power Quality In Electrical Installation Of Buildings- Causes, Effects And Mitigation Techniques

by Dr Siow Chun Lim

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The Electrical Engineering Technical Division (EETD) has successfully organised a **ONE DAY SEMINAR ON POWER QUALITY IN ELECTRICAL INSTALLATION OF BUILDINGS- CAUSES, EFFECTS AND MITIGATION TECHNIQUES** on 2nd November 2017 at Wisma IEM. The seminar aims to grant an overview of the categories of power quality, their causes, effects on electrical installation and equipment, and practical mitigation techniques. The speaker was Ir. Lim Kim Ten from IEM EETD.

The registration started at 8:30am. A total of 74 participants registered and attended the seminar. Ir. Lim started by giving a general scenario of power quality. Power quality is a concern in the design of electrical installations (Wiring), and electrical and electronic equipment since the invention of transistor in 1948, and explodes into major challenges with the break speed introduction of modern micro-controller based electronic equipment. Good power quality allows electrical and electronic equipment to function as its intended design; especially performance, life expectancy and life cycle cost.



Participants at the talk

He then went on to define and describe what is power quality. In short, power quality is a power frequency disturbance which can be characterised as sags, swells, blackout, brownout and transients just to name a few. These phenomena are all associated with voltage. Causes of such have been outlined and discussed. The session then paused for a tea break.

After the break, Ir. Lim provided further discussion and sharing on power frequency disturbance by citing some real-case scenarios. After lunch, he talked about harmonics, static electricity and power factor. Mitigations are also identified for each of the aforementioned. The last topic of the seminar was on earthing and bonding. He explained the importance of appropriate earthing and bonding design and practices. He concluded the seminar by providing more insights on surge protective devices and filters. Question and answer session then follows and the seminar ended with presentation of token of appreciation from IEM EETD to Ir. Lim.



The speaker: Ir. Lim Kim Ten



Token of appreciation to Ir. Lim