TECH TALK:

Swagelok Advisory Services in Action

02/18/2021

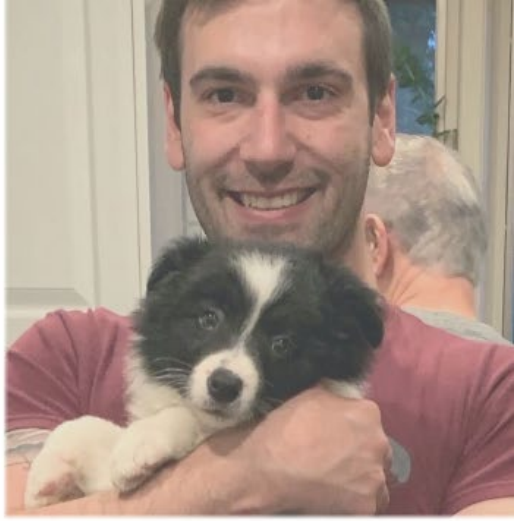
Swagelok

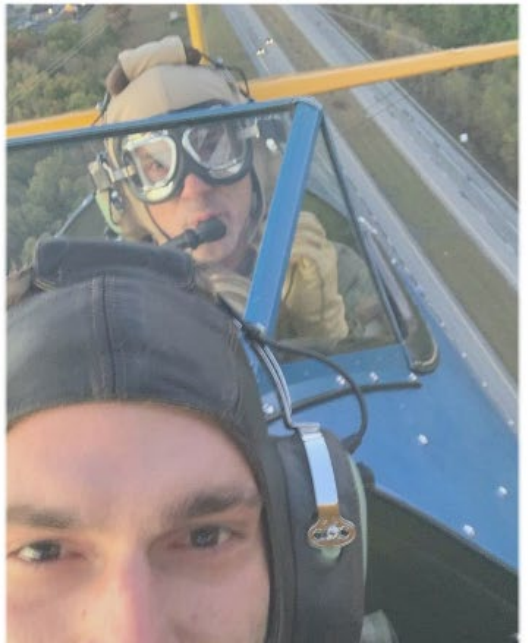
Swagelok Northwest (US)

