

Red Arrow Simplifies Measurement and Saves on Energy Costs by Capitalizing on the Rosemount™ Compact Annubar™ Flow Meter

RESULTS

- Quickly added an accurate and reliable measurement point during a short process shutdown
- Improved steam system monitoring
- Minimized energy costs

APPLICATION

To measure flow in a saturated steam line feeding two evaporators and an atomizer

Application Characteristics: 6-in. line 14 ft. off the ground

CUSTOMER

Global liquid smoke and cooking flavor supplier

CHALLENGE

Red Arrow wanted to closely monitor steam usage from two evaporators and an atomizer. The measurement solution was required to supply an accurate measurement that didn't require higher pumping costs. Only a short process shutdown was scheduled, so the solution needed to be installed quickly. As a result, traditional Differential Pressure (DP) flow technology like an orifice plate installation would not suffice.

The desired installation location was above the ground with other piping nearby, so a DP Flow installation involving impulse piping would be cumbersome and time consuming.



The Rosemount Compact Annubar Flow Meter added a valuable measurement point while saving on energy costs.



Rosemount Compact Annubar Flow Meter installation

SOLUTION

Red Arrow installed a Rosemount Compact Annubar Flow Meter between two standard raised-face flanges. This solution combines the benefits of the easy-to-install compact platform and the performance of the annubar averaging pitot tube. The pipe cutting, flange welding, installation, and flow meter wiring was quickly completed in four hours. The annubar sensor's shape provided a small profile in the pipe, resulting in a low permanent pressure loss compared to other DP Flow technologies. Additionally, the annubar sensor provided the accuracy and reliability required.

Red Arrow was able to closely monitor the evaporators' and atomizer's steam consumptions and run the process more efficiently by using less steam.

RESOURCES

Emerson™ Power Generation

Emerson.com/Industries/Power-Generation

Rosemount Annubar Flow Meter Series

Emerson.com/Rosemount/Rosemount-3051SFA-Annubar-Flow-Meter

Rosemount 3051S Transmitter Series

Emerson.com/Rosemount/Rosemount-3051S-MultiVariable-Transmitter



Rosemount Compact Annubar Flow Meter installed between two raised-face flanges



Rosemount Compact Annubar Flow Meter

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