

LASER INTERFEROMETER GRAVITATIONAL WAVE OBSERVATORY

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Lockout/Tagout Procedure		

PURPOSE

The intent of this procedure is to prevent human injury and/or property damage. More specifically, it is to provide a systematic step-by-step documentable method of disabling equipment that would pose a safety hazard if left enabled, or conversely, enabling equipment that would pose a safety hazard if left disabled.

SCOPE

This procedure applies to all electrical, mechanical and electromechanical equipment at the LIGO facility whose operation and/or functionality is determined by the position of a switch, lever, actuator, circuit breaker, button, knob, valve, dial, etc. Additionally, this procedure applies to that electrical equipment whose operation is solely determined by being "plugged in" or by being "not plugged in."

RESPONSIBILITIES

- **It is the responsibility of each individual working at the LIGO facility to determine if a lockout and tagout of equipment is required to ensure safety.** Everyone is responsible to abstain from performing any work until he or she can determine whether or not a lockout and tagout is applicable.
- Only the person who initiates a lockout or tagout may remove it. **Removing a lock or tag that you did not place will result in serious disciplinary action as well as possible legal action.** The single exception to this policy is that the site manager may remove a lock or tag if the person who initiated the lock or tag is unavailable indefinitely and the conditions requiring the lock or tag no longer exist. The site manager assumes responsibility if he/she removes a lock or tag that he/she did not initiate.

PROCEDURE

LOCKOUT

The LIGO lockout procedure is as follows:

1. Determine the need for a lockout. The use of a Personal Locking Device (PLD) shall be permitted for only a single shift of work provided all of the criteria are met (see Personal Locking Device definition. Skip steps 2-4 when PLD use is applicable.)
2. Obtain a lock, its corresponding key, tag, hasp and any other lock accommodating device (if applicable) from the lockout station. (Note: You may use your own lock, lock accommodating device and hasp, but you must utilize a LIGO provided tag). The locking device may not be wire or cable ties. It must be a sturdy metal lock.
3. Obtain a blank lockout/tagout form from the binder labeled "Active Lockout/Tagouts"

located in the immediate vicinity of the Lockout Station. Complete all of the information requested on the form except "Actual date of removal" and "Signature." Place the form in the binder labeled "Active Lockouts/Tagouts." Assign lock/tag ID from next available number from Index at the front of this binder. Enter this number in the Index.

4. Use your lock/hasp combination and lock accommodating device(s) (when applicable) to lock out the switch, lever, actuator, circuit breaker, button, knob, valve or dial, etc. Make sure to thread the shank of the lock through the brass eyelet of the tag before closing the lock (see FIGURE 1). If the device to be locked out has already been locked, add your lock to the existing hasp. Electrical control circuits **may not be used** as the isolation points since they do not provide adequate protection to interrupt main power.

Removing a LOCKOUT

1. Determine that your lockout is no longer needed.
2. Remove your lock, tag, hasp and lock accommodating device(s) (when applicable) from the switch, lever, actuator, circuit breaker, button, knob, valve or dial, etc. Return these to the lockout station.
3. Retrieve the corresponding lockout/tagout form from the "Active Lockouts/Tagout" binder. Complete the form by filling in the "Actual date of removal" and the "Signature." Place the completed form in the "Completed Lockout/Tagout" hanging folder. Record the "Actual Removal Date" in the Index of the binder.

TAGOUT

In some instances, a lock-accommodating device may not be available for the particular device you wish to lockout. In this instance, a tagout is acceptable with special approval from the site manager. The site manager should initial the tag. Procedurally, a tagout differs from a lockout only in that a lock and lock-accommodating device are not used.

DEFINITIONS

HASP -

A lock accommodating device (see below) which has provisions for more than one lock (see FIGURE 1).

LOCK ACCOMMODATING DEVICE -

Any device that prevents the change of position of the mechanism (switch, lever, actuator, circuit breaker, button, knob, valve, dial etc.) being locked out and which has a provision for a lock/hasp combination (see FIGURE 2) which will inhibit its removal.

LOCK/HASP COMBINATION-

(see FIGURE 2)

LOCKOUT -

Physically preventing the changing of position of a switch, lever, actuator, circuit breaker, button, knob, valve, dial, etc. by means of a lock.

LOCKOUT STATION-

A 1 1/2 x 2 foot yellow board so designated located outside Rm 130. Locks, keys, tags, lock accommodating devices and lockout/tagout forms will be available in the immediate vicinity.

PERSONAL LOCKING DEVICE -

A lock used in place of the formal lock/tag procedure that contains the person's name and phone number clearly printed on it. This can only be used during a single shift and must meet the following criteria:

- a. The machine or equipment has no potential for stored or residual energy or re-accumulation of stored energy after shutdown.
- b. The machine or equipment has a single energy source readily identified and isolated
- c. The isolation and locking out of energy source will completely de-energize and de-activate the machine or equipment.
- d. A single lockout device will achieve a locked-out condition.
- e. The PLD is under the exclusive control of the authorized employee performing the maintenance.
- f. No hazards are created for other employees.

TAGOUT -

Local notification that changing the position of the switch, lever, actuator, circuit breaker, button, knob, valve, dial etc. being tagged out is not permitted and could result in injury to personnel and/or property damage if operated.

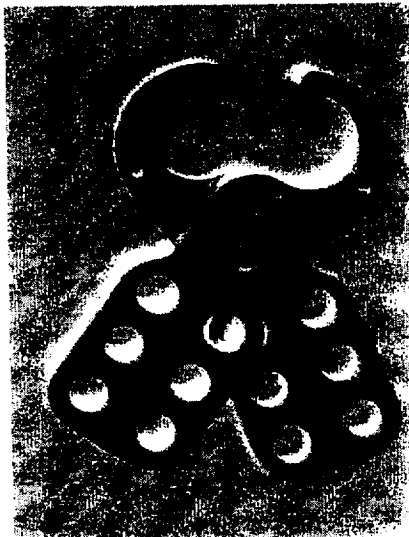


FIGURE 1
(HASP)



FIGURE 2
(HASP, LOCK, TAG, COMBINATION)