



The Electrical Association of Philadelphia

presents

High Voltage Systems: Equipment & Safety Class

Thursday, October 26, 2017

Special Location: Valley Forge Casino Resort

Description:

The High Voltage Training (2.4 kV – 34.5 kV) is a course designed for individuals who are involved with high voltage substation, distribution, and utilization equipment in industry. Relevant **NEC** provisions will be highlighted.

Subjects Covered:

- Introduction: Standards and Regulations
- AC Systems review: Inductive and capacitive reactance, impedance, power triangle, working with phasors.
- Print Reading: One Line, Three Line, & Connection Diagrams; Standard device designation numbers
- Characteristics of Three-Phase Power Systems: Types of System Grounding
- Power Transformers: Transformer Nameplate information
- Power Circuit Breakers: Circuit Breaker Nameplate Data, interrupting methods: air, oil, vacuum, SF6. Circuit switchers. Operating mechanisms, control schemes, tripping methods.
- Introduction to Medium Voltage System Protection: System requirements, protection terminology; impedance, available fault current, sensitivity, selectivity.
- Medium Voltage Fuses: Types, curve interpretation, fuse ratings. Fusing of motors, transformers, capacitor banks, and distribution lines.
- Instrument Transformers: PT's, CT's, types, connections, burdens, accuracy, safety.
- Protective Relaying: Applications, types, operating characteristics.
- Minimum Approach Distances.
- Temporary Grounding Equipment: Describe methods and components of temporary protective grounds.
- Live Line Tools – Safety Equipment Inspection
- De-Energizing Lines and Equipment for Employee Protection – Insulate and Isolate Procedures
- Grounding for the Protection of Employees
- Working on or near Exposed Energized Parts – Job Briefings

CEUs:	8 hours for Philadelphia, New Jersey and Delaware Contractors; 8 hours for PA Electrical Inspectors; 8 PDHs for PA PEs
Date:	Thursday, October 26, 2017
Schedule:	Class from 7:00 a.m. to 4:00 p.m. with break for lunch
Cost:	\$350 Limited to first 50 students. Includes lunch <u>and</u> materials fee.
Location:	Valley Forge Casino Resort 1160 1st Avenue, King of Prussia, PA 19406
Instructor:	Joseph Deane, P.E., KTR Associates

About the Instructor:

Joe Deane has over 25 years of experience as an Electrical Engineer, Project Manager, and Engineering Manager in both the electrical utility and industrial business sectors. Mr. Deane is Principal owner of KTR Associates, LLC, a firm that specializes in power system engineering and electrical safety. He is member of: IEEE, ISPE, NFPA and EAP.

- Register on-line at www.elecricexpo.org.
- Payment is required at time of registration to reserve your seat.
- Questions? Call Arielle at (610) 825-1600, ext. 14 or email arielle@eap.org.
- Please see "No Refunds" policy at www.eap.org.