



SAFETY MANAGEMENT MANUAL

7.8.2 Lockout/Tag Out

Originator:	Approved By:
Hank Ayers	Al Suchy

1. Purpose

The purpose of this procedure is to establish a lockout/tag out system for energy systems to reduce the potential for injuries or damage due to the inadvertent operation of a system. Energy systems include standard electrical, piping systems, and pumps; such as fuel, water, hydraulic, air or oxygen systems.

2. References

Title 29 Code of Federal Regulations 1910.147

3. Responsibility

It shall be the responsibility of the Master to ensure that a lockout/tag out system is in place and is being used on a vessel operated by Woods Hole Oceanographic Institution (WHOI). It shall be the responsibility of the Chief Engineer to monitor the lockout/tag out system and to maintain the log used to record lockout/tag out activity.

4. Policy

While it is recognized that the regulations in the above reference do not apply to you (Oceanographic Research Vessels), it provides recognized standards for a lockout/tag out system. Therefore all vessels operated by WHOI shall maintain a lockout/tag out system as set forth in this procedure.

5. General

A lockout/tag out system is used to secure energy stored equipment and piping systems in a manner that will render them safe to work on and prevent the inadvertent start up of such equipment while it is being worked on. Both parts of a lockout/tag out system are essential parts of an effective system. Vessels must incorporate both components of this system.

When a piece of equipment or a piping system needs to be repaired, set up, cleaned, adjusted, and/or rebuilt; the following sequence of events should take place.

1. Prepare for and announce the shutdown.
2. Turn the equipment or piping system off.
3. Disconnect all energy sources and test for isolation system.
4. Affix lockout devices to the power supply and/or valve(s) and tag the points of disconnect.
5. Release stored energy.
6. Retest to make sure the equipment is isolated.

Each vessel shall maintain a lockout/tag out log to record pieces of equipment that have been secured under this system. The individual that applied the lockout/tag out devices must remove them from the piece of equipment. It is recognized that there are occasions when a piece of equipment may be locked out and tagged by an individual no longer on the vessel. In these cases only the Chief Engineer may



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remove that individual's lockout device and tag. To ensure that this is accomplished safely, individuals signing off of the vessel must review with the Chief Engineer the status of locked out and tagged pieces of equipment. The Chief Engineer shall review the lockout/tag out lock with the relief Chief Engineer during the turn over process.

APPLICATION of LOCKOUT or TAGOUT DEVICES

- A) Announce the shut down of a piece of equipment
- B) Prepare equipment for shut down
- C) Shut down machine, equipment or section of piping system; if in doubt refer to proper shut down sequence outlined in machine or equipment Technical Manual
- D) Disconnect the energy-isolating device
- E) Apply the LOCKOUT or TAGOUT device; make appropriate entry in the log
- F) Verify that all stored or residual energy has been dissipated
- G) Verify the isolation and de-energizing of machine or equipment

TESTING or POSITIONING of MACHINE

- A) Clear the machine or equipment of tools and material
- B) Remove personnel from the machine(s) or equipment area
- C) Remove the LOCKOUT or TAGOUT devices as specified
- D) Energize and proceed with the testing or positioning
- E) De-energize all systems, isolate the machine, equipment or piping system from the energy source, and reapply LOCKOUT or TAGOUT devices as specified

REMOVAL of LOCKOUT or TAGOUT DEVICES

- A) Inspect the work area to ensure that non-essential items have been removed
- B) Inspect and ensure that machine or equipment components are intact and capable of operating properly
- C) Check the area around the machine, equipment or piping systems to ensure that all personnel have been safely positioned or removed
- D) Verify that LOCKOUT or TAGOUT devices are removed ONLY by the employees who attached them
- E) Notify the affected employees AFTER removing locks or tags and before starting equipment or machines
- H) Make appropriate entry in the log that the tag has been removed

6. Reporting

The lockout/tag out log shall be the medium for recording pieces of equipment that have been locked out and tagged out. The information recorded in the lockout/tag out log shall be maintained for at least one year or the longest piece of equipment that is to be cleared from the lockout/tag out system whichever occurs longest.