Brewing Company Saves Over $190,000 on Saturated Steam Costs with Mass ProBar® Flowmeter

RESULTS

- Improved accuracy by switching to mass flow measurement
- Reduced installation costs
- Lowered operating costs

APPLICATION

Measure saturated steam distribution

Application Characteristics: Saturated steam at 450 to 700 °F (232 to 371 °C) and 62 to 412 psia (427 to 2841 kPa) with pipe sizes from 6-in. to 24-in. (152 mm to 610 mm)

CUSTOMER

Brewing company in the United States

CHALLENGE

A major brewing company in the United States was looking for a way to measure flow for steam distribution to several departments for each process condition of the brewing phase. The brewery had used Annubar® flow elements in the first phase to monitor steam flow, and now wanted mass flow measurement for the second phase. They investigated various technologies, but also wanted to incorporate significant savings without having to use the numerous transmitters that were typically required for compensated mass flow measurement.

Initially, vortex meters were the primary flow sensors evaluated for monitoring steam at 25 measurement points. This would have resulted in large installation and operating costs. These costs would have eliminated most of their budget before even being able to monitor all measuring points.
SOLUTION
The Mass ProBar® was introduced to the plant engineers and was immediately recognized as a cost-effective measurement solution with obvious benefits. The majority of Mass ProBars purchased were direct mount flowmeters.

According to the local representative, “The ability to direct mount 450 °F (232 °C) steam service is the best sales benefit of all.” The integration of multivariable technology provides highly accurate flow measurement with single point installation into a cost-effective, compact package.

With reduced installation and operation costs, using the Mass ProBar instead of Vortex meters resulted in an annual savings of $199,159. When compared to other differential pressure meters like the orifice plate, the annual savings is $497,475.

RESOURCES
Emerson Process Management Industry Spotlight – Brewing
http://www.emersonprocess.com/foodandbeverage/indbrew.html

Rosemount 3095MFA Mass ProBar® Flowmeter
http://www.emersonprocess.com/rosemount/products/flow/m3095mfa.html