

Wet Corn Milling Plant Saves \$5000 / month in Energy Costs with Rosemount Annubar® Flowmeters

RESULTS

- Decreased energy costs
- Reduced maintenance costs
- Lowered risk of damaging plant equipment



APPLICATION

Flow Measurement in a Compressed Air Supply System

CUSTOMER

A Large Midwestern Wet-Corn Milling Plant

CHALLENGE

The Milling Plant engineers suspected that some of its compressed air supply exceeded its compressed air demand, but was unable to determine where the unnecessary usage and waste was occurring. They simply did not know where the air was going. They suspected they had leaks in their system but had no way of identifying those leaks unless the flow was being measured in the compressed air lines.

Previously the Corn Milling Plant did not have any flow measurements in their compressed air system. This system contained many leaks that could not be identified unless the air flow was measured. These leaks made it necessary for the facility's six 300 horsepower compressors to be running at capacity. They identified seven plant locations where the compressed air flow could be measured. These 2-in. and 3-in. feeder air lines were logical measurement points upstream of groups of plant process equipment that normally consumed the compressed air.

Multiple leaks in the compressed air system led to high energy costs due to all six compressors running continuously. Because these six compressors were always running, there was unnecessary wear and tear on the equipment that risked damage and was increasing their maintenance costs.

The Rosemount 3095MFA helped this customer quickly detect several sources of compressed air waste in air piping system leaks, improper tie-ins and equipment using air unnecessarily.



Rosemount 3095 MultiVariable™ Annubar Flowmeter.

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SOLUTION

The Milling Plant purchased and installed four Rosemount 3095MFA Annubar flowmeters and three 3095 MultiVariable™ transmitters with orifice plates for the air flow measurement points. Rosemount MultiVariable transmitters provided pressure and temperature compensated flow measurement to determine the actual flow rates. The Annubar flowmeters offered a solution that had the lowest permanent pressure loss of any DP technology available, which also helped to minimize the energy costs.

After the flowmeters were installed and the compressed air monitoring usage was tracked, they were quickly able to detect several sources of compressed air waste in air piping system leaks, improper tie-ins and equipment using air unnecessarily.

The processor then executed the appropriate corrective actions to alleviate the waste. The processor's Maintenance and Engineering Projects Coordinator said, "We are saving at least \$5,000 per month from less electrical consumption to our air compressors, just from finding and correcting all the waste. It cut our consumption by one-third! Plus, we are now operating only three of the six air compressors, saving a lot in normal 'wear and tear' and in general maintenance costs."

RESOURCES

Rosemount 3095 Series of Instrumentation

<http://www2.emersonprocess.com/en-US/brands/rosemount/Pressure/Pressure-Transmitters/MultiVariable-Transmitters/3095-MultiVariable/Pages/index.aspx>

Rosemount Annubar® Flowmeter Series of Instrumentation

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

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