

# CASE STUDY: Iowa State University



Scale build-up **Before** EasyWater No-Salt Conditioner treatment



EasyWater No-Salt Conditioners

## SAVING HEAT EXCHANGERS, PIPING AND VALVES FROM HARD WATER SCALE

|                      |                       |
|----------------------|-----------------------|
| Customer:            | Iowa State University |
| Project:             | Maple Hall            |
| EasyWater Equipment: | No-Salt Conditioners  |

### ≈ PROBLEM

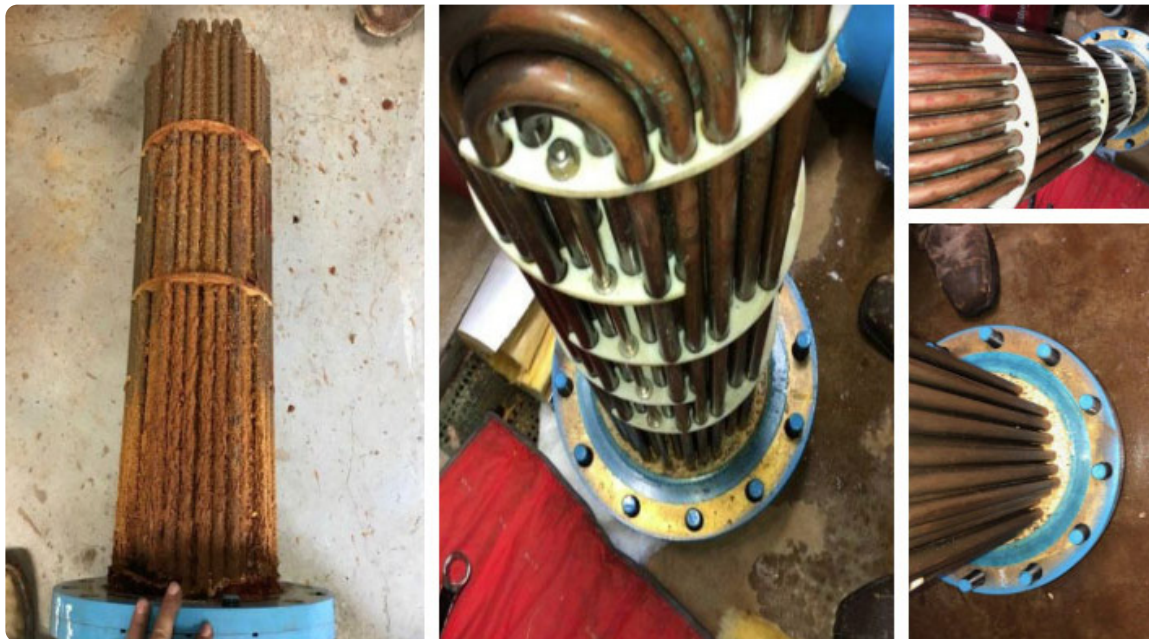
Iowa State University (ISU) receives extremely hard water (10.7 grains per gallon) from the city of Ames that also has a very high pH (9.34 pH). This combination of high hardness and high pH has caused Iowa major lime-scaling problems for many years. They have battled domestic water heat exchangers failing, and piping and valves becoming inoperable and closing shut due to scale build-up. Buildings on the ISU campus, like Maple Hall, tried using traditional salt softeners and even putting anti-scalant chemicals into the water to prevent scale build-up, but found very little relief.



Maple Hall at Iowa State University (ISU)

## ≈ SOLUTION

In December 2017, ISU decided to do a comparative test with EasyWater's No-Salt Conditioners in two residence halls. Maple Hall and Larch Hall are a mirror image of each other, and are located right next to each other on campus. EasyWater No-Salt Conditioners were installed in Maple Hall to treat all of the domestic hot water while Larch Hall was left as the control with no treatment. A major component of the test was to compare the condition of the Thrush domestic water heaters in the two halls. These heaters use steam inside copper tubes to heat domestic water on the outside of the tubes. Without treatment, the new Thrush heater in Larch Hall failed after only six months of use (see picture below).



LEFT: 6 Months – **Without** EasyWater Treatment / RIGHT: 6 Months **With** EasyWater Treatment

## ≈ RESULTS

The Thrush heater in Maple Hall was removed to be examined after six months of treatment with No-Salt Conditioners, and it looked brand new. Scale is also being slowly removed from the piping, valves and other water-using equipment in Maple Hall.

ISU has been very pleased with the results and is excited to expand the use of EasyWater's No-Salt Conditioners on campus.