

Course Length: 2 hours

Course Objective

- Delegates will be able to define the purpose of lockout/tagout.
- Provide delegates with the understanding of when LOTO is required and its uses.
- Provide delegates with knowledge in proper isolation of process equipment and piping during repair, service or maintenance.
- Delegates should be able to identify situations where injury to employees or damage to property or the environment could occur.

Course Design

- Narrated e-learning modules

Successful Course Completion:

- Requires successful completion of knowledge assessment.

Course Outline

- Why is Controlling Hazardous Energy Important
- The Fatal Five
- What is LOTO?
- Definitions
- Zero Energy State
- The 4 E's to Energy Control
 - Energy
 - Engineering
 - Education
 - Enforcement
- Energy
 - Kinetic
 - Potential
- Hierarchy of Controls
 - Elimination and Substitution
 - Engineering
 - Administrative
 - Personal Protective Equipment
- Employer/Employee Responsibilities
- Training

Lockout Devices

- Defined
- Requirements
- Circuit Breaker Lockout

- Valve Lockout
- Plug Lockout
- Pneumatic Plug Lockout
- Wall Switch Lockout
- Adjustable Cable Lockout
- Hasp Lockout
- Group Lock Box

Tagout

- Tagout Device
- Requirements
- Unlockable Devices
- Limitations of Tags
- General Rules

Lockout Tagout Procedures

- Who can Lock Equipment?
- Group LOTO
- Outside Personnel
- Shift or Personnel Changes
- How to Perform LOTO Safely
- Six Steps for Lockout/Tagout
 - Step 1 – Prepare for Shut Down
 - Step 2 – Shut Down the Equipment
 - Step 3 – Operate All Isolating Devices
 - Step 4 – Attach All LOTO Devices
 - Step 5 – Release All Stored Energy
 - Step 6 – Verify That Equipment Energy Isolation Has Been Accomplished
- Restoring Equipment to service & Temporary Removal
- Start-up Guidelines

Process Equipment and Piping Isolation Procedures

- Purpose/Scope
- Applications
- Hazards
- Responsibilities
- Isolation Procedures
 - Double Block and Bleed
 - Slip Blind or Spectacle Blind
 - Blind Flange
- General Requirements



Lockout Tagout (LOTO) Piping and Vessel Isolation E-Learning Course Outline



Summary

Reference Material / Documents

- OSHA 29 CFR 1910.147

M&A Safety Services training conforms to OSHA CBT Training standards and ANSI Z490.1. Criteria for Accepted Practices in Safety, Health and Environmental Training. M&A Safety Services LLC. follows all ANSI training criteria.

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Lockout Tagout (LOTO)
Piping and Vessel Isolation
E-Learning Course Outline

