

# SOUTH PAINT LINE

## BLAST MACHINE OPERATION PROCEDURE

### A. PERSONAL PROTECTIVE EQUIPMENT REQUIRED:

The following additional protective clothing and equipment must be worn:

- Face Shield
- Gloves
- Dust masks or respirators are recommended when working around shot dust. You **must** wear a dust mask or respirator when entering the cabinet or working under the blast machine.

### B. SAFETY

1. Never blow compressed air on yourself or anyone else.
2. Keep shot swept up around the blast machine.
3. Keep area clear of obstructions.
4. Never climb on or work beneath parts hung on paint line.
5. Always lock out the blast machine before doing any checks. Use proper lifting procedures when lifting or handling loads.

### C. START UP SEQUENCE

**Note:** The following equipment must be on in order to start the blast machine.

- Dust Collector Air
- Dust Collector and Rotary Value Disconnect
- Exhaust Fan

When beginning a shift be sure to:

- 1) Read the blast machine log book before assuming operation responsibility or starting up.
- 2) Check hopper levels.
- 3) Ensure all guards are in place before machine is turned on.

1. Turn main Breaker ON.
2. Turn Control Power ON.
3. Ensure Auto Start is OFF.
4. Turn Equalizing Screw Conveyor 1 & 2 ON.
  - warning siren will sound.
5. Turn Elevators 1 & 2 ON.
6. Turn Abrasive Screw ON.
7. Turn Abrasive Reclaim Conveyor ON.

**Note:** Numbers 4 - 7 should be performed in a slow sequence. (5 seconds apart.)

8. Turn Auto Start ON.
  - a. observe amp meters for all wheels.
  - b. notify Maintenance immediately if amps are not within parameters.
9. Turn Abrasive ON.
  - a. observe amp meter.
  - b. operating parameters: Read labels above Amp meters. *The maximum amperage for each wheel is displayed on a label above each meter. If amps increase quickly or go up to the maximum level, a problem has occurred.*
  - c. notify Supervisor and Maintenance immediately if amps are not within parameters.

#### **D. DURING OPERATION**

While the machine is in operation, perform the following:

1. Check and record the amp levels for all wheels every 30 - 45 minutes. Contact Supervisor and Maintenance if amps are out of specification.
2. Check hopper levels once every half hour. *If abrasive is required, press the "Shot Adder" button on the blast machine control panel. The machine is programmed to add 75 lbs. of abrasive each time the button is pushed. Check the hopper level again, adding abrasive as necessary.* Record all shot added on the appropriate form.
3. Check dust pails for abrasive...  
If abrasive is evident, contact Maintenance immediately.
4. Check hopper screens for debris.  
Clean as necessary.
5. Be aware of any unusual noises etc. and contact Maintenance if necessary to investigate and correct any problems.  
**Safety/Quality:** Never attempt to correct any mechanical or electrical problems yourself!
6. Do not allow any empty hooks to pass through the blast machine.  
**Exception:** Hooks signalling colour changes, blast machine operation, and 'no paint'.

## E. MAINTENANCE/CLEANING

1. Every break, the loaders are to check the cabinet for parts, debris, and proper positioning of grating.
  - a. if parts have fallen off the line they must be rehung prior to the wash in order to be pre-treated properly.
  - b. follow "Part Retrieval" process steps.
2. Rotate cabinet floor wear plates EVERY LUNCH BREAK.
  - a. this should be done when checking the cabinet for parts. Be sure to follow all lock-out procedures.
3. The following areas must be kept free of shot at all times:
  - a. All walkways
  - b. Track
  - c. Dust collector area
  - d. Paint booth area
  - e. 3 Stage wash area

**Any shot on the floor is to be swept up immediately and if possible put back into the machine, otherwise dispose of it.**

4. Keep bucket elevator screens clean at all times.
5. During NON-BLASTED PARTS and as time permits, clean the following:
  - follow all appropriate lock-out procedures.
  - a. Brush or vacuum off motors
    - Note:** Do not use compressed air to blow off motors!
  - b. Duct work
  - c. Structural steel.
  - d. Top and bottom (pit) of blast machine.
6. Dust Collector
  - In the event of any of the following contact Maintenance immediately:
  - a. High Temperature - the alarm goes off at 60 C
    - shut the system down immediately - follow "Shut Down" process steps.
  - b. Low Air
    - if the air is low the system will not start.
  - c. Low Dust Collector amps
    - indicator warning lamp will light up.

## **F. PARTS RETRIEVAL . . .**

1. If parts are passing through the blast machine on the line then the conveyor must be stopped and locked out prior to entering blast machine.
2. Follow "Shut-down" process steps.
3. Lock-out the blast machine.
4. Allow wheels to stop turning before entering the blast machine. If no parts are in the vicinity of the blast machine, then the line can remain running.
5. Enter cabinet and perform necessary duties.
6. Remove all lock-outs. Be sure cabinet door etc. is closed and all equipment in place.
7. Follow "Start - up" process steps.
8. Start up conveyor when ready.

## **G. SHUT DOWN**

1. Turn Abrasive OFF
  - allow amp meter readings to return to their normal level when not under load.
2. Turn Auto Start OFF.
  - allow amp meters on all wheels to go to 0.
3. Allow machine to equalize. (Takes approximately 2 minutes.)
4. Turn equalizing screw conveyor OFF.
  - all other conveyors will shut off also.
5. Turn Main Breaker OFF.

## **H. BLAST MACHINE- RELATED FIRE**

1. Call for help to begin containing the fire.
2. Shut blast machine OFF & lock it out.
  - If possible, use "Shut Down" process steps; otherwise simply push the Emergency Stop.
3. Shut dust collector OFF and lock it out.
4. Proceed to fire and assist in any possible way.

**Warning: If the fire cannot be contained quickly pull the fire alarm and follow PLANT EVACUATION PROCEDURE. There are possible hazards with combustion by products when shot dust is burned. Wear a respirator in such cases.**

## **I. FIRE ALARM**

1. Shut blast machine OFF by depressing the emergency stop button and then turn the Main Breaker to OFF.
2. Shut the dust collector OFF.
3. Proceed to the nearest exit and follow PLANT EVACUATION PROCEDURE.