

Measuring Averaging Temperature for Better Beer Brewing

Case A190502

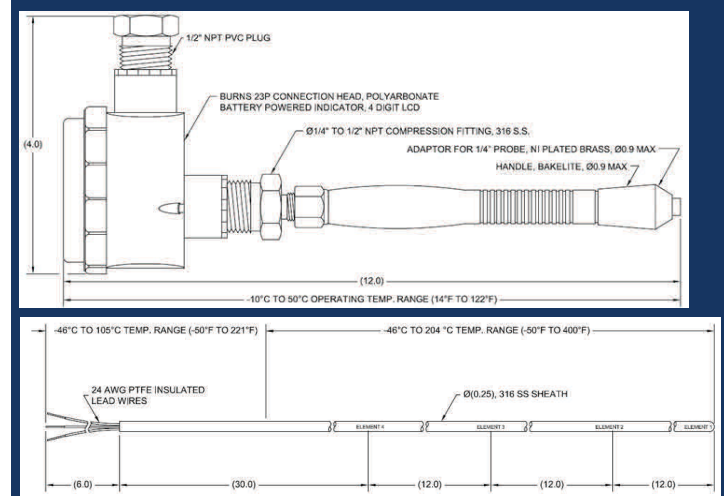
Application

A local brewing company wanted to have better temperature control over their mash tun. This tank is where the milled grains are mixed with water to form the “mash”. Varying the temperature will activate different enzymes and affect which sugars are produced. Having an accurate temperature measurement for the mash tun is vital to creating the right flavor and feel of the beer.

Challenge

With a standard sensor and thermowell assembly, the temperature provided is just a single point. In large tanks the composition of the tank isn't uniform which can cause varying temperatures throughout the mixture. In these cases a single measurement point is inadequate.

Another requirement was that the sensor have no wires or cords that would have to be installed or connected so that the probe could easily be submerged and removed.



23806 Averaging Sensor

Solution

A hand held RTD probe with a battery powered indicator was designed to accurately measure the average temperature of the full depth of the mash tun. With four evenly spaced sensing elements, the RTD averaging probe is sensitive to temperature change along the full length of the sensor. The waterproof head mounted indicator is battery powered which allows the user to get a reading without the use of a control system or having to install wires for power.