

BEST PRACTICE: VOLTAGE TESTING

STATEMENT: Provide a concise approach that outlines the key steps involved with voltage testing.

DESCRIPTION:

Any employee that is to perform voltage testing must be qualified and trained on the test instrument to be used. The qualified employee shall follow the accepted procedure for testing for the presence of voltage and the steps necessary for the verification for the absence of voltage. The employee shall be familiar with the maximum voltage potential and wear protective equipment at least equal to that voltage. For commissioning of electrical service and trouble shooting, properly rated voltage meters must be selected with the appropriate category for the maximum voltage that could be encountered:

- A. Identify the circuit(s) to be tested
- B. Determine the source of the circuit(s)
- C. Determine the maximum nominal voltage that could be present.
- D. Perform a shock risk assessment
- E. Perform an arc flash risk assessment
- F. Select the appropriate Personal Protective Equipment for use
- G. Review the procedures for proper meter operation.
 - a. Verify proper operation of the test instrument.
 - b. Test the voltage.
 - c. Retest on original source to verify proper operation of the test instrument.
- H. Implement Lockout/Tagout requirements.
- I. Determine the working clearances

Any employee involved with voltage testing must be a qualified person trained in the use of the test instrument to be used, able to demonstrate and have knowledge related to the construction and operation of the test instrument being used and must have received safety training to identify and avoids the hazards associated with the procedure. The employee should be familiar with the appropriate rating of rubber protective goods and their use and understand the limitations in the protection they offer. The employee should also be aware of the arc rating of garments and choose the appropriate Personal Protective Equipment Category for the exposure. Knowing the proper working clearances around electrical equipment is key to staying safe and out of harm's way. Ensuring proper illumination around equipment being tested can prevent accidents resulting from blind reaching or poor visibility.

BENEFITS:

- Ensures qualified workers will be performing required tasks.
- Provides compliance with NFPA 70E Standard and OSHA Regulations.
- Incorporates risk managements procedures.
- Follows proper rules for establishing an electrically safe working condition.
- Demonstrates compliance with all applicable OSHA and NFPA 70E requirements.

REFERENCES:

NFPA 70E – THE STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE