ECO-FRIENDLY SCALEWATCHER TACKLES SCALE IN SCHOOL BUILDING

A school in Texas is benefiting from reduced salt and chemical usage following the installation of the computerized, electronic, water-conditioner Scalewatcher® from Scalewatcher North America. The Scalewatcher system has proved so successful that the school authorities are proposing to install units in every building which will save the school authority thousands of dollars a year in buying salt, extra water for backwashing, softener repairs, wasted energy and cleaning products.

The school is situated in a hard water area with a water hardness of 35gpg, an iron concentrate of 1.03ppm and an overall TDS (total dissolved solids) of 1387ppm. It was decided to conduct a trial of the Scalewatcher system on a water heater located in a wing of the school, built in 2008, which contains 12 classrooms and has a large number of water-fed appliances including 14 stools, 14 sinks, 12 drinking faucets, 4 drinking fountains, a floor sink in the janitor's room and 4 outside water bibs.

The 50-gallon capacity water heater is a three-phase model with a recurring pump and temping valve. The heater's temperature is set at 145 degree and the temping value at 105 degrees. Prior to the Scalewatcher unit being installed, the water heater was drained and flushed by a 2-man

maintenance team. The factory drain valve was removed and replaced with a ¾" and 4" brass nipple and a ball valve with hose adapter. The system was then drained and flushed twice over a three-month period prior to the Scalewatcher unit being installed.

To monitor the scale removal, photographs were taken after the water was drained from the heater and the three heating elements removed. It was found that the scale build-up was so thick on the elements they had to be removed through a hole in the water heater. Installing the Scalewatcher took the two maintenance men only 20 minutes using a drill cement bit and a screwdriver. After three days the aerators had to be regularly cleaned as they were being blocked by scale breaking away from the water heater.

A week later, the same maintenance team drained the water heater again and removed the heating elements to find that 65% of the scale had dissolved. This was repeated again a week later whereupon it was found that 90% of the scale had gone. On each occasion photographs were taken of the water heater and elements to record the amount of scale removed. In addition the TDS was tested and found to have dropped to 1024ppm a reduction of 363ppm. Normally it would be expected that the TDS would rise whilst the scale was removed from the system. However on this occasion it is believed that the TDS dropped because not only had scale been removed from the pipework but also there was less corrosion.

The school owns three water softeners and rents two additional units to treat the hot water in the kitchens and boilers. It is planned that the Scalewatcher system will eventually replace all five and treat both the hot and cold water including all water-fed equipment and the lawn sprinkling system.

This will have an enormous impact on the school budget, saving it thousands of dollars a year for other projects.

The school's Maintenance Manager is thrilled with the result and has stated that the water felt soft as soon as the Scalewatcher was installed and that staff and pupils are very happy with the quality of the water. Such has been the success of Scalewatcher that the school has budgeted for additional Scalewatcher units to be purchased during 2012 and for units to be installed in every school building by the end of the school year 2013/14.