Safety Bugle

Today's Topic: Lock-Out / Tag-Out

Introduction
Many workplace accidents are caused by machinery that accidentally becomes activated while being serviced or maintained. This accidental activation is called an "uncontrolled release of hazardous energy." Many of these accidents can be prevented if the energy sources are isolated, and locked or tagged out.

Identifying Hazardous Energy
Hazardous energy can found in the workplace in different forms. The most common form of energy is electrical, but mechanical, hydraulic, pneumatic, chemical, and thermal energy can also be dangerous. Energy can also mean movement or the possibility of movement. There are two types of energy.

- **Kinetic energy** is the force caused by the motion of an object. A spinning wheel is an example of kinetic energy.
- **Potential energy** is the force stored in an object that is not moving. A spring under tension is an example of potential energy. Potential energy can also be the potential energy from suspended parts or springs.

Whenever any part of the body is exposed to these types of energy while servicing or maintaining equipment, lockout/tagout procedures must be followed.

What is Lockout/Tagout?
To keep equipment from being energized during repairs or maintenance, it can often be **locked out**. An *energy isolating device* (the disconnect switch or valve) is placed in the off position. A lock, either combination or key, is then placed over the energy isolating device. This lock remains over the energy source device until servicing or maintenance is complete.

A piece of machinery is **tagged out** when the machine is turned off and a *tag* with a written warning is attached to the disconnect switch, circuit breaker or valve or other energy isolating device. The purpose of the tag is to assure that the equipment will not be operated until the tag has been removed. Tags used with the lock also identify the employee who is servicing the equipment.

NOTE: *Push buttons, selector switches and other control circuit type devices are not energy isolating devices.*

When is Lockout/Tagout Needed?
Lockout/Tagout is required where servicing and maintenance of machines and equipment could cause injury to employees due to unexpected startup or release of stored energy. Such situations could occur when repairing electrical circuits, cleaning or oiling machinery with moving parts, or clearing jammed mechanisms.

Training

Three types of employees are covered by the standard: *authorized, affected, and other*. The amount and type of training that employees receive depends on their job in relation to the machine that is being locked out or tagged out.

Authorized Employees
Employees who are *authorized* to execute the lockout/tagout and perform the servicing or maintenance should receive training in the:

- Recognition of all applicable hazardous energy sources (electrical, mechanical, hydraulic, pneumatic, chemical and thermal),
- Details about the type and size of the hazardous energy sources present in the workplace, and
- Methods necessary for controlling and isolating the energy source.

Authorized employees must possess the knowledge and skills necessary for the safe application, use and removal of energy controls.

Affected/Other Employees
Affected employees (usually the machine operators or users) and all *other* employees whose work operations may be in the area of the energy controls must recognize when the control procedure is being set in motion. They also must understand the purpose of the procedure and the importance of not using or starting up any equipment or machines that are locked out or tagged out.