

HydroFLOW Optimizes Steamer Oven's Maintenance Program



Customer: The Anoka-Hennepin School District is Minnesota's largest, serving approximately 38,000 students. The potable water in the district is considered very hard (roughly 17 GPG or 290 PPM).

Objective: Treat feed water to two Cleveland Ultra 10 Double Steamer Ovens, which are prone to build-up of scale, with a *HydroFLOW* S38 physical water conditioner (PWC).

Duration: The product evaluation took place between January 19, 2016 to April 18, 2016 (3 months)

Testing Method

- A comparison was made between two identical steamer ovens in different schools that are 1 mile apart and use the same potable water source.
- One steamer oven was treated with *HydroFLOW* and the other without *HydroFLOW*.
- The steam generator tanks of both steamer ovens were cleaned prior to the product evaluation's commencement.
- The two steamer ovens were inspected and compared every month for a duration of 3 months.

Installation location of the *HydroFLOW* Unit



HydroFLOW S38 installed on cold water supply line feeding the steamer oven

Tube bundles inside the steam generators after 1 month



With *HydroFLOW*
Thin layer of loose scale



Without *HydroFLOW*
Thick layer of hard scale

Note: These pictures were taken with an inspection (borescope) camera entering through a side porthole.

Conclusions

- At each monthly inspection, there was dramatically less scale accumulation in the *HydroFLOW* treated steamer oven.
- *HydroFLOW* reduced maintenance costs by 75% - cleaning is now performed every 4 weeks, instead of every week.
- Chemical savings alone provided a return on investment of less than a year.
- Chemical and labor savings provided a return on investment of less than 6 months.
- As a result of lessened chemical cleaning, the life cycle of the steamer oven is expected to extend significantly.



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