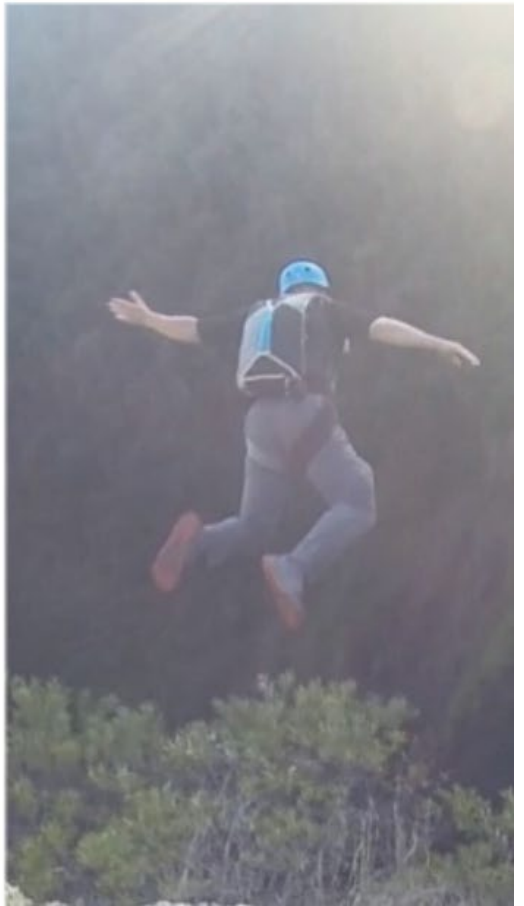
Meet Your Field Engineers

Adam Ghannoum

Field Engineer

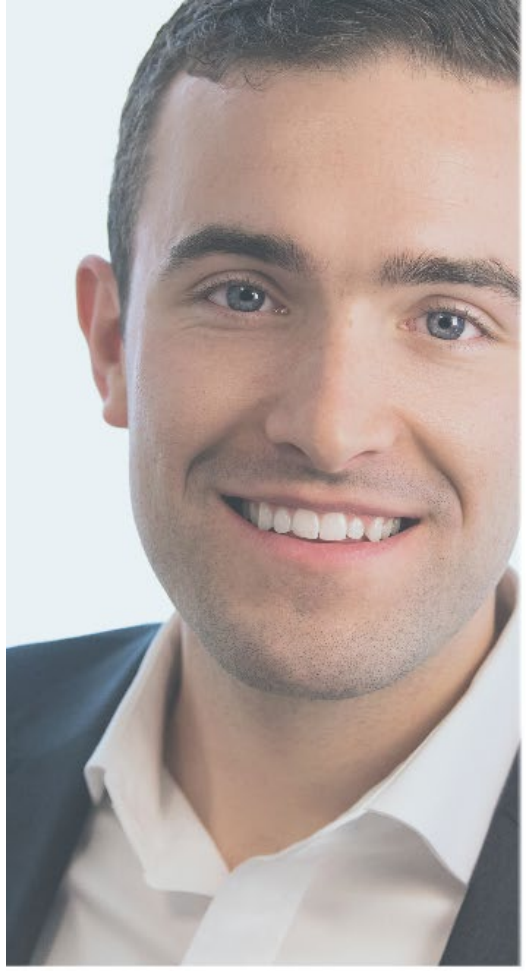


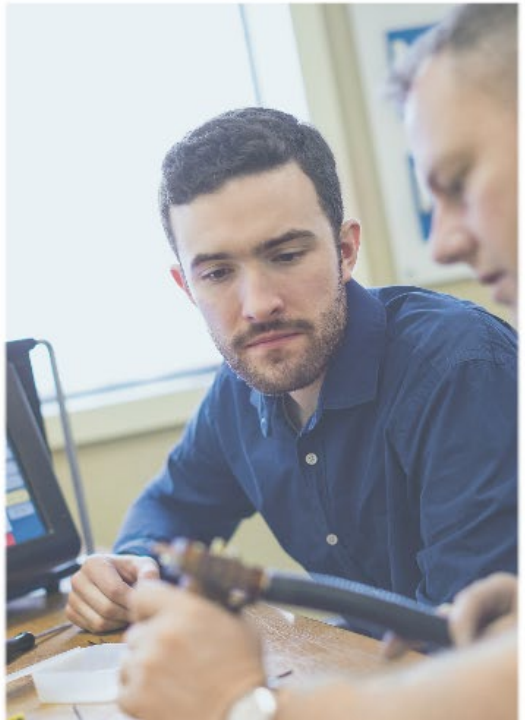


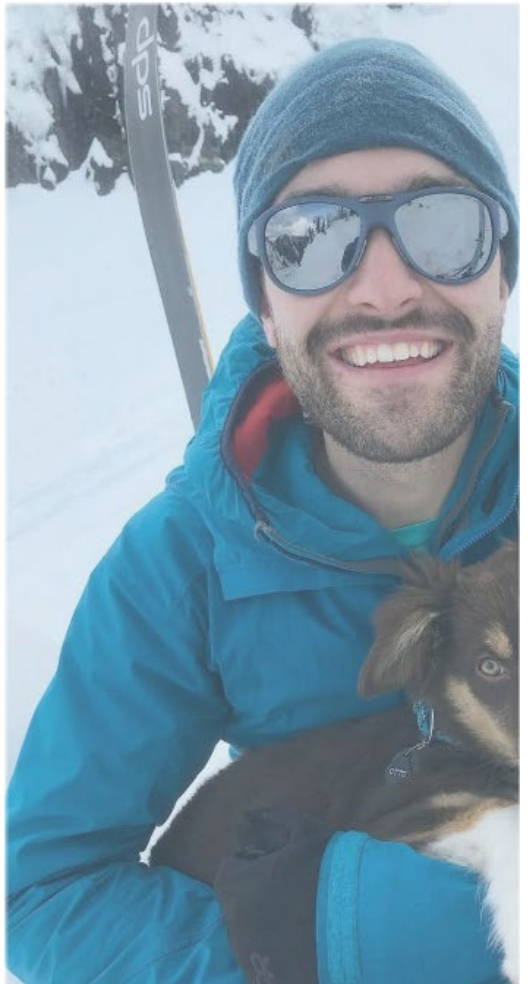


Meet Your Field Engineers

Matt Hasenohr
Field Engineer







Agenda

Swagelok Northwest (US)

- What is Swagelok Services?
- Compressed Gas Leak Detection
- Hose Management Service
- Sampling System Evaluation & Advisory Service
- Questions

What is Swagelok Services?

