

## Typical Maintenance Requirements for Autoclaves

Maintenance requirements for autoclaves differ according to manufacturers. A detailed maintenance schedule should be provided by the manufacturer during commissioning and as part of operator training. The list below is intended to provide a general idea of the maintenance schedule of a typical waste treatment autoclave.

### Sample daily maintenance schedule (conducted by the operator)

- (a) Visual checks for steam and water leaks
- (b) Checks for cleanliness of the internal chamber and door seal; cleaning where necessary.

### Sample weekly maintenance schedule (conducted by the operator)

- (a) Checks of operation of the indicator lamps
- (b) Comparison of temperature and pressure gauges with chart recordings and correlation of temperature and pressure during a cycle.

### Sample monthly maintenance schedule (conducted by the facility engineer and operator)

- (a) Check of door gasket or O-ring and replacement where necessary following manufacturer's instructions (Note: The door gasket or O-ring around the door may need replacement every 3 to 6 months depending on the extent of use and how well the autoclave is kept clean.)
- (b) Validation test using microbiological indicators to determine microbial inactivation efficacy and adjustment of parameters when necessary (microbiological tests should be conducted more frequently if any test samples fail).

### Sample quarterly maintenance schedule (conducted by the facility engineer)

- (a) Check of control parameters that may require recalibration or replacement
- (b) Check of valves to determine if they need cleaning or replacement
- (c) Check of piping joints
- (d) Check for corrosion and wear in the chamber (generally not a problem with stainless steel autoclaves but important for carbon steel autoclaves)
- (e) Inspection of all electrical heat terminal points
- (f) Check for cleanliness of water and steam line main strainers
- (g) Check of piping and drains to ensure they are clear and operating
- (h) Check for correct functioning of door interlocks
- (i) Test of air removal efficiency with the chamber empty if the autoclave is has a vacuum cycle.

### Sample annual maintenance schedule and inspection (conducted by the facility engineer)

- (a) Check of service history for recurring faults and corrective action
- (b) Inspection and removal of any scales from the chamber following manufacturer's instructions
- (c) Check of the water-level control and indicator systems
- (d) Check of condition and operation of temperature indicator and pressure gauges
- (e) Test of the operation of safety valves, door interlocks and other safety and emergency devices under operating conditions
- (f) Check of all control functions including correlation of pressure and temperature against known references, during a cycle with the chamber empty
- (g) Test of all functions under working conditions to the satisfaction of the responsible person.