

Power System Harmonics

Agenda

09:15 Arrival – Registration / coffee / tea

Modern complex electrical loads like electronic motor control, rectifier plant, Switch Mode Power, Frequency Inverters, Information Technology Equipment etc, produce considerable harmonics with potential consequential effects on both the current and voltage waveforms. This can result in equipment and associated power system failures. This course details the causes, effects and mitigation and associated regulations.

09:30 Session 1:

- Student Exercise
- Harmonic Fundamentals:
- Single & three phase harmonic fundamentals, current & voltage distortion

11:15 *Coffee / tea break (15 mins)*

11:30 Session 2:

- Power factor, four-wire systems, harmonic calculations
- Harmonic Sources
- AC/DC & AC/AC Convertors, including switched mode power supplies, Non-linear equipment, etc.

13:00 *Lunch (60 mins)*

14:00 Session 3:

- Harmonic Effects
- Instant & continuous distortions, flicker, machine vibration & noise.

For more information about this course contact the training team:

training@cibse.org | cibse.org/training | +44 (0)20 8772 3660

15:00 *Coffee / tea break (15 mins)*

15:15 Session 4:

- Harmonic Mitigation
- Power System design, Power transformer design & Compensation Devices, Factor K and K-Factor transformers

16.00 - 16.30 Q & A

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