Paper Mill Standardizes on Installation Practices with Rosemount[™] Compact Flow Meters and Saves on Labor and Energy Costs

RESULTS

- Saved on labor and maintenance costs
- Added an important measurement point, which helped optimize machine performance with little impact on utility costs

APPLICATION

Measuring flow in a superheated steam line

APPLICATION CHARACTERISTICS

4-in. line

CUSTOMER

Major tissue paper supplier in the U.S.

CHALLENGE

As part of an energy management campaign at the plant, the utilities manager at a tissue paper mill wanted to add a new measurement point to a steam utilities line that had not been measured previously. This measurement point would be used as an internal accounting meter. The manager had a short shutdown planned on the line and wanted to add the measurement point during that time as the line likely wouldn't be down again for months. Keeping low energy costs in mind, the manager wanted to utilize a low permanent pressure loss measurement solution moving forward with all measurement points in the plant. Traditional differential pressure flow meter solutions, such as orifice plates, have a lengthy installation time because they require awkward impulse piping assemblies. An orifice plate also generates a considerable pressure drop.

The desired installation location was 30 ft. from the ground above a catwalk with other process lines nearby, not leaving much space for the measurement solution to have a large footprint.

It was also important to measure the steam temperature because the steam temperature affected some of the machinery's performance in the plant.



The Rosemount Compact Annubar™ Flow Meters' easy installation saved time and cost during the installation.



Rosemount Compact Annubar included integral temperature, which provided a more accurate measurement and allowed the machinery to run more efficiently.



SOLUTION

The utilities manager decided to install a Rosemount Compact Annubar Flow Meter between two raised face flanges located above the catwalk. The flow meter was quickly installed by an instrument tech who had prior experience installing the compact conditioning orifice flow meters. The Rosemount Compact Annubar Flow Meter required the same installation procedure. As a result, the plant decided to standardize on the Rosemount 405 platform, which includes orifice plate and averaging pitot tube styles where applicable. This greatly reduced the training required for new instrument techs.

The Rosemount Compact Annubar Flow Meter included integral temperature measurement, which allowed the mill to accurately track the process line's temperature and better understand how to run the machinery for optimal performance.

The utilities manager was pleased with the low pressure drop created by the annubar sensor in the Rosemount 405 wafer. As an added benefit, superior accuracy was achieved by the annubar sensor. The measurement point provided valuable data to the utilities manager who was able to better track the plant's utilities.

RESOURCES

Emerson[™] Pulp & Paper

Emerson.com/Industries/Pulp-Paper

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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