



## Technical Diagnostic Services Training Institute

### OSHA Industrial Electrical Safety

16 hours

#### Who Should Attend:

Designed for employees that perform operation or maintenance work on electric Utilization Equipment, and Power Generation, Transmission, or Distribution installations.

#### Course Description:

Reduce risk to employees by fully implementing an electrical safety program. This will be accomplished through enhancing employee knowledge, improving supervisor employee communication, changing staff behaviors, and improving attitudes toward electrical safety. Course will meet the mandatory training requirements of Fed/OSHA 29 CFR 1910.269 (Generation, Transmission, and Distribution), 1910.137 (Electrical Protective Equipment), and 1910.147 .331-.335 (Electrical Safety Related Work Practices).

#### Outline:

- I. Introduction
  - A) Terms and Conditions
  - B) Hazards of Electricity
  - C) Shock
  - D) Arc
  - E) Blast
- II. General Requirements
  - A) Training
  - B) Determining Existing Conditions
  - C) Medical Services and First Aid
  - D) Job Briefings
  - E) Enclosed Spaces
  - F) Excavations
  - G) Testing and Test Facilities
  - H) Mechanical Equipment
  - I) Overhead Lines
  - J) Underground Electrical Installations
  - K) Substations
  - L) Special Conditions
- III. Personal Protective Equipment (PPE)
  - A) General Requirements
  - B) Head Protection
  - C) Eye and Face Protection
  - D) Flash Protection
  - E) Footwear
  - F) Use and Care of Rubber PPE
  - G) Live Line Tools
  - H) Record Keeping
  - I) Temporary Insulation Equipment
- IV. Energized Work
  - A) Live Work Policy
  - B) Responsibilities
  - C) Approvals
  - D) Establishing a Safe Work Zone
  - E) Hot Work Permit Program

**TDSTI**

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### OSHA Electrical Safety continued

- V. De-energized Work
  - A) Lockout/Tagout
  - B) De-energizing Lines and Equipment
  - C) Clearing
  - D) Sample Lockout/Tagout Procedures
  - E) Proving System is De-energized
  - F) Temporary Grounds
- VI. Ground Systems
  - A) Personal Protective Grounding
  - B) Induced Voltages and Currents on
  - C) De-energized Lines and Equipment
  - D) Technical Considerations in Protective Grounding
  - E) Protective Grounding in Substations and Switchyards
  - F) System Grounding Connections
  - G) Test Procedures for Personal Protective Grounds
- VII. Specific Equipment Hazards
  - A) Circuit Breakers
  - B) Contactors/Starters
  - C) Transformers
  - D) Current Transformers
  - E) Potential Transformers
  - F) Batteries

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