

You are invited to an IEEE Meeting on Thursday, April 17, 2008



Title: "Safety Bonding in Low-Voltage Power Systems Using High-Voltage Techniques"

Speaker: Charles Cunha, Regional Power Systems Engineer, Square D / Schneider Electric

Date: April 17th, 2008

Time: No-host social at 5:30 pm; Presentation at 6:15pm; Dinner at 7:15 pm;
Presentation continues at 8:00 pm; Adjourn by 9:00 pm.

Place: Marie Callender's Restaurant - The Garden Room; 2090 Diamond Blvd in Concord
(near the Concord Hilton Hotel). Call 925-827-4930 if you need directions.

RSVP: Please make reservations by April 16, by contacting Gregg Boltz at
email: gboltz@brwncald.com or telephone: (925) 210-2571

Cost: The cost of dinner is \$20 for IEEE members; \$25 for non-members.

Meeting Description:

Safety bonding is a necessity in all power systems. This presentation will cover the following topics:

- § The two objectives in grounding
- § Voltage gradients during ground faults
- § Tolerable body current limit
- § Accidental ground circuit
- § Criteria of tolerable voltage
- § Typical shock situations
- § Bonding versus grounding
- § Step and Touch voltage criteria
- § Design example - Bonding

About the Speaker:

Charles Cunha, P.E., serves as a Regional Power Systems Engineer for Square D and received a Bachelor of Science degree in Electrical Engineering from California State University, Fresno in 1983. Charles joined Pacific Gas and Electric Co. in 1984 as a planning engineer responsible for short circuit, load flow, and coordination studies for the Fresno area. In addition to this work, Charles was responsible for interconnecting several cogeneration facilities to the PG&E grid, area planning studies, reliability studies and 12-kV feeder designs. In 1988 Charles joined Roseville Electric serving as the utility's engineering manager. During this time Charles designed several power substations, overhead and underground transmission lines, overhead and underground distribution lines, overhead and underground fiber optic lines, steel poles and their foundations. Other responsibilities included load flow studies, short circuit studies, harmonic studies, service reliability studies, construction and engineering specifications, and system reliability. Charles has taught classes on capacitors, underground cable design and ampacity selection for cables 69-kV and below, pole line design, relay setting, electromagnetic fields, and power line safety. Charles does power system consulting services for Schneider Electric North America.

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