Swagelok Northwest (US)

Design & Assembly

Onsite Services

Training

What is Swagelok Services?

Swagelok Northwest (US)

Onsite Services

- Fluid System Evaluation & Advisory Service
- Sampling System Evaluation & Advisory Service ←
- Compressed Gas Leak Detection ←
- Hose Management ←
- Steam System Audit

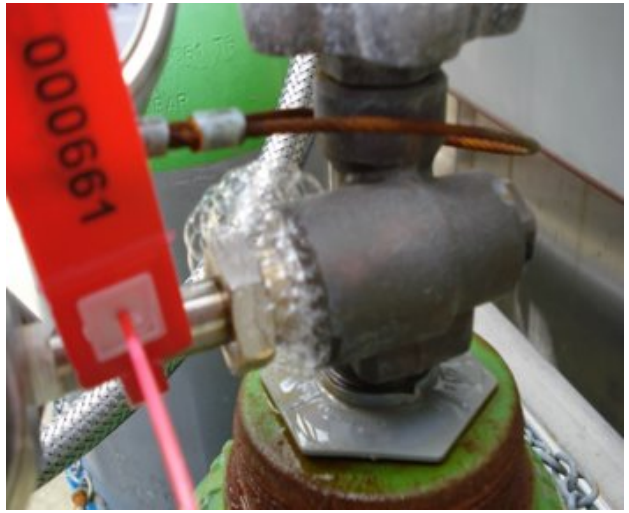
Compressed Gas Leak Detection

Swagelok Northwest (US)

Challenge: A paper manufacturer has abnormally high cost of energy at the plant

- Frequent air system maintenance and downtime
- Additional compressors required

Solution: 15,000 connections tested; 800 leaks identified



Compressed Gas Leak Detection

Swagelok Northwest (US)

Results: Annualized cost savings: $242,000
Cost avoidance from eliminating compressors: $250,000
Total savings: $492,000

Fluid System Evaluation and Advisory Service
Customer Name : Site Name

Appendix C - Issues by Issue Tag ID

Issue Tag ID : 0001			Category : 2
Plant Area	Air Supply	Part Material	Stainless Steel
Customer Tag ID	PI-120C	Connection Type	
Location	North Side of Plant	Connection Size	1/2 in
GPS Location			
Part Description	0-100 PSIG Pressure Gauge		
Process Fluid	Air	Type of Part	Measurement Devices
Pressure	100 psig	Manufacturer	Unknown
Temperature	70 F	Part Number	
Issue	Incorrect Part	Equiv Swagelok Part	PGI-63C-PG100-LAGX
Description	Gauge is being used near max range which may cause damage and over pressurization.		
Other Findings			
Possible Solution	Replace component(s) according to manufacturer's instructions		
Ultrasound dB		n/a	
Ultrasound ID		n/a	

IMPORTANT: Always depressurize the system before working on, disassembling or assembling a fluid system. Safe Product Selection: When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

NOTE: Where the Part Number is followed by " * ", it should be confirmed before placing an order.

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Appendix C Page1

Swagelok

Hose Management Service

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Challenge: A tire plant is experiencing frequent downtime due to unplanned maintenance of tool hoses.

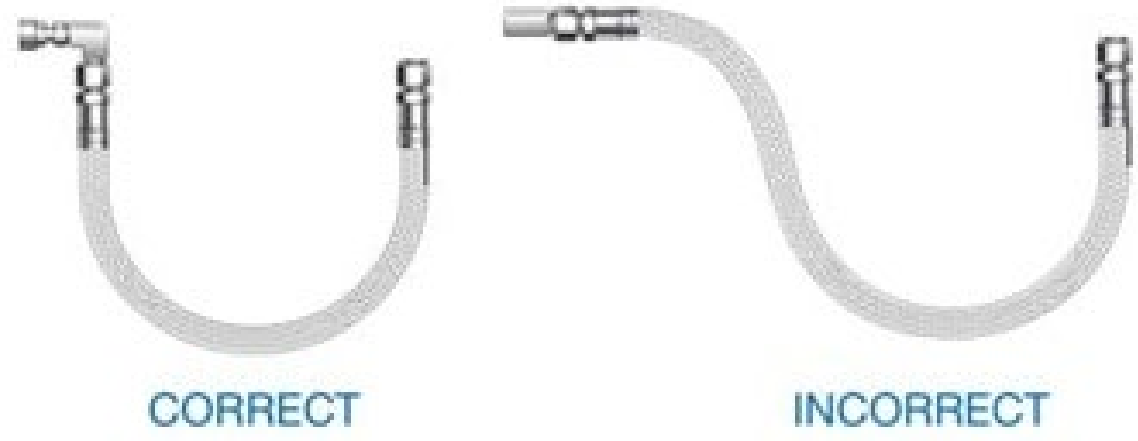
Solution: Swagelok team evaluated the selection and installation of hoses across multiple tools at the facility.

