



the hands-on solution for your qualified employees

70E+Plus



Training Description:

There is 70E training and then there is 70E+PLUS. The National Electrical Code, NFPA 70E and OSHA now all require that individuals receive safety training before they can be considered Qualified to perform electrical maintenance. Some of the topics included for this training must be:

- *How to select an appropriate volt-meter*
- *How to determine nominal voltage*
- *How to determine the appropriate PPE for the hazard*
- *How to determine Approach Distances based on Voltage*
- *Requirements of OSHA 1910.331 through 1910.335*

In addition it is important they become familiar with the procedures required by NFPA 70E 2009.

70E+PLUS is different because it goes a step further and covers additional material that is needed if your goal is truly avoiding injuries from electrical hazards and not just compliance. 70E+PLUS is hands-on and includes troubleshooting and safety by actually doing it. Hands-On troubleshooting panels will be brought in and the students will actually build circuits and troubleshoot them. Real world examples will be given for students to make decisions concerning PPE and decisions on appropriate troubleshooting techniques. Your plants three phase distribution system will be studied so your qualified employees can better determine system nominal voltages. This course will actually improve troubleshooting skills as well as safety, both will make your plant more efficient. This is truly a unique learning experience.

I. OSHA: REGULATIONS AND STANDARDS

- Code of Federal Regulations
- NFPA 70
- NFPA 70E
- IEEE
- Compliance
- Safety Programs

II. QUALIFIED VS. UNQUALIFIED

- Definitions
- Training Retraining
- Skills Verification
- Contractors

III. VOLTAGE

- Definition
- Exposed and Energized
- Hazard Analysis/Shock
- Determining Nominal Voltages/Labeling
- Approach Boundaries
- Selecting Voltage Rated Protective Equipment
- Selection and Use of Appropriate Voltage Detectors
- Energized Work Permits
- Electrical Rescue

IV. CURRENT

- Definition
- AC/DC
- Magnetic Fields
- Transformers
- Single/Three Phase Systems
- Available Current Levels/Shorts
- Ground Faults
- Circuit Protection and Coordination
- Hazard Analysis/Arc Flash/Labeling
- Selecting Appropriate Personal Protective Equipment
- Protection Boundary and Guarding Requirements

V. RESISTANCE

- Definition
- Conductor Vs. Insulator
- Continuity
- Ohms Law
- Grounding
- Working Clearance



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