Content Community Connection

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Methods of Grounding In Power Systems

Contact us Today for a FREE quotation to deliver this course at your company's location.

https://www.electricityforum.com/onsite-training-rfq

Actual case studies and in-class exercises provide knowledge needed for solving grounding problems, designing new systems or maintaining existing facilities. Power systems grounding problems cause unexplained system outages. Highly qualified Siemens Westinghouse instructors can provide you with knowledge and experience to recognize, evaluate and verify grounding system elements.

Course Objectives:

- Explain the Reasons for Grounding, Shock Hazards, System Ground Versus Equipment Grounds
- Describe the Basics of System Grounding
- Describe Typical Ground Fault Schemes and Switchgear Performance Testing
- Explain Symmetrical and Fault Calculations
- Outline NEC Requirements
- Summarize Computer and Instrumentation Grounding
- Explain Ground Grid Resistance

WHO SHOULD ATTEND

The Methods of Grounding In Power Systems training course is suggested for graduate engineers or personnel with equivalent work experience in electrical power systems. Consultants, application engineers, design engineers and electrical engineers from large industrial plants or municipal distribution systems will find this course very beneficial. Attendance at the Siemens Westinghouse Industrial Power Systems Analysis Seminar or equivalent is strongly recommended as a prerequisite.

STUDENTS RECEIVE

- **FREE** Electricity Forum 120-Page Digital Power Quality Handbook (Value $20.00)
- **$100 Coupon** Toward Any Future Electricity Forum Event (Restrictions Apply)
- 1.4 Continuing Education Unit (CEU) Credits
- **FREE** Magazine Subscription (Value $20.00)
- Course Materials In Paper Format

COURSE OUTLINE

Methods of Grounding In Power Systems Course Outline

Introduction to Power Systems Grounding

- IEEE Standard 142-1991
- Grounding Nomenclature
- Systems Grounding
- Systems Grounding

Basics of System Grounding

- Ungrounded Systems
- Grounded System
- Ground Fault Detection
- Ground Fault Coordination

NEC Requirements

- Article 250-1 Scope
- Separately Derived Systems
- Equipment
- Sizing Grounding Electrode Conductors

Computer Grounding

- Separately Derived ADP Power Supply
- Single Point Grounding
- Safety vs. Signal Grounding
- Raised Floor Signal Reference Grids
- Modular Power Centers

Ground Grid Resistance

- Grounding System Components
- Effects of Ground Resistance
- Improving Ground Resistance
- Ground Resistivity Measurements
- Ground Resistance Measurements
- Calculating Resistance for Large Substation Ground Grids

- Ground Grid Design

IEEE Standard 80-1986

- Maximum Mesh, Step and Touch Voltages
- Permissible Body Current Limits
- In-Class Calculations and Evaluations of Ground Grids

Questions and Answers

COURSE TIMETABLE

Both days:

Start: 8:00 a.m.
Coffee Break: 10:00 a.m.
Lunch: 12:00 noon
Restart: 1:15 p.m.
Finish: 4:30 p.m.

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