

Service and Preventative Maintenance

Preventive Maintenance on TERI water bath heater

All companies have their own ideas that relate to preventive maintenance for their equipment. OGI (TERI Brand) has the required steps to ensure the quality of their product. It is very important to keep the maintenance current on your TERI brand heater so that failures do not schedule maintenance on your heater. Preventive maintenance schedules vary widely between given users. The following identifies what is recommended by TERI. However, this listing is provided as a general outline. It is the final responsibility of the end user to identify those items which they feel are critical. Then develop, implement and monitor such programs based upon their maintenance budget, available man power, and the equipment's availability at any given heater setting.

Preventive Maintenance Checks:

- 1. Visual inspection of the entire line heater system to include:
 - a. Inspect heater Supports for stability
 - b. Visually inspect heater piping and shell for corrosion.
 - c. Visually inspect the heater shell for water leaks
 - d. Inspect Shell Level Gauge, Thief Hatch for leaks
- 2. Inspect and clean burner and pilot assembly.
 - a. Confirm orifices are tight
 - b. Ignitor is positioned correctly
 - c. Pilot position to burner
 - d. Burner and pilot fittings are tight
 - e. Inspect Flame Arrestor element, clean as necessary.
 - f. Verify there is not soot or debris in the fire tube. Can be checked through stack blind flange or through the flame arrestor. If there is, it will be the customers responsibility to get the necessary equipment to clean it.
- 3. Verify all piping and tubing connections are free of leaks.
- 4. Inspect and clean fuel gas train
 - a. Blowdown gas strainer. Pull screen and clean as necessary.
 - b. Inspect Regulators
 - i. Replace regulator plug/disc assemblies
 - ii. Inspect Orifices
 - c. Replace filter element that feeds pneumatic lines (if needed).

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- d. Inspect Safety and Temperature Control Valve
 - i. Confirm plug and seat are clean
 - ii. Top off seal/lube oil in Kimray Valves
- e. Verify Fuel Gas Meter oil levels and top off if necessary
- 5. Visually inspect the Re-lighter / Control panel of any moisture, condensation or connections (if applicable).
- 6. Startup heater and confirm operation of (allow heater to operate a minimum of 1 hour):
 - a. Pilot Ignitor and re-lighter operation, If applicable
 - b. Confirm operation of each heater safety
 - i. Low Bath Level
 - ii. High Bath Temperature
 - iii. Low Fuel Gas Pressure (If Applicable)
 - iv. High Fuel Gas Pressure (If Applicable)
 - v. Stack High Temp Shutdown (If Applicable)
 - c. Confirm operation of Bath and process controls for each burner
 - i. Minimum Bath Temp Controller (If Applicable)
 - ii. Bath Temp Controller
 - iii. Process Temp Controller
 - d. Confirm all pressure and temperature set points.
 - e. Confirm Burner Combustion emissions using combustion analyzer
 - i. Tune burner as necessary
- 7. Keep clean, non-corrosive water in the heater at all times. Annual sampling and analysis of the bath media for pH, glycol and inhibitor centration is important and can be supported by your chemical provider. This task is performed by the Customer.

Technician will replace parts on heater as necessary. All parts replaced will be charged to the PO used for the service, unless another payment method is mentioned. If the part is not with the technician, it will be ordered with the service PO, unless different payment is recommended and be shipped to the customer. These steps are highly recommended so your TERI unit remains efficient throughout the year. OGI has the qualified technicians to provide you with these services. If you would like to have an OGI technician to perform preventive maintenance on your heater, please contact the OGI Service Manager.

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