

Risk Assessment Service Line - Mobile Technology

ENSAFE

Pulp and Paper
Safety Association
Annual Conference
Ponte Verde, FL

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Machine-Specific Energy Control Procedures

ENERGY CONTROL PROCEDURES

Loudon, TN | Department: Rotary | Area: Production

Furnace # 2 | Prepared by: Craig Eckstein 05/17/2022



EQUIPMENT: Furnace # 2

Equipment Photo



Shutdown Procedures

1. **NOTIFY** - Affected employees what equipment is to be locked out.
2. **SHUTDOWN** - Equipment with normal shutdown procedure or by the applicable "Lockout Statement" listed below.
3. **LOCK** - Disconnect and Lockout ALL energy sources & release any stored energy if possible. Notes: (a) All personnel involved MUST have individual lock on equipment. (b) Locks will be swapped out during shift change.
4. **TAG** - Ensure tag is clearly marked with Name & Department.
5. **TRY** - Verify all energy sources are isolated by TRYING equipment.

1 Electrical - E-1 (main power 1) - 480 (Volts)

Location: Rotary MCC room - Feeder E-102 | Devices: Lock

Lockout Procedure

At Rotary MCC Room, place disconnect switch in the off position and apply additional lockout device if needed and padlock. Shuts off power to the furnace.

Verification of De-Energization

Test the furnace electrical circuits powered by this circuit breaker with test equipment to ensure no electrical power. The electrical circuits and indicators must not turn on and action must not occur.





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Machine- Specific Energy Control Procedures

2 Gas - G-1 (main gas) - 35 (PSI)

Location: Adjacent to hydraulic pump | **Devices:** Lock

Lockout Procedure

Close isolation valve with burner on. Lock out the appropriate valve with additional lockout device if needed and padlock after the flame is extinguished.

Verification of De-Energization

Visually confirm that the flame is completely extinguished, the isolation valve is locked, and line pressure is at zero.



3 Pneumatic - P-1 (main air) - 100 (PSI)

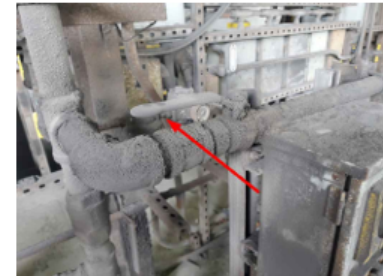
Location: Adjacent to hydraulic pump | **Devices:** Lock

Lockout Procedure

Close isolation valve and apply additional lockout device if needed and padlock. Isolates air pressure from the hydraulic pump. Manually vent the compressed air pressure by bleeding the line.

Verification of De-Energization

Visually confirm that the air isolation valve is in the closed position and locked. Listen for the release of air where manually bled. Attempt to operate machine. Action must not occur.



5 Electrical - E-3 (drive fan) - 480 (Volts)

Location: South side of furnace | **Devices:** Lock

Lockout Procedure

Place disconnect switch in the off position and apply additional lockout device if needed and padlock. Shuts off electrical power to the fan circuits.

Verification of De-Energization

Test the fan electrical circuits and indicators powered by this disconnect switch. They should not turn on and no action should occur. Attempt to start or operate the equipment.





Machine- Specific Energy Control Procedures

5 Electrical - E-3 (drive fan) - 480 (Volts)

Location: South side of furnace | **Devices:** Lock

Lockout Procedure

Place disconnect switch in the off position and apply additional lockout device if needed and padlock. Shuts off electrical power to the fan circuits.

Verification of De-Energization

Test the fan electrical circuits and indicators powered by this disconnect switch. They should not turn on and no action should occur. Attempt to start or operate the equipment.



RESTORE TO SERVICE SEQUENCE

1. **Notify** - Affected Employees that work is complete.
2. **Check Machine** - Check the machine or equipment and the immediate area around the machine to ensure that nonessential items have been removed and that guards are in place.
3. **Check Area** - Check the work area to ensure all employees have been safely positioned or removed from the area.
4. **Verify Machine** - Verify the controls are in neutral.
5. **Remove Lockout** - Remove the locks, tags and lockout devices and re-energize the machine or equipment. In reverse order, follow all the steps from the lockout-tagout procedures found above. Note: The removal of some forms of blocking may require re-energization of the machine before safe removal.

MACHINE GUARDING RISK ASSESSMENT**SAMPLE COMPANY/FACILITY**

Prepared By: Craig Eckstein Date: 08/24/2021

Asset ID	Machine Name	Machine Type
Accessory	Crimper	Crimper

**Tasks, Hazard & Controls****Task/Machine Element:** Front**Hazards**

Mechanical - Pinch/Crush, Mechanical - Cutting / Shearing Part(s);

Controls

Safeguarding - Fixed guards, Other, Complimentary Guarding Measures - Hold-to-run controls, E Stop(s) push button; Manual feed. One hand push button control to operate shear.

Risk Scoring

Severity	Occurrence	Effectiveness	Risk Score
4	3	4	48

Re-Risk Scoring**Recommended Controls**

Maintenance - Repair Existing Control, Safeguarding - Presence sensing device - Light curtain(s); Consider extending fixed guard to protect point of operation, or light curtain.

Severity	Occurrence	Effectiveness	Risk Score
4	2	2	16

Comments: Operators indicated parts fall in near shear and must be retrieved. Light curtain on front or polycarbonate interlocked guarding should be considered (machine must stop running if operators must continue to manually remove parts from the point of operation). Bottom of expanded metal guard poses a laceration hazard and does not protect the point of operation.



Machine Guarding Risk Assessments

MACHINE GUARDING RISK ASSESSMENT



Photographs

Title: Front



Description: Expanded metal guard appears sharp. Guard does not prevent access to pinch points.

Title: Emergency stop button



Description: Missing yellow background.

Machine Guarding Risk Assessments



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For More
Information,
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