

Joint Electrical Engineering Institutions' Lecture Program, 2013

Design of Lightning Protection Systems

Rohit Narayan, Director, Data & Telecom Sales, Erico

DATE/ TIME: **Thursday 28 March 2013** 5:30 for 6:00pm Start

VENUE: Engineers Australia Auditorium,
Ground Floor, 8, Thomas Street, Chatswood

RSVP: https://events.engineersaustralia.org.au/ei/getdemo.ei?id=1368&s=_GGS0KL46O

Lightning Protection used to be more of an art than a science. In modern times though, science has triumphed and engineers are becoming more and more adept at devising scientific methods in determining lightning risk and in mitigating it. This presentation looks at evaluating lightning risk and the methods of lightning protection that are commonly used in Australia and New Zealand. It will discuss:

- The risk assessment tool in AS/NZS1768 for Lightning protection
- Selection of appropriate protection levels and what these mean for the LPS design
- Overview of the design rules for conventional lightning protection systems
- Key criteria for writing specifications for conventional lightning protection systems
- Hardware and typical details of lightning protection
- The use of isolated lightning rods to protect modern day electronic or electrical features on rooftops of building that have conventional lightning protection
- Active lightning protection system operation, advantages and limitations.

It will also cover some case studies including:

1. Victorian Desalination Plant - This was equipped with green roof placed on top of a steel roof with a membrane in between. This posed special challenges one risk factors that is not accounted for in risk assessment in the AS/NZS standards
2. Eden Park, Auckland - This has expensive lighting fixtures installed on top of the stadium and an expensive and critical scoreboard. A combination of techniques was used to provide lightning protection at this site.
3. A conventional building.

The presenter, Rohit Narayan, is a Chartered Professional Engineer who holds a Bachelor of Electrical Engineering degree from the University of Tasmania and a MBA from Deakin University. He has 22 years of experience as an electrical engineer in various technical and commercial roles. Rohit's field experience at ERICO includes design and consultancy on projects incorporating earthing, lightning protection and surge protection. Previously, Rohit has also worked as a project manager with Olex Cables, Motorola and Telecom Fiji.

NOTE: Attendance may be credited towards Engineers Australia's Continuing Professional Development (CPD) points. Engineers Australia members are required to undertake a minimum of 150 hours CPD every three (3) years & are responsible for recording CPD for audit.

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