

Paper Mill Reduces Material Costs and Improves Paper Quality with High Signal Magmeter Technology

RESULTS

- Reduced raw material costs
- Improved paper quality
- Reduced process variability by 5%



The 8712 High Signal Magmeter improved stability and response time.

APPLICATION

Basis weight control measurement

APPLICATION CHARACTERISTICS

4.5% Pulp Stock, 16 inch line size

CUSTOMER

Paper mill in North America

CHALLENGE

This paper mill was looking to reduce process variability caused by excessive damping and unstable readings in their application of basis weight control measurement. This measurement determines the amount of stock flow to the head box of a feedback loop from the basis weight measurement of the final paper product. This mill recognized an opportunity to reduce material costs by improving the control of the head box measurement. The high level of damping in the existing magnetic flowmeter caused the mill to use an excessive amount of stock to meet the paper weight goals. When the mill reduced the amount of damping, the flow signal became erratic, leading to poor process control and varying paper quality. This mill needed a flowmeter that would provide a stable measurement and a fast response time to improve quality and profitability.

SOLUTION

Through a selection process, the mill decided to test two meters' stability and response time performance - a Dual-Frequency Magmeter from one manufacturer and the Rosemount 8712 High Signal Magmeter. These tests showed the 8712 High Signal to be four times more stable in the application as shown in figure 1. In the response time test, as shown in figure 2, the 8712 High Signal responded three times faster to a step change in the process.



Rosemount 8712 High Signal™ with easy-to-use Local Operator Interface (LOI).

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 Process Management

Based on the results of this testing, the user installed the Rosemount 8712 High Signal Magmeter, and was able to achieve their goal of improving process control, adjusting their set point lower, and ultimately reducing their material costs while improving paper quality, as shown in figure 3.

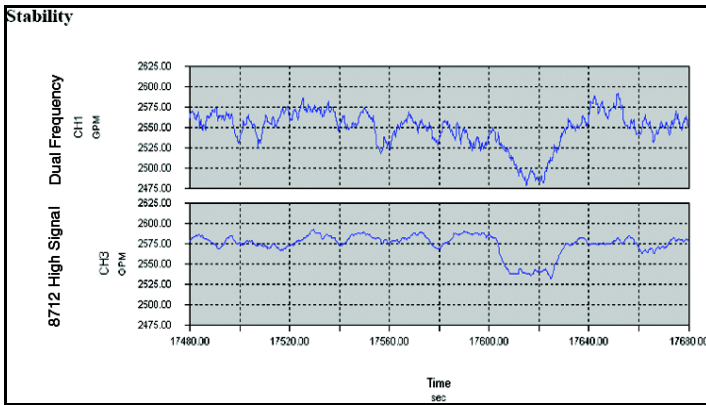


Figure 1

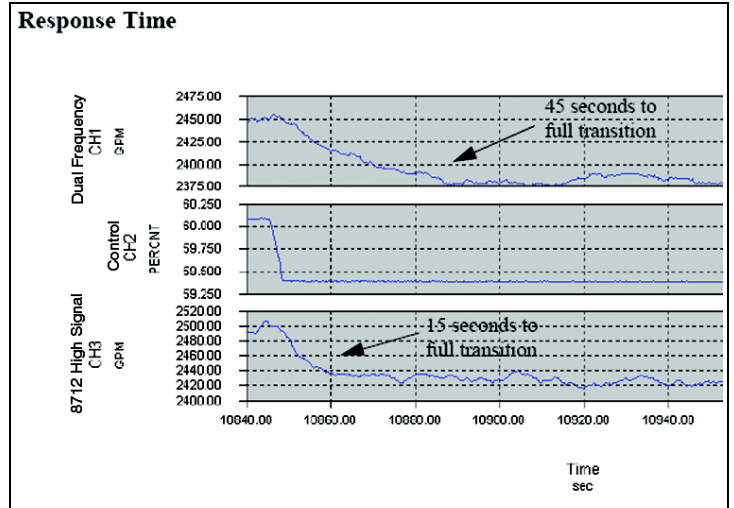


Figure 2

RESOURCES

Emerson Process Management Pulp & Paper Industry

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

Rosemount Magnetic Flowmeters

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

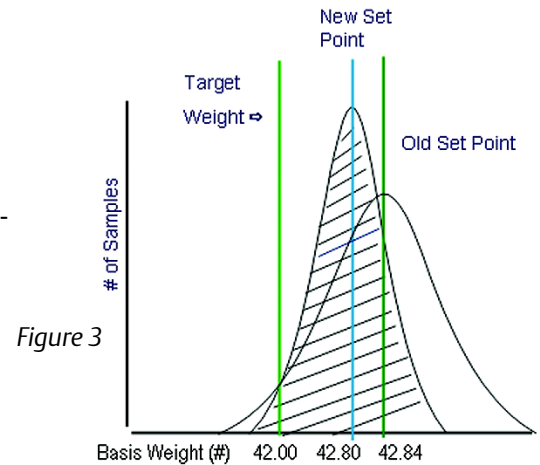


Figure 3

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