Lockout/Tagout Basics

Week Number 11 (March 12 - 18) 2017 Edition

OBJECTIVES

Upon completion of this safety talk, participants will be able to:

- *Identify the basic steps of a lockout/tagout*
- *Give an example of how to verify that a voltage tester is working properly*

The procedure for working safely with electricity is to de-energize. The industry standard for safety, NFPA 70E, calls for circuits and equipment to be placed in an electrically safe work condition. This mandates that we implement an effective lockout/tagout (LOTO). To ensure this is done we'll review the basic steps of a LOTO.

Step 1. Notify Personnel

Before beginning, make sure those working in the area are made aware that a lockout/tagout is going to take place. This includes "Affected" individuals and "Authorized" employees. The affected is anyone who works in or around the area in which service or maintenance is being performed. An authorized employee identified here are those exposed or one of who performs the LOTO. Be sure all affected individuals know the power will be off, the reason for it and not to operate equipment. Make sure you and all other authorized employees know of all energy sources and their location, including stored energy.

Step 2. Disconnect and De-energize

Make sure the load is interrupted and disconnected from all energy sources.

Step 3. Release Stored Energy

After disconnecting and de-energizing, check for residual energy which may remain stored in the equipment or circuits. Discharge capacitors and short circuit high capacitance elements according to established procedures. Coordinate electrical LOTO with procedures for other forms of stored energy such as hydraulic, pneumatic, and mechanical which must be released.

Step 4. Apply Locks and/or Tags

Each employee must apply their lock (or tag) to all disconnecting means used to de-energize the circuit. If you use a tag without a lock, another safety measure must be used. Check with the company LOTO procedures and/or your supervisors for the additional measure to be used and make sure it has been implemented before you begin work on the circuit or equipment.

Step 5. Verification - Attempt to Operate

Make sure the equipment or circuit is de-energized and cannot be reenergized with the lock or tag in place. Check to see if the switches and/or other disconnecting means can be operated with the lock or tag in place. Do not proceed until this is verified

Step 6. Verification - Test for the Absence of Voltage

The next phase of verification is testing for the absence of voltage. The voltage detector itself must be tested before and after the equipment or circuit to complete the verification process. Be sure to select an appropriate voltage detector, inspect the voltage detector and wear the appropriate PPE while testing. Verification of the tester can be done by testing for voltage on a circuit, de-energizing the circuit and retesting the de-energized circuit using the same voltage tester.

Step 7. Apply Protective Grounds -

You should know that the potential for induced voltage or other stray current exists. Be sure to apply grounds. Use grounds rated for the maximum available fault current for the time necessary to clear the fault.

Step 8. Perform Work

Once the LOTO procedure has been completed according to the established procedures, begin work according to approved company work practices.

DISCUSSION QUESTIONS

- What is the difference between an affected and authorized employee?
- When can a tag alone be used for LOTO?
- Why is verification of a voltage tester necessary?
- What are possible sources of induced or other stray current?