Hose Management Service

Swagelok Northwest (US)

Results: Changes implemented with regards to hose selection and installation

- Reduced downtime and unplanned maintenance



Sampling System Evaluation & Advisory Service

Swagelok Northwest (US)

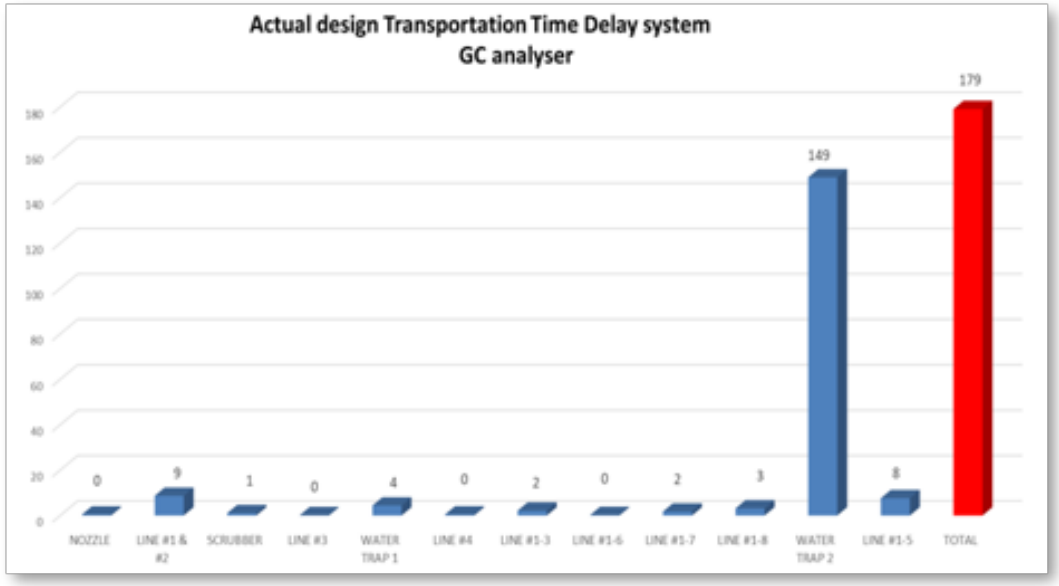
Challenge: An oil refinery recently purchased a new analyzer and sample system, and the measurements from the system do not seem accurate.

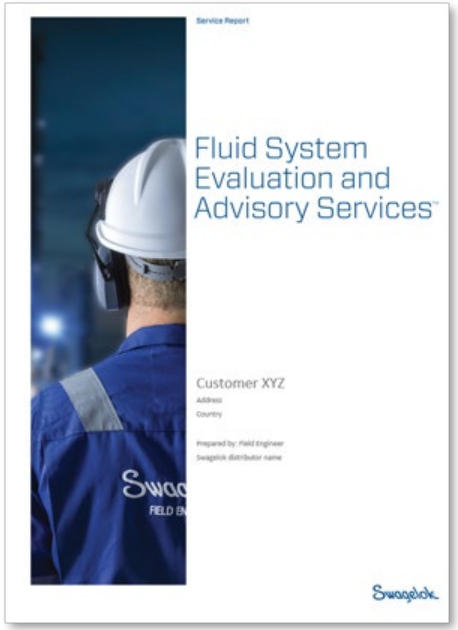
Solution: Swagelok team of field engineers reviewed the sample system and provided design recommendations for improvement

