

ScaleWatcher Application Note

SCALEWATCHER DESCALES COOLING TOWER

John Wanamaker Stores has installed the ScaleWatcher Electronic Descaling System at one of its stores in Pennsylvania and resolved the problem of limescale build-up in its cooling tower. John Wanamaker is part of a chain of 35 department stores located in the Mid-Atlantic States of the USA.

Despite the use of chemical water treatment, scale build-up still occurred in the top of the cooling tower caused by water from the chillers draining down through the polyplastic fill. Limescale also caused the fouling of tubes inside the chillers which resulted in a loss of efficiency, increased energy usage and high head pressures. In addition, the tubes in the heat exchanger had also become scaled-up, so reducing efficiency.

At the beginning of each season, two weeks were spent manually cleaning the cooling tower by scraping and pressure washing.

The ScaleWatcher System was installed on the makeup water line in the cooling tower and on the water feed line to the heat exchanger. Within two weeks, metal became visible in the pans and an inspection of the heat exchanger found that all scale had been removed.

The ScaleWatcher was then repositioned on the water feed to the chillers and an inspection, some weeks later, found the chillers to be clear of scale. An attempt to clean the tubes, to ensure they were scale free, found that the cleaning could not be improved.

All chemical water treatment has now been suspended and virtually all of the scale has now been removed from the cooling tower.