



## Case Study - Fast Food Restaurant - Scale (One-month Test Evaluation)



**Installer:** Hydrowerks, *HydroFLOW* Master Distributor for IA, KS, MN, MO and NE.

**Customer:** Wendy's Restaurant - St. Robert, Missouri. This fast food restaurant is famous for its old fashioned hamburgers, chicken sandwiches, salads, fries and soft drinks.

**Application:** Scaling problems with water heater and ice machine.

**Device:** *HydroFLOW* HS48 and S38 water conditioners.

**Installation date:** June 25, 2013.

**Evaluation date:** August 2, 2013.



## Background:

Ed Halley, Maintenance Manager for Wendy's of Missouri, a franchisee of Wendy's, contacted Bell Plumbing, a dealer for Hydrowerks, regarding on-going scale issues at its location in St. Robert, Missouri. Ed was looking for a non-chemical solution to eliminate the scale problems that are destroying the water heater and causing the ice machine to malfunction on a regular basis.

The restaurant's water source is from city water. Water is very hard at 519 ppm. A water softener and filter system are currently used. Replacing the water heater and maintaining the ice machine is costing the location approximately \$3,500 per year.

## Problem area:



These are two pictures of the ice machine on the day the *HydroFLOW* devices were installed. The location had just cleaned them the day before. The city water flows through a water softener and a filter system before entering the ice machines. The maintenance manager would expect to clean the ice machine of scale at least every month.

The location had just installed a new 100-gallon tankless water heater to replace the one that lasted just one year.



## Proposed solution:

An HS48 water conditioner was installed on the copper pipe at the location where the water enters the restaurant.

An S38 water conditioner was installed after the filter system and before the ice machine to protect it from scale.

The Wendy's locations are in the process of remodeling their facilities and upgrading their equipment. One change just taking place at St. Robert was a new soda dispenser which was installed one week after the *HydroFLOW* devices had been mounted.

## Results:

Very little scale was found upon opening the ice machine. The minuscule scale that was present was mushy and easily wiped off. The maintenance manager also noticed that the pipes were de-scaling.

The new soda machine is starting to have scale problems and a second S38 unit needs to be installed to protect the machine.

This is a picture of the maintenance manager holding a reservoir located at the bottom of the ice maker. This would have been full of solid scale in the past. Today, what scale is present is very mushy and was easily wiped off.





## Quote from customer:

"I would have expected much more scale normally and it would have been very hard. To clean it would have involved scrapping the scale off. Today it is just mushy and easily wiped off."

## Estimated Return On Investment:

Less than ten months.

## Referral Information:

Please contact Roland Eppert, President of Hydrowerks, in order to receive the customer's information.

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