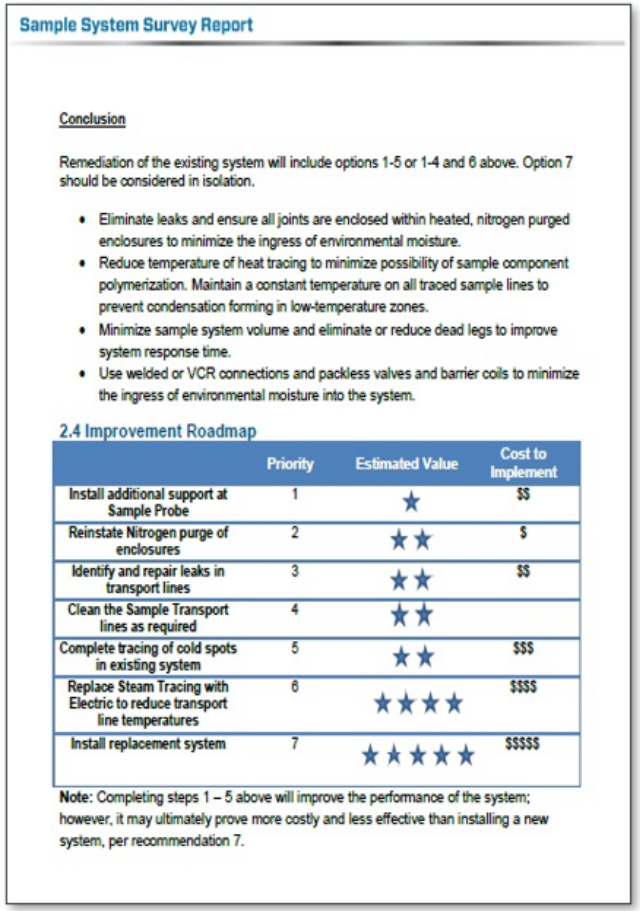
Sampling System Evaluation & Advisory Service

Swagelok Northwest (US)

Results: Actual time-delay calculated to be > 8 hours. Based on the recommendations, time-delay was improved to < 60 seconds.







Sample System Survey Report

Conclusion

Remediation of the existing system will include options 1-5 or 1-4 and 6 above. Option 7 should be considered in isolation.

- Eliminate leaks and ensure all joints are enclosed within heated, nitrogen purged enclosures to minimize the ingress of environmental moisture.
- Reduce temperature of heat tracing to minimize possibility of sample component polymerization. Maintain a constant temperature on all traced sample lines to prevent condensation forming in low-temperature zones.
- Minimize sample system volume and eliminate or reduce dead legs to improve system response time.
- Use welded or VCR connections and packless valves and barrier coils to minimize the ingress of environmental moisture into the system.

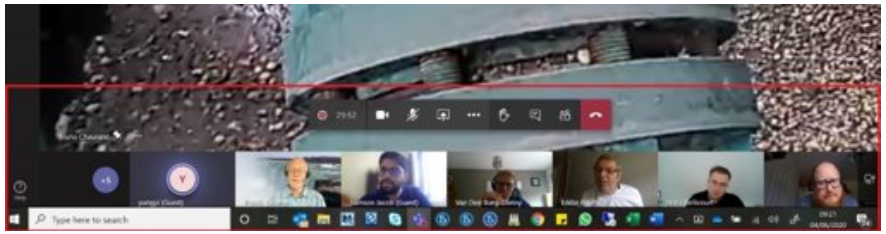
2.4 Improvement Roadmap

	Priority	Estimated Value	Cost to Implement
Install additional support at Sample Probe	1	★	$$
Reinstate Nitrogen purge of enclosures	2	★★	$
Identify and repair leaks in transport lines	3	★★	$$
Clean the Sample Transport lines as required	4	★★	
Complete tracing of cold spots in existing system	5	★★	$$$
Replace Steam Tracing with Electric to reduce transport line temperatures	6	★★★★	$$$$
Install replacement system	7	★★★★★	$$$$$

Note: Completing steps 1 – 5 above will improve the performance of the system; however, it may ultimately prove more costly and less effective than installing a new system, per recommendation 7.

Swagelok Services and COVID-19

Swagelok Northwest (US)



Get In Touch

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