Energy source: Any source of electrical, mechanical hydraulic, pneumatic, chemical, thermal, or other energy.

Hot tap: A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure to install connections or appurtenances. It is commonly used to replace or add sections of pipelines without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

Lockout: The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout device: A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in a safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Servicing and/or maintenance: Work place activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintenance and/or servicing machines or equipment. These activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or start-up of the equipment or release of hazardous energy.

Tagout: The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout device: A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Energy Control Program

General

Prior to an employee performing any servicing or maintenance on a machine or equipment where unexpected energizing, start up, or release of stored energy could occur, the machine or equipment shall be isolated from the energy source, and rendered inoperative. If a machine or equipment is not capable of being locked out, the energy control program shall utilize a tagout system. The energy control procedures shall include specific requirements for testing a machine or equipment to determine and verify the effectiveness of lockout devices, tagout devices, and other energy control measures.

It is the policy of Cleveland State University to not permit work on any energized electrical lines where a mechanism for isolation exists. All employees must demonstrate that no alternative option exists for required work to be performed without the line being energized. This process is to be facilitated only by the issuance of an Energized Work Permit upon reviw of the work project by the Office of Electrical Operations, Facilities Management.

Lockout/Tagout

If an energy isolating devise is capable of being locked out, the energy control program shall utilize lockout. Should it be determined that the device is physically unable to be locked out, a tagout system may be used provided it can be demonstrated that the utilization of a tagout system will provide full employee protection as described in the "Full Employee Section" below.

Whenever replacement or major repair, renovation or modification of a machine or equipment is performed and whenever new machines or equipment are installed, assessments shall be made to provide for the modified equipment to accept a lockout device. All lockout/tagout devices or any type of protective materials and hardware shall be in accordance with 1910.147(c)(5).

When a tagout device is used on an energy isolating device, the tagout device shall be attached at the same location that the lockout device would have been attached. The goal of the tagout process is to provide a level of safety equivalent to that obtained by using a lockout program.

Additional steps to be considered as part of the tagout process will include implementing additional safety measures such as removing an isolating circuit element, blocking a controlling switch, opening an extra disconnecting device, or removing a valve handle to reduce the likelihood of inadvertent energization.

Application of Control

The lockout or tagout procedures shall cover the following elements and actions completed in the following sequence:

1. Before an authorized employee turns off a machine or equipment, the authorized employee shall know the type and magnitude of the energy, the hazards of the energy to be controlled, and the method or means to control the energy.

2. The authorized employee shall notin entsh

3. In work situations where shift or personnel changes occur, specific procedures shall be utilized to ensure the continuity of lockout or tagout protection. This includes an orderly transfer of lockout or tagout device protection between off-going and oncoming employees to minimize exposure to hazards from the unexpected energization or start-up of the machine or equipment or the release of stored energy.

Group Lockout or Tagout

1. When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lock