

# Paper Mill Standardizes on Installation Practices with Compact Flowmeters 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" 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 hadn't 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 DP Flowmeter 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 feet 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 3051SFC Compact Annubar Flowmeter's easy installation saved time and cost during the installation.*



*Figure 1: The Compact Annubar included integral temperature which provided a more accurate measurement and allowed the machinery to run more efficiently.*

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### SOLUTION

The utilities manager decided to install a Rosemount 3051SFC Compact Annubar flowmeter between two raised face flanges located above the catwalk. The flowmeter was quickly installed by an instrument tech who had prior experience installing the compact conditioning orifice flowmeters. The Compact Annubar flowmeter required the same installation procedure. As a result, the plant decided to standardize on the 405 platform which includes orifice plate and averaging pitot tube styles where applicable. This greatly reduced the training required for new instrument techs.

The Compact Annubar flowmeter 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 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 Process Management Pulp & Paper Industry

<http://www2.emersonprocess.com/en-US/plantweb/customerproven/Pages/PulpPaper.aspx>

#### Rosemount Annubar® Flowmeter Series

<http://www2.emersonprocess.com/en-US/brands/rosemount/Flow/DP-Flow-Products/Annubar-Flowmeters/Pages/index.aspx>

#### Rosemount 3051S® Transmitter Series

<http://www2.emersonprocess.com/en-US/brands/rosemount/Pressure/Pressure-Transmitters/MultiVariable-Transmitters/3051S-MultiVariable/Pages/index.aspx>



Figure 2: Compact Annubar Flowmeter installed between two raised face flanges.



Figure 3: The Rosemount 3051SFC Compact Annubar Flowmeter.

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