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COOLING TOWER GUIDANCE
SDS+RTD

SDS+RTD cleaning of cooling tower systems options include two scenarios. One is an off-line method and the other is more popular, the free cooling method. The ***SDS+RTD*** chemistry is often diluted; however, in order to dissolve all water scale and break down dirt from the water-side of your equipment, the mixture of water and chemistry must come into contact with the scale to take effect. Therefore, consider which method is better to ensure contact with the scale is achieved. Use the Delta Products Group ***SDS+RTD*** dosage calculator to estimate the ***SDS+RTD*** needed for the project.

INSTRUCTIONS FOR SDS+RTD CLEANING

Off-Line

1. Take the unit off-line, isolate, and drain the tower system to be cleaned.
2. Manually remove loose debris from the sump, if possible.
3. Set up pump system to pull chemistry and water mixture from sump, discharging to the hot deck, through the nozzles, onto the fill, louvers, and mist eliminators.
    a. Consider moving the mist eliminators to the sump to ensure contact with ***SDS+RTD***.
    b. Consider moving the louvers to the sump to ensure contact with ***SDS+RTD***.
    c. Consider setting up a sprinkler to cast the ***SDS+RTD*** and water mixture onto the parts not in the stream of flow if their removal would be counterproductive.
4. Add ***SDS+RTD*** chemistry and water mixture slowly to the sump, and circulate until either the unit is clean or the chemistry is exhausted.
    a. Depending on the scale composition, and surface area being cleaned, add ***Foam-EX Defoamer*** to the sump to help control foaming and reduce the risk of excessive foaming.
    b. Depending on tower location (e.g., rooftop), slowly add more ***SDS+RTD*** to reduce foaming and the risks of a windy dispersement of chemistry-laden foam.
5. Test the ***SDS+RTD*** chemistry strength.
    a. If the unit is clean, and the chemistry still has some strength, dispose of the chemistry per the EH&S directives or the site. (See the Sanitary Sewer Disposal section of the ***SDS+RTD*** *Booklet*.)
    b. If the unit still has a level of scale that is unacceptable, consider adding ***SDS+RTD*** chemistry, as needed, to obtain a clean unit.
6. Upon completion, dispose of spent chemistry, rinse until clear, and return to service.

Free Cooling

1. Drain valve in bottom of sump tank and lower water level to a point where pump still circulates without cavitating. If the pump sucks air, add minimum amount of make-up water to maintain circulation.
2. In order to clean the entire system, including cooling tower, sump tank, pump piping, and all associated equipment on tower while the system is in operation, use the ***SDS+RTD*** dosage calculator.
3. Slowly add this quantity of ***SDS+RTD*** to the sump tank over at least a two-hour period. This will minimize foaming in the tank and/or tower, depending on deposits.
4. Periodically check liquid level in tank. Add make-up water only when necessary.
5. Circulation time should be at least six (6) hours, during which all the equipment should be in contact with the ***SDS+RTD*** and water mixture.
    a. Consider setting up a sprinkler to cast the ***SDS+RTD*** and water mixture onto parts not in the stream of flow. Placing them in the sump may be an option, depending on the tower pump intake and other parameters.
6. Test the ***SDS+RTD*** chemistry strength.
    a. If the unit is clean, and the chemistry still has some strength, dispose of the chemistry per the EH&S directives for the site. (See the Sanitary Sewer Disposal section of the ***SDS+RTD*** *Booklet*.)
    b. If the unit still has a level of scale that is unacceptable, consider adding ***SDS+RTD*** chemistry, as needed, to obtain a clean unit.
7. Upon completion, dispose of spent chemistry, rinse until clear, and return to service.
    a. Depending on the site EH&S limitations, open make-up, and discharge, and run system until clear.