

LOCKOUT/TAGOUT

Introduction

On January 2, 1990 the Lockout/Tagout Standard, 29 CFR 1910.147, went into effect. It was created to help reduce the death and injury rate caused by the unexpected energization or start-up of machines, or the release of stored energy. More than 125 deaths and 28,000 lost work days were attributed to this area before implementation of the standard. In 1993, Lockout/Tagout was the eighth most cited OSHA standard. In 2001, Lockout/Tagout was the fifth most cited OSHA standard.

The standard covers the servicing and maintenance of machines and equipment in which the unexpected energization, start-up or release of stored energy could cause injury. Normal production operations, cords and plugs under exclusive control, and hot tap operations are not covered. This standard is intended to apply to energy sources such as electrical, mechanical, hydraulic, chemical, nuclear and thermal.

“Lockout” is the placement of a locking device on an energy isolation device (circuit breaker, slide gate, line valve, switch, etc.) to insure the energy isolating device and equipment being controlled cannot be operated until the lockout device is removed. A lockout device utilizes a positive means such as a lock (key or combination type) to hold an energy isolating device in a safe position and prevent the energization of a machine or equipment. The lockout device must be substantial enough to prevent removal without use of excessive force or unusual techniques.

“Tagout” is the placement of a tagout device (a tag or other prominent warning device and a means of attachment) on an energy isolation device to indicate the energy isolating device and equipment being controlled may not be operated until the tagout device is removed.

The lockout device must be used unless the employer can demonstrate that the utilization of a tagout system will provide full employee protection. The tagout device must be non-reusable and attached by hand. The tagout program must provide a level of safety equivalent to a lockout program.

Written Program

OSHA 29 CFR 1910.147 covers the minimal acceptable written program procedures. It must include:

- ◆ A specific written statement of the intended use of the procedure.
- ◆ Specific procedural steps that are taken for shutting down, isolating, blocking and securing machines or equipment to control hazardous energy. This must be done for each piece of equipment, unless it is a duplicate.
- ◆ Specific procedural steps for the placement, removal and transfer of lockout devices and the responsibility for them.
- ◆ Specific requirements for testing the effectiveness of the lockout devices, tagout devices and other energy control measures.

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Training

Training of employees must be done by an authorized individual selected by management. Affected employees and all other employees whose work operations are or may be in an area where energy control procedures may be utilized must be instructed in the purpose and use of the energy control procedure. When tagouts are used, employees must be instructed in the limitations of these devices.

Employee retraining must be provided for all authorized and affected employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures. In addition, whenever replacement or major modification of a machine or equipment is performed, and whenever new machines or equipment are installed, energy isolation devices for such machines or equipment must be designed to accept a lockout device.

Removal of Lockout/Tagout Devices

Before lockout or tagout devices are removed, the authorized employee must ensure non-essential items are removed and machine components are operationally intact. The area should be checked to ensure all employees are safely positioned or removed, and all affected employees are notified that lockout/tagout devices have been removed. The lockout/tagout device must be removed by the person who applied the device. If the person who applied the device is not available, the device may be removed by another employee if the employer has established a specific procedure and training for this. When group lockout/tagout devices are used, a procedure equivalent to the personal lockout/tagout system should be followed.

References

The OSHA website has excellent information on this regulation (1910.147). Check out the PSHA website at www.osha.gov. You'll find sample programs, letters of interpretation, etc. Check their eTools and you'll find some great interactive training assistance.