Safety Meeting Topic #3
Lockout/Tagout Procedures

Don’t Just Turn It Off - Lock It Out

Any powered equipment is potentially dangerous - even if it’s supposed to be shut down! Many needless accidents occur when somebody turns on a machine that someone else is repairing. “I didn’t know anyone was working on it” is the usual alibi in accident investigations.

Accidents occurring under these circumstances are not only needless but serious. They result not in small cuts or scratches, but most often in amputations, serious fractures, even death. Any energy source - electrical, mechanical, pneumatic, hydraulic, or gas - can be deadly if not controlled.

There is one sure way to prevent such accidents from happening to you and that is to make certain that power cannot possibly reach machinery while you are adjusting or repairing it. How is this accomplished? By locking out and tagging the power at its source. These procedures are so important that there are federal safety regulations covering them.

Locking out means placing a lock on a device that prevents the release of any “Stored Energy”, such as an electric circuit breaker, disconnect switch, a line valve, a block, and others.

Tagout means attaching a tag on a switch or other shutoff device that warns others not to start up the equipment. Tagout may only be used together with lockout, unless locking out the equipment is impossible.

Stored Energy: ENERGY

Energy is Movement or the possibility of movement.
Whether the power switch is on or off, energy of some sort is always present in any powered equipment.

Energy can come from many different sources, but is always one of two types.
Kinetic energy- the force caused by the motion of an object.
Potential energy- the force stored in an object that isn’t moving.

Sounds easy? It is, of procedures are followed correctly. Here is a general lockout procedure that can be adapted to your job:

Turn off the equipment at the control panel
Turn off or pull the main disconnect

Attach your safety lock at the main switch

Try to restart the equipment at the control panel

Check the machine for possible residual pressure, particularly for hydraulic systems

Complete your servicing work

· Replace all guards on the machinery

· Remove your safety lock and adapter

· Let others know that the equipment is back in service

No lockout system will be effective if it is undertaken in a hit-or-miss fashion. **You need special training and authorization to perform lockout/tagout.** Hayward Electric strongly recommends that all of our employees be trained in lockout/tagout procedures. If you do not, you must refrain from performing work on powered equipment requiring lockout/tagout and call someone who is trained and authorized to perform the duty for you. Lockout/tagout is performed only by authorized employees who are trained to:

- recognize hazardous energy sources and their type and amount of energy; isolate and control energy to prevent accidents; and perform OSHA’s specific, required, lockout/tagout steps. Occasionally affected employees are required to work with powered equipment, but aren’t authorized to apply or remove locks and tags. They must know: why lockout/tagout is important and how it works; the requirement to lockout/tagout equipment before performing repairs or service; and the importance of not trying to remove or work around locks or tags. Other employees aren’t involved with lockout/tagout, but should still understand: lockout/tagout’s basic procedures and the importance of not trying to restart locked or tagged equipment.

**GROUP LOCK OUT / TAG OUT**

In the event that multiple users have the need to lock out in the same location, Group Lock Out / Tag Out can be used utilizing a “Group Lock Box”. One example of the use of the Group Lock Out /Tag is as follows:

One appointed representative places his locks and tags at all the energy sources required to isolate the system to be worked on. The representative then places the key or keys to his lock or locks in the “Group Lock Out” box. The representative is then responsible for the system isolation. The representative then demonstrates to all authorized and effected employees the system isolation including showing location of
locks and tags. All employees requiring to place locks and tags on the system then place their locks on the “Group Lock Out” box. From this point on Lock Out / Tag Out is used for each individual employee as performed in “Individual Lock Out / Tag Out.

When the system is ready to be restored to the normal operating condition the removal of locks and tags for all employees is performed as in “Individual” Lock Out / Tag Out. Once the appointed representative has verified that all authorized and effected employees has removed their lock from the “Group Lock Out” box he then removes his key, then removing his locks from the system isolation locations. At this time the system should be ready for normal start up as performed in the “Individual” Lock Out / Tag Out
SAFETY MEETING # 3 - LOCKOUT / TAGOUT PROCEDURES
TRAINING QUIZ

1. “The job will only take a few minutes, I don't need a lock - I'll just shut it down”
   A. True
   B. False

2. It is okay to place your lock through the throat of a co-workers lock if you do not have multiple lockout available.
   A. True
   B. False

3. An energy source that requires lock out/tagout is:
   A. Electrical
   B. Pneumatic
   C. Hydraulic
   D. All of the above

4. When you're afraid you'll lose your key, it's okay to leave it in the lockout lock.
   A. True
   B. False

5. An approved action in lockout/tagout is to have a co-worker lockout your equipment while you gather your tools.
   A. True
   B. False

6. After locking out the circuit, you are ready to _________________.
   A. Start working on the equipment
   B. Replace all guards
   C. Test the equipment for residual power
   D. Take a coffee break

7. You do not have to lock out the main disconnect as long as you lock out the control circuit.
   A. True
   B. False

8. You need to replace a ballast in a fluorescent light fixture. This requires the use of lockout/tagout.
   A. True
   B. False

9. If there is a need for several people to lock out in the same area, “Group Lockout/Tagout” may be used.
   A. True
   B. False

10. Only “electrical” sources of energy are required to be locked out.
    A. True
    B. False
11. There are 10 steps to performing lockout/tagout.
   A. True
   B. False

12. Your foreman asks you to help a co-worker install conduit on a piece of equipment. Your co-worker has already performed lockout/tagout. You are not required to perform lockout/tagout as well.
   A. True
   B. False

13. OSHA requires you to have special training and authorization to perform lockout/tagout.
   A. True
   B. False

14. You should always let those around you know when you are performing lockout/tagout:
   A. True
   B. False

15. You need to replace a lightbulb in an incandescent light fixture. This requires the use of lockout/tagout.
   A. True
   B. False