



Professional Cleaning Chemicals

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Water Filtration and Water Treatment for Cooling Towers

To maintain and control water pH between 7.0 and 8.0, adopt a three prong approach. This will provide an effective and holistic cooling tower water management system which entails the following components:

Stage #1 - Ion-Exchange Water Softener.

Stage #2 - Sand Filter with Filter Screens.




Stage #3 - Automatic Water Treatment Chemical Dosing System.





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<p>Stage #1 - Ion-Exchange Water Softener with Pre-filter Supply and fit 1x Sensus water meter with electronic pulse timer and 20" Big Blue pre filter. Supply and fit 1x 1500 Litre automatic ion exchange water softener system to reduce the calcium and magnesium ions in the make-up water feeding the two cooling towers. Filter cartridge for pre-filtration will be cleaned and replaced monthly. Sodium Chloride to be replaced as required.</p>	
<p>Stage #2 – Sand Filter with Filter Screens Supply and fit a side stream sand filter with 50mm uPVC (Class 6) pipes to circulate water in two cooling tower sumps. Monthly backwash cycle will be undertaken by IPS service technician. Supply and fit fibreglass filter box with changeable filter screens (450mm x 250mm) that will be cleaned and refitted monthly by IPS service technician.</p>	
<p>Stage #3 – Automatic Water Treatment Chemical Dosing System Supply and fit an ACDS to chemically treat the cooling water in cooling towers simultaneously. Dosing to be fed through side stream filter to distribute chemicals evenly.</p>	

The water treatment service will be undertaken on a monthly basis by a service technician. Monthly samples will be taken on site and analysed to determine that water quality is maintained within acceptable parameters by regulating the following:

1. Alkalinity – Dictates the potential for calcium carbonate scale.
2. Chlorides – Different levels will be tolerated based on materials of cooling equipment.
3. Calcium Hardness – contributes to scale build-up in the cooling tower and heat exchangers.
4. Magnesium Hardness – contributes to scale build-up in the cooling tower and heat exchangers.
5. Total Hardness – contributes to scale build-up in the cooling tower and heat exchangers.
6. Iron – When combined with phosphates, can foul equipment.
7. Total Dissolved Solids/Conductivity – contributes to scaling, foaming and corrosion.
8. ORP - The Measurement of Oxidation/Reduction Potential – determines rate of corrosion.

A monthly water analysis report can be taken to detail current chemical levels against acceptable chemical parameters.