

Registration

General Information

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Speakers

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Directions & Maps

Contact Us

OMICRON Substation Grounding Seminar

This one-day seminar will introduce the basics of grounding system design, discuss evaluation of ground grids for personal safety according to IEEE Standard 80-2000 and the corresponding OSHA Standard, and show how to determine the local ground potential rise (GPR) of the station under test from faults to ground or lightning impulses.

The presenters will also talk about how to determine k-factors and line, earth, positive-sequence and zero-sequence impedances.

Who should attend:

- Power utility engineers
- Substation design engineers
- Transmission line engineers
- Protection electrical engineers
- Consultants
- University and college lecturers
- Students

Seminar topics will include:

- Industry Standards Review - OSHA, IEEE
- Objectives of Good Design
- Understanding the Soil Model
- Ground Potential Rise (GPR)
- Lightning Design Considerations
- Case Studies - Improper Designs
- Testing & Evaluation
- Line Impedance and k-factor Measurement

Cost: No charge. Includes copy of presentations, lunch, and Certificate of Participation. CEUs are available on request.

Date: Thursday, October 3, 2013

Time: 9:00 a.m. - 4:00 p.m. Eastern

Location: University of Tennessee at Chattanooga, University Center Auditorium

To register online go to this link:

<http://www.registration123.com/OMICRON/2013GroundTest>

Hosted by:

THE UNIVERSITY OF TENNESSEE 
CHATTANOOGA



Registration Deadline: Thursday, September 26, 2013

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Seminar Agenda

Registration opens at 8:00 AM. Welcome at 9:00 AM. The seminar adjourns at 4:00 PM.

Morning Topics

Grounding System Design

- Overview
- Industry Standards: OSHA, IEEE
- Objectives of Good Design
 - Human Safety
 - Equipment Safety & Performance
 - Lightning Impulse Dissipation
 - Limit Transfer Voltages
 - Control of Ground Potential Rise
- Understanding the Soil Model
- Ground Potential Rise (GPR)
 - What is GPR?
 - GPR and its Effects on Equipment
 - Transfer Voltage
 - Controlling Surface Gradients for Safe Step & Touch Potentials
- Lightning Design Considerations
 - Electro-dynamics of a Lightning Impulse
 - Proper Earth Dissipation of Energy
- Case Studies - Improper Designs
 - Lightning
 - Control Cable Shield Bonding
 - Capacitor Switching

Afternoon Topics

Testing and Evaluation

- Why Test?
- Understanding the Various Test Methods
- Ground Impedance Testing
- Soil Resistivity Testing
- High-current DC Point to Point - Thevenin Resistance
- Step & Touch Voltage Assessment

Line Impedance and k-factor Measurement

- Importance of k-factor
- Different k-factor Format
- Calculation of k-factor
- Measurement of Line Parameters (i.e. Z1, Z0, k-factor)

Case Studies

Conclusion

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