

PREVENTATIVE MAINTENANCE FOR SHUT-DOWN AND START-UP OF DRY KILNS THAT WILL NOT BE USED FOR 2 MONTHS OR LONGER

Frank Scheidel
Coe Manufacturing Company
Moore International Division
Portland, Oregon

MAINTENANCE PROCEDURES FOR KILN SHUT-DOWN:

- A. Structure & Housing Nothing typical
- B. Fan System
- 1) Turn off power to motor starter or motor control panel.
 - 2) Loosen "V" belt drive on kilns with line shaft fan systems.
- C. Instrument:
- 1) Close air supply valve to instrument.
 - 2) Open pet-cock on instrument air filter.
 - 3) Close water supply to water flow meter or drip-well and drain through to the water box.
 - 4) Remove wick from wet bulb.
 - 5) Remove ink cartridges and fiber tips on pen arms. Clean ink feed lines (new style). Clean "V" pens (old style).
- D. Heat System:
- 1) Close main steam supply valves to the diaphragm valves and de-superheater.
 - 2) Close hand valves downstream of traps.
 - 3) Drain condensate return system of all water.
 - 4) Drain bucket type steam traps. If they are located in sump below grade, make sure they don't become submerged and freeze.

MAINTENANCE PROCEDURES FOR KILN START-UP:

- A. Structure & Housing:
- 1) Clean and repaint any areas on the structural steel that show rust spots.
 - 2) Manually operate vents to make sure they open properly.
 - 3) Paint walls of masonry kilns that have been idle for six months or longer.

MAINTENANCE PROCEDURES FOR KILN START-UP

B. Fan System:

- 1) Check each fan for broken or bent blades.
- 2) Remove any equipment or refuse from the fan area that may be sucked into the fans or blow off when fans start.
- 3) Line Shaft:
 - a) Check oiler wicks and fill oil cups. Make sure oil is getting to the top of each bearing.
 - b) Replace worn bearing liners and packing.
 - c) Replace complete set of "V" belts if any show wear or cracks. Tighten belts to proper tension.
 - d) Lubricate bearings on fan motor.
- 4) Internal Motor Kilns:
 - a) Repack motor bearings with hi-temp silicone grease.
Caution: Use the same brand and style of silicone grease that you used last.
- 5) With steam supply valves and instrument air supply valve closed, operate fans for 5 to 10 minutes. Shut down fan system and check each bearing and motor to make sure they are lubricated properly and are not overheating.

C. Instrument:

- 1) Remove and clean #3 and #10 air valves from the instrument with acetone or replace with new units.
- 2) Replace instrument filter element with a new cartridge.
- 3) Replace ink cartridges and fiber tips on pen arms.
- 4) With main steam valves closed, open the air supply valves to the instrument. Operate the set point knobs on the instrument to make the steam supply diaphragm valves open and close. Do the same for the vent motors and steam spray valve.

D. Heat System:

- 1) Close blow-down valves at traps.
- 2) Open hand valves downstream of traps.

MAINTENANCE PROCEDURES FOR KILN START-UP

- D. Heat System - Continued
- 3) Make sure the condensate return system beyond the traps is functioning.
 - 4) Open the main stream supply valves.
 - 5) After fan system and instrument have been checked out, bring the kiln up to 120°F with the fans running.
 - 6) Check the steam traps for proper operation.
 - 7) Operate steam spray and make sure all spray ports are free and blowing steam.
 - 8) Check the packing glands on all valves and replace the packing on any that leak.