

Introduction to Lightning Protection Design and Standards

LEARNING OUTCOMES

Lightning strikes can result in substantial damages such as power surges, fire, and even death. Proper design of lightning protection systems is extremely important for personnel and equipment safety, operation of the electrical and controls systems, and operating cost reductions due to problems relating to improper lightning protection. This course will provide participants with the following knowledge and skills:

- Understand the nature of lightning and how it works
- Understanding the fundamentals of the components that make up the lightning protection systems
- Understanding various methods to determine zone of protection from lightning
- Understanding various methods of lightning protection design
- Provide a list of applicable codes, standards, and design methodologies.

COURSE OUTLINE - 4 HOURS

- Overview
- Nature of Lightning
- Why Lightning Protection
- Applicable Standards
- Lightning Details (Definitions and Fundamentals)
- Basic of Lightning Protection System
- Lightning Air Terminals
- Lightning Protection Design (Grounding)
- Determination of Volume/Zone of Protection
- Case Studies
- Lightning Protection and CEC
- Lightning Risk Assessment per CSA B72

INSTRUCTOR

Mark Moosaei, B.A.Sc., M.A.Sc., PMP, P.Eng. – Principal, Rastin Engineers Inc.

Mark Moosaei graduated with B.A.Sc. in electrical engineering from the Isfahan University of Technology in 1993, and obtained M.A.Sc. Degree from the Concordia University, Montreal, in 2003. Mark is a principal engineer with Rastin Engineers, and has over 25 years of experience working for major EPCM consulting engineering firms in Canada and Internationally.

Mark's areas of expertise includes designing, commissioning, and managing electrical, instrumentation, and control systems for Port and Terminal, Mining, Water and Wastewater, Oil and Gas, Utility, Pulp and Paper, and Metal Refining. His expertise also includes practical experience

with industrial power distribution systems, emergency systems, analysis software, motor controls, VFDs, PLCs, and HMIs. Mark has a thorough knowledge of the Canadian Electrical Code, industry standards and safety codes.

Mark is a Project Management Professional (PMP) and registered electrical engineer (P.Eng.) in British Columbia and Alberta. He has published academic papers on the topic of control systems with the Institute of Electrical and Electronics Engineers (IEEE).

WHO SHOULD ATTEND

The course is intended for professional engineers, engineers-in-training, electrical managers, project managers, designers, electricians, construction contractors, maintenance supervisors and any other personnel who have basic knowledge and understanding of power distributions for electrical, instrumentation, controls, and communication systems.

WHEN & WHERE

T.B.D.

REGISTRATION FEES

T.B.D.

The fees includes hardcopies of the course presentation materials, and refreshments and lunch.

Get \$50 off the price for new university/college graduates and students. The \$50 amount will be refunded after the successful completion of the course.

For companies, register 3 persons and get the 4th person registration free of cost.