

# Grain Processor Reduces Shutdowns and Throughput Risks with Advanced Diagnostics

## RESULTS

- Decreased shutdown and throughput risks
- Reduced maintenance costs
- Lowered safety risks



## APPLICATION

Feed line pressure

**Application Characteristics:** high flowing, abrasive, liquid corn starch/enzyme mixture in a process pipe

## CUSTOMER

Large corn wet milling processor in the United States

## CHALLENGE

This grain processor experienced challenges ensuring adequate feed to the jet cooker within their corn wet milling process. Without appropriate feed levels, the jet cooker will “starve” and greatly reduce the operational performance of the facility.

This customer measured the pressure of the feed line to ensure the jet cooker had adequate feed levels. However, the liquid corn starch mixture often plugs the impulse line, leading to a misreading of the feed level and risked starving the jet cooker.

Not knowing when the impulse lines were beginning to plug increased risk of shutdowns and reduced throughput. Therefore, operations and maintenance costs increased due to the need for routine checks for plugging. Often times, these routine checks found that the impulse lines did not require cleaning. However, due to the safety risk of a plugged line, routine maintenance was still required for early identification of plugging.

## SOLUTION

The Rosemount 3051S with Advanced Diagnostics replaced the previously installed transmitter to measure the feed line pressure and provide early detection of plugged impulse lines. Within a few days of installation, the 3051S was able to detect the onset of plugging in the impulse line. The Statistical Process Monitoring (SPM) technology within the 3051S calculated the process variability to identify the plugged line and notify the maintenance department to clean the impulse line.

*“This technology can help us in our critical measurement areas where flow and pressure measurement failure can significantly impact plant throughput and safety.”*

Plant Manager



**ROSEMOUNT**<sup>®</sup>

For more information:  
[www.rosemount.com](http://www.rosemount.com)

  
**EMERSON**<sup>™</sup>  
Process Management

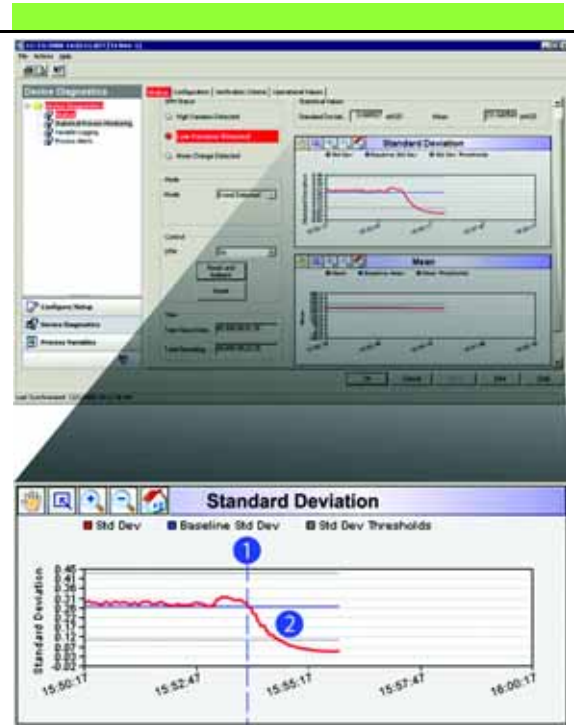
## GRAIN PROCESSING

The advanced diagnostics equipped this grain processor with the field intelligence necessary to decrease shutdowns and reduce throughput risks. The advanced diagnostics capability also helped reduce operations and maintenance costs with less trips to clean the impulse piping. Safety risks associated with plant assets and personnel were also reduced by ensuring the jet cooker always had adequate feed.

### RESOURCES

#### Rosemount 3051S Series of Instrumentation

<http://www.rosemount.com/3051SDiagnostics>



- 1) Process variability decreases when impulse line becomes plugged
- 2) Alert is generated when process deviates past user configured thresholds

The Emerson logo is a trade mark and service mark of Emerson Electric Co. Rosemount and the Rosemount logotype are registered trademarks of Rosemount Inc. All other marks are the property of their respective owners.

Standard Terms and Conditions of Sale can be found at [www.rosemount.com/terms\\_of\\_sale](http://www.rosemount.com/terms_of_sale)

**Emerson Process Management  
Rosemount Measurement**  
8200 Market Boulevard  
Chanhassen MN 55317 USA  
Tel (USA) 1 800 999 9307  
Tel (International) +1 952 906 8888  
Fax +1 952 949 7001

**Emerson Process Management**  
Blegistrasse 23  
P.O. Box 1046  
CH 6341 Baar  
Switzerland  
Tel +41 (0) 41 768 6111  
Fax +41 (0) 41 768 6300

**Emerson FZE**  
P.O. Box 17033  
Jebel Ali Free Zone  
Dubai UAE  
Tel +971 4 811 8100  
Fax +971 4 886 5465

**Emerson Process Management Asia Pacific Pte Ltd**  
1 Pandan Crescent  
Singapore 128461  
Tel +65 6777 8211  
Fax +65 6777 0947  
Service Support Hotline : +65 6770 8711  
Email : [Enquiries@AP.EmersonProcess.com](mailto:Enquiries@AP.EmersonProcess.com)

**ROSEMOUNT**

For more information:  
[www.rosemount.com](http://www.rosemount.com)

  
**EMERSON**  
Process Management