Enforcing Lockout Procedures In Construction

1. Failed Lockout Procedures Can Be Fatal

*Tags and verbal agreements are not enough to assure safety.*

Proper lockout procedures are intended to prevent injuries and fatalities similar to the following examples… all of which could have been avoided:

- An employee cleaning the inside of a concrete mixer at a batch plant was struck and crushed by the mixer paddles when the mixer was turned on by a co-worker. None of the employees at the batch plant had been trained on how to “lockout” power to the mixer.

- A carpenter, engaged in the construction of temporary partitions around an elevator shaft, was decapitated when the elevator car came down the shaft and caught his head between the car frame and the barrier he was building. He had a “verbal agreement” with the elevator constructor on the previous day that the elevator would not be usable until all the barriers were built. The power to the elevator could have been shut off and padlocked in the elevator’s penthouse. The power should have been locked out, that is, made impossible for anyone else to use, and the carpenter should have had the key.

- An electrician making changes to a temporary service in a building under construction believed the power was off because he had opened the circuits at the breaker panel and attached a tag on the door. The tag warned that the circuit breakers should not be closed until he removed the tag. An employee of another craft, when he couldn’t use a power tool, went to the breaker panel and began closing the circuits. The electrician’s body was in contact with metal piping. He was electrocuted. The doors of the breaker panel and the electrical closet both had locks. The other craftperson should have been “locked out” of the closet.

- A pipefitter working on a high pressure line in a confined space at a nuclear power plant was asphyxiated when a valve on the end of the pipe was opened and an inert gas flowed through the pipe, filling the confined space. A shunt, immediately upstream, could have been activated to keep the space free of the gas.

2. Construction Sites Need Lockout/Tagout (LOTO) Procedures

*600 workers lose their lives each year because of insufficient training in lockout procedures.*
These incidents clearly indicate the need for effective LOTO procedures on construction sites. Construction workers rehabbing existing structures, or working on new construction, are subject to electrocution, crushing, asphyxiation and other hazards, just as are personnel working in general industry.

The Occupational Safety and Health Administration (OSHA) estimates that 600 workers lose their lives each year because of insufficient training in the enforcement of lockout procedures of direct, or stored energy. In addition to electrical hazards, construction employees are exposed to mechanical and elevated equipment hazards. LOTO procedures protect construction workers from these hazards.

Provide the necessary locks, tags and blocking devices.

Employees should have access to individually-keyed locks and tags for use in lockout equipment. Before starting work on or around equipment that could start, move or fall:

- Train all personnel in the basic concept of hazardous energy control.
- Turn the equipment off.
- Dissipate any residual or stored energy (electric, pneumatic, hydraulic, etc.).
- Secure all energy sources in the “off” position with key-operated locks and accompanying tags noting lock ownership.
- Block any equipment that could fall. Be sure to use blocking devices provided by the equipment manufacturers. The blocking device should be of the appropriate size and material.
- Inspect by test and/or observation that all energy sources are de-energized before work begins.
- Inspect repair work before reactivating the equipment.
- Make sure all workers are clear of danger points before re-energizing the system.

3. Lock In To Lockout

Construction sites, by their very nature, are ever-changing. Enforce the rules and make sure your safety procedures cover the specific dangers and lockout procedures for your operations. List activities where stored energy can be a problem; spell out safeguards and employee responsibilities.

Superintendents and foremen must rigidly enforce LOTO procedures. Employees should understand that failure to follow LOTO procedures may be grounds for disciplinary action.

Reference:
ASCC Safety Manual Chapter B.7, Control of Energy Sources: Lockout/Tagout.