

Why is it necessary to layup my cooling system?

When a cooling system has stagnant water during the off season it can be susceptible to microbiological growth and corrosion. By following a few proactive steps during shutdown, these issues can be eliminated. The steps below will help you properly layup your cooling system over the winter months.

1. Reduce the conductivity setpoint on the towers by 50% 2 to 3 days prior to the shutdown or cleaning to reduce the solids in the system.
2. Prior to shutdown add 2xs the normal non-oxidizing biocide to the system and allow to circulate for 4-6 hours to ensure proper disinfection of all water contact areas.
3. Brush and/or pressure wash the distribution deck during operation to allow for movement of solids to more accessible areas.
4. Drain down the tower and wash out the tower fill and sump.
5. Check motor, fan belt, gear boxes, bearings, and grease points per manufacturer's instructions.
6. Remove and clean all strainers. Reinstall the strainers.
7. Isolate the cooling tower control system by shutting off water supply.
 - Ensure the tower Chemical controllers are turned off from the system so chemical cannot be fed during down time.
 - Remove tower probes, clean and place in air or solution (ORP, PH) to ensure proper storage.
8. Clean and flush the chemical feed pumps. Place the suction line (foot valve) of each pump in water and operate the pump to completely flush it of treatment products. Leave the foot valve out of the chemical tank for the off-season.

** If adding a lay-up chemical for corrosion passivation go to step 9, if not, skip to step 12.*
9. Refill the tower system (It does not need to be refilled to the operating level. This will help reduce the system volume). Vent all chillers to ensure that they are completely filled with water. Close the vents.
10. Add the appropriate amount of tower layup chemical and circulate per instructions to ensure proper protection of all wetted surfaces.
11. Completely drain the system from the lowest point.
12. Open and clean chillers and/or heat exchangers and mechanically clean the tubes and/or plates.
 - Store chillers and shell and tube heat exchangers with the end bells removed when not in use.

Taking your cooling system out of service during the off season can help prevent microbiological growth and corrosion problems.

Following these steps for layup will help prolong equipment life and improve operational, production and utility costs.

