Swagelok[®] Onsite Services

Customer Success Stories

Every day, experienced Swagelok fluid system specialists and field engineers with deep technical and application expertise consult with customers in diverse industries across the globe on fluid system design, installation, operation, and maintenance. This collaborative problem-solving often takes the form of onsite services tailored to help customers identify risk factors, solve pressing challenges, and optimize their fluid systems.

Onsite services help customers:

- Promote onsite safety
- Manage asset integrity
- Improve reliability and performance
- Increase sampling reliability
- Reduce operating costs
- Improve system productivity
- Mitigate environmental risks
- Reduce emissions



Increasing Chemical Processing Control



Dairy Production Process Improvement







Swagelok



Nitrogen Blanketing System Leak Detection



Power Generation Cost Reduction

Cooling System Inspection and Custom Solutions



Lab System **Cost Reduction**



Refinery Steam Tracing



Contractor Work Evaluation for Utility <u>Company</u>



Improved Process Control and Compressed Air Quality Saves Chemical Company \$65,000

Customer: Chemical Production

"How do we address compressed air leaks that jeopardize our production process?"

Challenge:

Leaks in a plant's compressed air distribution system were making it difficult to control production processes. Batches of product regularly did not meet quality standards and had to be discarded. Leaks also caused issues with product bagging equipment, making it challenging to get finished product to customers.

Need:

Assistance with identifying issues within the plant's compressed air system and prioritizing repairs.

Solution:

- Swagelok field engineers performed a leak detection evaluation on the plant's compressed air system
- They provided a detailed roadmap to success that identified leaks, determined root causes, and showcased system design issues contributing to the problem
- Improvements were prioritized to provide the best return on the maintenance budget
- Swagelok engineers worked with plant personnel to create new design standards for several aging systems
- Swagelok fluid system specialists trained the maintenance team to implement changes effectively



- Leaks accounting for \$65,000 in compressed air loss and poor compressed air quality (jeopardizing process quality and efficiency) were identified
- Numerous subsystems were brought back into specification
- The company's product now once again meets quality standards and is regularly shipped on time





Nitrogen Blanketing System Enhancements Boost Safety and Deliver Savings

Customer: Production Company

"How do we prevent our nitrogen blanketing system from creating safety hazards?"

Challenge:

A nitrogen blanketing system was exposing flammable substances to oxygen and releasing volatile compounds into the air, jeopardizing employee safety and setting off alarms that led to a plant shutdown.

Need:

Assistance finding the source of the problem and correcting issues.

Solution:

- Swagelok professionals conducted a compressed gas leak detection evaluation that identified system leaks that were allowing both the nitrogen blanket and volatile compounds to escape
- Issues responsible for the creation and release of volatile chemicals were identified
- The customer was provided with a solutions summary that detailed the repairs needed to address blanketing system leaks



- The loss of an estimated \$18,000 of nitrogen per year was prevented
- The plant is now not only safer to operate, but also more cost-efficient





Lab Group Cuts Over \$10,000 Per Year in Costs After Leak Detection Evaluation

Customer: Specialty Chemicals and Performance Materials Manufacturer

"How do we decrease costs related to argon and nitrogen loss?"

Challenge:

A lab group suspected that the loss of argon and nitrogen within their gas storage and delivery systems was negatively impacting their process efficiency and utility costs.

Need:

Assistance locating and verifying the gas loss to maintain the accuracy of experiments.

Solution:

- Swagelok service professionals evaluated a portion of the lab with ultrasonic leak detection equipment, identifying leak points
- A solutions summary for improvement was developed to minimize operating costs moving forward based on assigned dollar values of detected leaks





- 13 leaks responsible for an approximate loss of 7.5 standard cubic feet per minute (or .21 cubic meters per minute) were detected
- Prioritized recommendations for leak repair helped the customer prevent an estimated \$10,000 in annual gas losses, while increasing the accuracy of their experiments





Evaluations of Air and Pneumatic Valve Control Systems Help Dairy Producer Avoid Product Batch Loss

Customer: Dairy Production Company

"How do we avoid losing product batches due to system control failures?"

Challenge:

Issues in a compressed air system prevented process control valves from operating properly. By the time operators detected issues in the complex system and maintenance personnel identified the root cause, several product batches sized between five and 500 gallons had to be disposed.

Need:

Help identifying issues within the compressed air system and finding ways to simplify the system so it would be more reliable and easier to maintain.

Solution:

- Swagelok professionals carried out an evaluation of the plant's compressed air system and pneumatic valve control systems
- The utilities manager received recommendations for repairs prioritized by returns on investment
- The Swagelok team provided insight into how the system could be simplified to improve efficiency and longevity



- The air and pneumatic valve control system evaluation identified nearly 200 system issues, resulting in annual utility losses in excess of \$16,000
- System improvements helped prevent a projected loss of product valued at \$4,000 per month and roughly 10 hours per month of cleanup and product disposal
- The evaluation also identified steam system safety concerns that had been the cause of several recordable incidents, helping to avoid future potential problems





Leak Detection Evaluation Helps Energy Provider Reduce Power Generation Costs

Customer: Power Generation Facility

"How do we decrease power generation costs and increase our profitability?"

