



Weekly Water Analysis

FOR STEAM HEATING BOILERS

Parameters To Measure In-House: pH, TDS & Sulfite

The chemistry of steam boiler water can change quickly, depending on blow-down volumes, make-up rates, steam-trap function and other variables. In order to track these changes and respond appropriately, system water must be tested frequently. Every month during system operation, we perform a comprehensive set of tests on water from the steam boiler, condensate return line, feedwater tank, and make-up line. Every week during system operation, you perform three quick field tests on water from the steam boiler. Together, we can consistently maintain protective chemistries.

Follow the directions given below for testing pH, conductivity and sulfite levels. Record all results on your "Steam Boiler Analysis Log Sheet", and follow the action prescribed at the bottom of the log sheet if any values are outside of safe zones. Please feel free to call us with questions.

Draw Representative Sample

- Open and close valve 3 times; allow fluid to run 2 seconds each time.
- Open valve again; allow fluid to run until appearance ceases to change.
- Fill sample cup.

Measure pH

- Make sure probe is properly calibrated (see manufacturer instructions).
- Remove cap, turn on probe and submerge tip in sample.
- Swirl gently until reading stabilizes.
- Record value as pH. Example: "pH 9.4"

Measure Conductivity

- Make sure probe is properly calibrated (see manufacturer instructions).
- Remove cap, turn on probe and submerge tip in sample.
- Swirl gently until reading stabilizes.
- Record value as $\mu\text{mhos/cm}$. Example: "480 $\mu\text{mhos/cm}$ "

Measure Sulfite Level

- Remove one test strip and immediately reseal test strip container.
- Dip test end of strip into sample, hold for 1 second, then remove.
- Flick away any excess sample from the strip.
- Allow color to develop for 20 seconds before comparing to color chart on test strip container.
- Estimate sulfite concentration, and record value as ppm ($\text{mg/l} = \text{ppm}$). Example: "15 ppm"