

## Preventative Maintenance Schedule

### Single Chamber Vacuum Furnace

#### WEEKLY (or more frequently)

- ☐ Inspect door O-ring
- ☐ Check oil on roughing, booster and holding pumps
- ☐ Drain roughing pump drip leg
- ☐ Check airline lubrication and drain air filter
- ☐ Inspect furnace hot zone for defects or damage and clean chamber doors and walls (where accessible)
- ☐ Check flow through cooling water return lines
- ☐ Bake-out furnace and measure leak up rate. Note: Leak up rate should be 10 - 20 microns/hr. or less
- ☐ Inspect thermocouples for deterioration or damage



#### MONTHLY

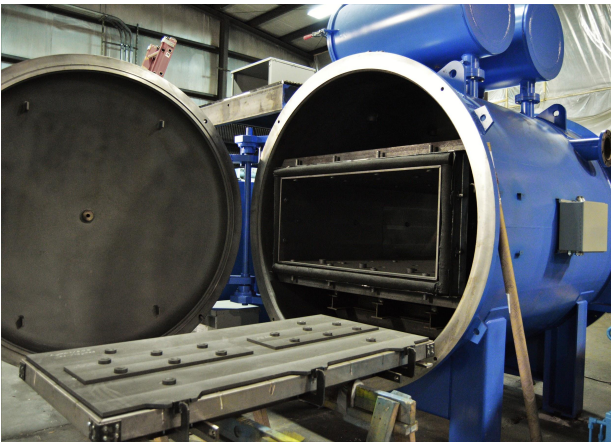
- ☐ Clean control cabinet air filters
- ☐ Check grease cups on valves (if applicable)
- ☐ Check diffusion pump oil level
- ☐ Inspect all drive belts
- ☐ Check water and air pressure alarm systems
- ☐ Check water treatment system (if applicable)
- ☐ Inspect cooling tower evaporator unit for sediment build-up in water sumps and for plugged or incorrectly adjusted nozzles
- ☐ Check make-up water float switch and solenoid
- ☐ Inspect all hoses and connections
- ☐ Check pick-up placement, alignment and travel limits of load dolly (if dolly is present)
- ☐ Perform general visual inspection of entire furnace system
- ☐ Check tightness of heating element connections

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## QUARTERLY

- ☐ Check over temperature safety alarm
- ☐ Check and flush Y-strainer on water system (if applicable)



## SEMI-ANNUALLY

- ☐ Check all electrical connections, including element power terminals
- ☐ Check all safety interlocks for correct operation
- ☐ Drain and replace oil in roughing booster and holding pumps
- ☐ Check control and over temperature thermocouple accuracy and replace as necessary
- ☐ Check conductivity on ceramic insulators
- ☐ Check the operation of inert gas supply pressure alarm

## ANNUALLY

- ☐ Inspect and clean all vacuum valves and replace O-rings (if required)
- ☐ Inspect and clean roughing pump and replace valves and springs
- ☐ Inspect and clean diffusion pump
- ☐ Inspect and clean quench motor housing and quench piping (if applicable)
- ☐ Check motor shaft couplings for tightness

