

Industrial Gas Producer Prevents Overbilling with Advanced Diagnostics

RESULTS

- Improved billing accuracy
- Lower operations and maintenance costs
- Improved awareness of actual facility throughput



APPLICATION

Hydrogen flow

CUSTOMER

Industrial Gas Supplier

CHALLENGE

This customer had difficulty detecting pulsation upstream from a reciprocating gas compressor and the flow line exiting the facility.

The customer was using a conventional differential pressure transmitter to measure the hydrogen flow exiting the facility. The line pulsation caused inaccurate measurement without the customer knowing that pulsation was causing the problem.

The previous differential measurement was unable to detect the pulsation, creating a negative business impact to the customer. This resulted in inaccurate measurement and customer complaints for overbilling. Operations and maintenance costs were also high because of repeated attempts to troubleshoot pulsation using third party consultants. Also, the measurement error was so prevalent that at times it indicated the plant was running 110% efficiently when in fact it was running only at 90%.

SOLUTION

The negative business impacts that the customer was experiencing were solved by replacing the previous device with the Rosemount 3051S Pressure Transmitter with Advanced Diagnostics.

Although the pulsation could not be fixed by the transmitter, the Advanced Diagnostic capability contained within the 3051S could detect that pulsation was occurring. The 3051S automatically measured the amplitude of the process noise by sampling 40 times faster than the customer's DCS. This gave the customer additional process insight to when the pulsation was occurring.

The Advanced Diagnostic capability contained within the Rosemount 3051S could detect that pulsation was occurring.



Rosemount 3051S

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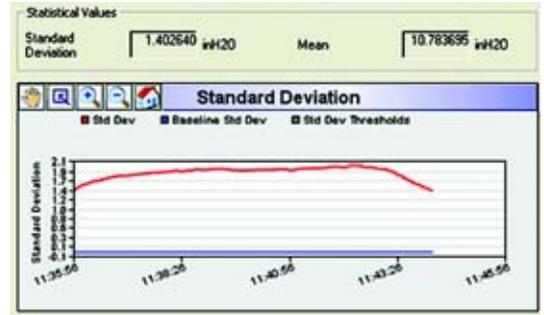

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The best field intelligence of the Advanced Diagnostics within the Rosemount 3051S Pressure Transmitter provided positive business impacts to this customer. By detecting when pulsation was occurring, they were able to prevent overbilling. Operations and maintenance costs were also reduced from troubleshooting and attempting to repair the pulsation problems. It also helped avoid unnecessary third party consulting costs. Lastly, the customer had improved awareness of actual plant throughput so they could optimize future performance.

RESOURCES

Rosemount 3051S Advanced Diagnostics

http://www.emersonprocess.com/rosemount/products/pressure/m3051s_diagnostics.html



The amplitude of the process noise, indicated by Standard Deviation (red line), shows the presence of pulsation. If no pulsation were to exist, the process noise would be closer to the baseline (blue line).

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