A SM-102

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Revision Level:

Procedure No.

Lock Out Tag Out Program

Date Description Of Change Signature Rev. Level

08/15/2013 Initial Release Parth
Siddhpura

09/16/2020 Revised to Add Maria Muniz as Production Manager Gary Ravitsky

Procedure Approval:

Company Title: Quality Manager **Date:** 08/15/2017

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Lock Out Tag Out Program

1. Purpose

This Lockout/Tagout (LOTO) Program establishes the minimum requirements for the control of hazardous energy during the servicing and maintenance of machinery and equipment at Ameritube LLC, a producer and distributor of copper tubing and metal products. The program complies with OSHA's Control of Hazardous Energy standard (29 CFR 1910.147) and aims to protect employees from injury by preventing the unexpected start-up or release of stored energy.

2. Scope

This program applies to all employees, contractors, and visitors involved in or affected by servicing or maintenance of equipment where unexpected energization or release of energy could cause injury. Covered equipment includes tube draw benches, pilger mills, annealing furnaces, CNC tube benders, overhead cranes, cut-off saws, hydraulic presses, pickling tanks, compressors, and related machinery at the Hillsboro facility.

3. Responsibilities

Maria Muniz, Production Manager, is the LOTO Program Coordinator and is responsible for:

- Developing, implementing, and annually reviewing this program
- Ensuring that machine-specific Energy Control Procedures (ECPs) are created and maintained
- Providing locks, tags, and other hardware
- Coordinating training for authorized, affected, and other employees
- Conducting and documenting periodic inspections

Maintenance Supervisor:

- Oversees maintenance personnel compliance with LOTO
- Verifies isolation prior to work

Authorized Employees:

- Perform lockout/tagout according to ECPs and verify isolation
- Communicate status to affected employees

Affected Employees:

Understand purpose of LOTO and do not attempt to operate locked/tagged equipment

4. Definitions

Authorized Employee – A person who locks or tags machines/equipment to perform servicing or maintenance. Affected Employee – A person whose job requires operation or use of equipment being serviced. Other Employee – Workers who may be in the area where LOTO is used and need awareness training. Energy Isolation Device – A mechanical device that physically prevents transmission of energy (e.g., disconnect switch, line valve, block valve).

5. Hazardous Energy Sources

- Electrical 480 V panels, control cabinets
- Mechanical Moving parts, flywheels, belts
- Hydraulic Tube benders, presses

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- Pneumatic Air lines, actuators
- Thermal Annealing furnaces, hot pickling baths
- Chemical Acidic pickling solutions, fluxes
- Gravitational/Potential Overhead cranes, suspended loads

6. LOTO Devices

- Keyed-different padlocks (color-coded)
- Lockout hasps
- "Danger Do Not Operate" tags
- Valve lockouts (ball, gate, butterfly)
- Circuit breaker and plug lockouts
- Group lock boxes

7. General Energy Control Procedure

- 1. Preparation Identify energy sources and review ECP
- 2. Notification Inform affected employees
- 3. Shutdown Power down equipment using normal controls
- 4. Isolation Operate isolation devices
- 5. Lockout/Tagout Apply lock(s) and tag(s)
- 6. Release Stored Energy Bleed, block, or otherwise dissipate
- 7. Verification Attempt start to confirm isolation

8. Removal & Restoration

Before returning equipment to service:

- Inspect area, remove tools/non-essential items
- Ensure guards are reinstalled and personnel are clear
- Remove locks/tags in reverse order of application
- Notify affected employees that equipment is operational

9. Testing or Positioning

If LOTO devices must be removed for testing or positioning: remove per Section 8, perform test, then re-apply full LOTO before continuing work.

10. Group Lockout

For jobs with multiple authorized employees, use a group lock box. The primary authorized employee applies a lock to each isolation point, places keys in box, and each worker applies their personal lock to the box.

11. Shift or Personnel Changes

Outgoing authorized employees brief incoming personnel; incoming workers apply their locks before outgoing locks are removed to ensure continuity of protection.

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12. Outside Contractors

Contractors must follow Ameritube's LOTO requirements, provide their own procedures, and coordinate with Maria Muniz or the Maintenance Supervisor prior to starting work.

13. Training & Communication

- Authorized Employees Detailed LOTO training and hands-on practice
- Affected Employees Purpose of LOTO and prohibition on restart
- Other Employees General awareness

Training occurs at initial assignment, when program or equipment changes, or when inspections reveal the need for retraining.

14. Periodic Inspections

Maria Muniz conducts annual inspections of each ECP to ensure accuracy and employee compliance. Findings are documented and corrective actions implemented.

15. Recordkeeping

- Training records Retained minimum 3 years in HR
- Inspection records Retained minimum 3 years
- ECPs Maintained current and accessible

16. Program Review & Update

This program is reviewed annually by Maria Muniz and updated as needed due to equipment, process, or regulatory changes.