

Wixom, Michigan



Greenville, South Carolina



Heat Treating



Services Unlimited, Inc.

AFC- Holcroft, LLC. in conjunction with **Heat Treating Services Unlimited, Inc** offers a complete line of **Preventive Maintenance Programs** for all types of Thermal Processing Equipment. With a combined 150+ years experience in maintenance departments and maintaining production equipment, we have designed our programs with you in mind. Below are the items that we can offer:

- Training for Your Personnel
- Designing a PM Program
- N.I.S.T. Traceable Calibrations
- Temperature Uniformity Surveys
- System Accuracy Tests
- Burner Adjustment and Repairs
- Complete Rebuilding/Relocations
- Complete PM Program with Staff
- Safety Checks—NFPA
- Alloy Replacement
- Emergency and Major Repairs
- Instrumentation Repair and Replacement
- Atmosphere Troubleshooting
- Complete Refractory Services

Preventive maintenance (PM) has the following meanings:

The care and servicing by personnel for the purpose of maintaining equipment and facilities in satisfactory operating condition by providing for systematic inspection, detection, and correction of incipient failures either before they occur or before they develop into major defects.

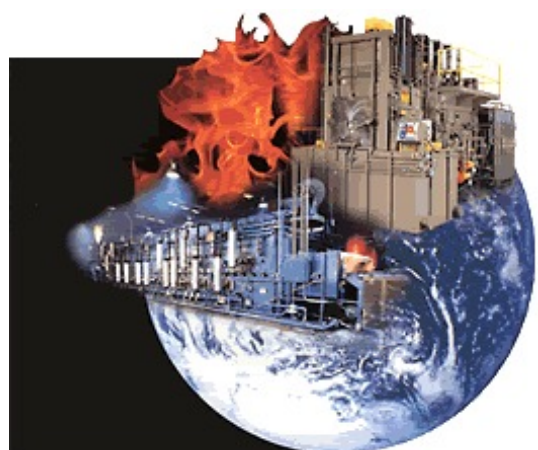
Example:

Batch Furnace Preventive Maintenance Program

Weekly PM's

Inspect, Clean, Adjust or Service as Needed:

- Oxygen probe reference air supply
- Oxygen probe burn off air supply
- Compressed air line oilers
- Compressed air line dryers
- Verify Oil levels:
 - Quench tank oil level
 - Flow scopes oil level
- Combustion blower air filter
- Quench oil cooling pump oil filter strainer
- Inspect quench oil cooling system for visual leaks
- Inspect all drive belt and chain guards
- Combustion System:
 - Inspect ignition wiring for loose connections and signs of arcing
 - Visually inspect each burner exhaust for signs of heavy soot
 - Visually inspect the burner radiant tube to furnace case seal for atmosphere leaks
 - Check all pilot burners for proper operation
- Check all electrical components for missing cover plates or open doors



Monthly PM's

Inspect, Clean, Adjust or Service as Needed:

- Furnace Door Travel Speed, up and down
- Quench Rack Travel Speed, up and down
- Quench Agitators Drive Belts, condition and adjustment
- Quench agitators inspect bearings and grease
- Furnace Fan Drive Belts, condition and adjustment
- Furnace Fan inspect bearing and grease
- Furnace fan check fan cooling water flow
- Furnace Air Cooling Fan Drive Belts, condition and adjustment
- Furnace Air Cool Fan inspect bearing and grease
- Furnace Air cool fan check fan cooling water flow
- Inspect all safety guards for condition, proper position and secure mounting
- Quench Rack Lift cylinders inspect the cylinder for compressed air leaks
- Quench Rack Lift cylinders inspect the condition of the furnace case cylinder rod seal and grease
- Quench Rack Index Rod inspect for secure mount
- Quench Rack Index Rod inspect the furnace index rod seal and grease
- Quench Rack Index Rod limit switches, condition, mounting and limit switch arm condition
- Rear Load Handler Gear Box check oil levels
- Rear Load Handler Gear Box drive chain alignment, tension and condition
- Rear Load Handler inspect and verify the limit switches



Semi-Annual PM's

● Perform Interior Inspection

- Furnace Chamber
- Radiant Tubes
- Thermocouple Protection Tubes
- Rollers
- Quench Chamber
- Air Cool Chamber

● Perform Exterior Inspection

- Quench Chamber
- Door Assembly
- Air Cool Chamber
- Fans
- Burner System
- Atmosphere System
- Flow Scopes
- Electrical Panels

Additional Benefits

- Create Work List of Needed Repairs in Order of Importance
- Verify with customer items that will be repaired or scheduled for repairs at a later date
- Once a PM program is utilized for a period of 6 months to 24 months and the life expectancy of major furnace components has been determined a Predictive Maintenance Program can be established.



For additional information or questions concerning our Preventive Maintenance Programs, please contact us @ 1-888-383-4878 or 1-248-624-8191!

