PROFESSIONAL PRACTICE

High Voltage Plant Professional Course

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September 2022

Mitigating critical risks through better design

Industrial power users are becoming increasingly removed from safety and technical advancements commonly found across the power utility sector, heightening risk exposure.

While organisations employ registered electrical professionals, they typically work in isolation from the broader power industry. Capability development for industrial engineers also hasn't historically been well serviced by the education sector. This introduces increased risks to:

» Safety – compliance as a PCBU

» Productivity – lost time and equipment failure

» Asset Management – annual budgets and asset utilisation

In response, the Electricity Engineers' Association (EEA) and Mitton ElectroNet have partnered to offer professional courses in High Voltage Plant (this course) and Low Voltage Equipment for High Voltage Plant.

Purpose of the course

This course is designed to equip industrial users of high voltage electricity with:

» an improved understanding of the critical risks associated with their installations, and how these may be mitigated through design considerations.

» the ability to describe the workings of high voltage equipment used in industrial settings, and evaluate and optimise the safety and efficiency of an industrial power system.

Who should participate?

This course is suitable for technical engineers and electrical tradespeople who work with, maintain and operate high voltage systems within industrial facilities.

Participants will likely already have first-hand knowledge of some of the challenges associated with utilising high voltage plant.

What is involved?

The course takes approximately 20 hours to complete, made up of:

» Theoretical knowledge conveyed through online materials (8 hours)

» Practical workshop series facilitated by Mitton ElectroNet. The workshops may be conducted online or in-person (8 hours)

» Assessment (4 hours).

Theoretical knowledge will be assessed through a self-directed online quiz (40%). The practical application of learning will be assessed through an assignment (60%). The assignment will require each participant to critically evaluate and suggest improvements to an industrial power system.

NOTE: this course can be used for the purposes of achieving Engineering New Zealand CPD credits.

What will you learn?

The course covers the following:

1. Understanding the electrical componentry of high voltage installations
2. Exploring the challenges associated with the design of high voltage installations
3. Understanding risk and the risk management process per international standards
4. Assessing the safety and performance of a high voltage industrial power system
5. Preparing a risk treatment plan to mitigate safety and performance risks

The Facilitator

Stuart McGirr joined Mitton ElectroNet in 2012, graduating from Canterbury University the year earlier. Initially specialising in earth grid injection testing and design, Stuart has since expanded his knowledge in arc flash analysis, new connections and high voltage systems, working with various clients in New Zealand, Australia, UK and Europe. Through his career, he has completed two stints in the UK, both times working for separate electrical consultancy companies. The first two-year stint was based in Glasgow and the other three-year stint based in London. Upon returning to New Zealand in 2020, he recommenced employment with Mitton ElectroNet, becoming a Team Leader in the Electrical Safety team. Stuarts main focus is clients within the heavy industry space, including ports, food processing plants, hospitals and mines. These customers typically own or operate high voltage systems that are a subsidiary of their plant processes. Stuart is a Chartered Engineer and a Chartered Member of the Institution of Engineering and Technology (IET).

Prices and registration

Registration links and pricing information for all courses (and other EEA courses) are located on the Professional Development page on the EEA website.

NOTE: Prices are reduced for EEA members.

REGISTER AT >

www.eea.co.nz/Site/professional-development/