Challenge:

Cost per kilowatt-hour to produce electricity was rising, while the amount of energy generated remained constant.

Need:

Help finding the root cause of increasing utilities usage, determining the best way to address problems, and prioritizing repairs on a limited budget.

Solution:

- Leak detection evaluations were conducted by Swagelok fluid system specialists on both the compressed air and hydrogen systems
- The customer was provided with a report detailing the root causes of utility losses and a solutions summary of suggested adjustments prioritized by returns on investment



- \$46,000 worth of compressed air losses were identified, and repairs were prioritized
- Two hydrogen leaks were repaired, saving \$6,078 annually—more than covering the cost of the evaluation
- Swagelok recommendations were referenced during a later plant outage to improve safety and process reliability while eliminating an additional \$15,000 of annual compressed air losses in the emissions control system





Steam System Evaluation Helps Refinery Drastically Reduce Steam Loss, Maintenance, and Component Spend

Customer: Petroleum Refinery

"How do we conduct steam tracing processes safely and effectively, while staying on budget?"

Challenge:

Steam tracing of process piping carried out as part of plant winterization efforts was consuming a considerable amount of time and money, yet yielded mediocre results and created safety and process issues in portions of the plant.

Need:

A winterization plan that was safer, more reliable, and less resourceintensive. They also needed data to justify the new plan.

Solution:

- Swagelok field engineers conducted an evaluation of the steam tracing system and winterization efforts
- The energy coordinator was provided with a detailed report outlining how to achieve his goals, as well as a plan for eliminating costly steam losses and related risks

7 >

- The report identified \$700,000 in steam loss per year
- The evaluation also identified more than \$500,000 of recurring annual component spend that could be avoided through system improvements
- Implementation of the plan saved an estimated 100 hours of maintenance time per year, while improving safety and process reliability





Swagelok Field Engineers Help Company Minimize Utilities Usage and Maintain Product Quality

Customer: Dairy Production Company

"How do we minimize utilities usage while maintaining product quality?"

Challenge:

Production process issues cause product batches to fail to meet quality standards and utilities usage to increase, while production levels remained steady.

Need:

Help identifying the root cause of process issues and determining what solutions to implement.

Solution:

- Swagelok field engineers evaluated the plant's production systems, identifying persistent issues and safety hazards that had caused several recordable incidents
- The plant manager was provided with a solutions summary that prioritized repairs while providing ways to simplify systems for greater reliability





- The field engineers' initial evaluation identified leaks resulting in \$16,000 in annual utility losses
- By implementing the suggested changes, the production company saved more than \$60,000 per year in costs associated with downtime and product loss
- Recommendations were also supplied to help the customer address safety hazards





Fluid System Evaluation Leads to Production Continuity for Manufacturer

Customer: Manufacturing Company

"How do we discover leaks early to avoid scrapping assemblies?"

Challenge:

A company was forced to scrap \$12,000 worth of assemblies because leaks were discovered too late in production, leading to loss of revenue and reputation with customers.

Need:

Assistance finding the reason for the leaks, improving quality assurance, streamlining production processes, and eliminating product and labor waste.

Solution:

- Swagelok field engineers identified the root cause of the assembly leaks was due to intermix/interchange of fittings
- Leak-tight, fabricated subassemblies were provided through Swagelok's Custom Solutions program



Result:

 The company avoided a two-month backlog in production that would have resulted in 100 fewer units being manufactured, equaling \$800,000– \$900,000 in losses





Field Engineer Helps Power and Water Plants Prevent Major Losses Related to Installation Issues

Customer: Power and Water Utilities Provider

"How do we verify contractor work is leak-free and ready for startup?"

Challenge:

The customer had hired a contractor to help get their plant up and running during a startup but had no sure way to check for proper installation yielding leaktight operation.

Need:

Confirmation that the company would have a leak-tight operation during transition of ownership from contractor to owner company.

Solution:

- A Swagelok field engineer conducted a comprehensive fluid system evaluation at a power plant and a water plant
- The field engineer explained how Swagelok can work with contractors to test their operations prior to future handoffs



- The first evaluation identified opportunities to prevent \$76,000 in annual losses resulting from installationrelated fluid system leaks at the power plant
- The second evaluation uncovered opportunities to avoid \$150,000 in annual losses from installation-related fluid system leaks at the water plant
- Startup was halted in an area where hazardous gases were leaking, preventing significant safety consequences



Swagelok® Onsite Services

Local Solutions. Global Support.

Whether you are seeking to reduce unplanned downtime, improve process efficiency, ensure reliable system operation, increase processing margins, lower operating costs, or all of the above, find out how you can move closer to achieving your goals through Swagelok® onsite services.

Contact Us:

info@london.swagelok.com london.swagelok.com





