Swagelok London

Swagelok® Onsite Services

Local Solutions. Global Support.

Swagelok Components - 70 Years of excellence in Manufacturing

Swagelok Company's expanding portfolio of products, assemblies, and services helps you solve your fluid system problems.

Swagelok
Value beyond the expected™

Tube Fittings

- Available in tube sizes 1/16 to 2 in. and 2 to 50 mm
- Consistent gageability upon initial installation
- Easy to disconnect and retighten
- Wide variety of materials and configurations

Patented Design: Excellent gas-tight sealing and tube-gripping action, easily achieved proper installation, consistent remakes, excellent vibration fatigue resistance and tube support, full compatibility with original Swagelok stainless steel tube fittings of identical sizes.

General Industrial Fittings

- Available in sizes 1/16 to 2 in. and 2 to 50 mm
- Wide variety of materials and configurations
- Pressures from vacuum to 60 000 psi (4134 bar)
- NPT, ISO/BSP, and SAE threads

Types: Pipe, Weld, Vacuum, Flange, Medium-Pressure

Instrumentation Valves

- Variety of end connections including integral Swagelok tube fitting
- Broad operating temperature range
- Large selection of sizes and materials
- Minimal dead volume and entrapment zones

Types: Ball, Needle, Check, Relief, Plug, Metering, Toggle, Manifold, Bleed and Purge

Process Valves and Manifolds

- Integral tube fitting ball valves in sizes up to 2 in. and 50 mm
- Flanged process valves up to 3 in. (DN80)
- A large variety of special application valves

Types: Ball, Needle, Single Block, Single Block and Bleed, Double Block and Bleed, Manifold

High-Purity Fittings

- Available in sizes 1/16 to 1 in. and 6 to 18 mm
- High-purity stainless steels and other materials
- Wide variety of configurations

Types: VCR® Face Seal, VCO® Face Seal, Micro-Fit®, Weld

Packless Valves

- High-cycle, high-integrity sealing
- Low- and high-pressure models available
- All metal containment
- Shutoff, bulk-gas distribution, and isolation service
- High-purity stainless steels and other materials

Types: Bellows-Sealed, Diaphragm-Sealed

Plastic Products

- Innovative CR-288® concentration monitor provides process monitoring for inline liquid chemical applications
- Wide variety of PFA tube fittings and valves
- UHP fluoropolymer diaphragm valves
- High-purity PFA fine thread flare fittings

Types: PFA and Vinyl Tubing, PFA Plug Valves, PFA Needle Valves, Modified PTFE Diaphragm Valves and Concentration Monitor, PFA Check Valves and Fittings

Welding System

- Cost effective and reliable gas tungsten arc welds
- Lightweight, portable power supply
- Meets ASME-BPE 2002 welding standards

Types and Accessories: Traditional and High-Purity Power Supplies, Weld Heads, Fixture Blocks, Side Plates, Plenum, and Collets

Regulators

- Instrumentation-grade and ultrahigh-purity models
- Unique design features such as metal-to-metal seal to atmosphere
- Self-vent and captured-vent options

Types: Diaphragm Sensing, Piston Sensing, Pressure Reducing, Back Pressure, Vaporizing, Ultrahigh-Purity, Modular

Gauges and Transducers

- Swagelok tube adapter and Swagelok VCR end connections available for easy positioning
- A variety of mounting options
- Meet ASME, EN, and JIS standards

Gauge Types: Industrial, Process, Safety, Miniature, Low-Pressure, High-Purity
Transducer Types: Industrial, Explosion- Proof, Ultrahigh-Purity

Sanitary Products

- Exceptional range of 3A-compliant products
- Common configurations and special fabrications
- Large selection of valves, fittings, pumps, and accessories
- Designed for easy cleaning and draining

Types: BPE Fittings, TS Fittings, DR Radial Diaphragm Valves, Weir-Style Diaphragm Valves, Pumps, Block Body Valves, Skid-Mounted Systems, Tubing

Hoses

- Custom lengths and other end connection combinations available
- Wide variety of types and materials
- Broad operating pressure and temperature range
- Available in hose sizes 1/8 to 2 in. and 3 to 50 mm

Types: All-Metal, PTFE-Lined/Metal, Thermoplastic, Rubber, Vinyl, PFA

Modular Solutions

- O-ring and metal-to-metal sealing technologies suitable for instrumentation and ultrahigh-purity applications
- Compact footprint
- Lightweight, easy-to-assemble
- Wide variety of surface-mount components available

Types: Analytical MPC, Ultrahigh-Purity, IGC®, Modular Components, Configuration Software, System Assembly

Filters

- Available for liquid and gas service
- Welded, inline, and tee-type configurations
- Wide variety of filter media available
- Membralox® ceramic filtering technology for high-purity applications

Types: Coalescing, Particulate, High-Purity

Sample Cylinders

- Sizes from 10 to 3785 cm³ (1 gal)
- 304L, 316, 316L, and Alloy 400
- Working pressures up to 5000 psig (344 bar)
- Variety of options including integral valves, outage tubes, color-coding, and specialty coatings

Types: Sampling, Transportation-Compliant (DOT, TPED, Transport Canada, CCC), Single- and Double-Ended

Quick-Connects

- Designed to minimize spillage and air inclusion
- Push-to-connect design enables quick, simple operation. No twisting, turning, or wrenching necessary
- Wide variety of configurations, end connections, and stem and body connectors

Types: Instrumentation, Single-End Shutoff, Double-End Shutoff, Full-Flow, Miniature, PTFE-Sealed

Tubing and Tube Supports

- Stainless steel, copper, and PFA tubing
- Sizes from 1/16 to 4 in. OD and 3 to 25 mm OD
- Standard instrumentation and ultra-high-purity tubing
- Tube support system for tube and hose sizes 1/4 to 1 in. and 6 to 25 mm

Types: Chemically Cleaned and Passivated Tubing, Sanitary Tubing, Ultrahigh-Purity Stainless Steel Tubing, Medium-Pressure Heavy-Walled Annealed Tubing

Tools and Accessories

- Tube benders, swaging units, gap inspection gauges
- Variety of wrenches, cutting tools, and deburring tools
- Liquid leak detectors, thread lubricants, and sealants

Types: Electric, Bench-Top, and Hand Tube Benders, Hydraulic Swaging Units, Snoop® and Goop® Products

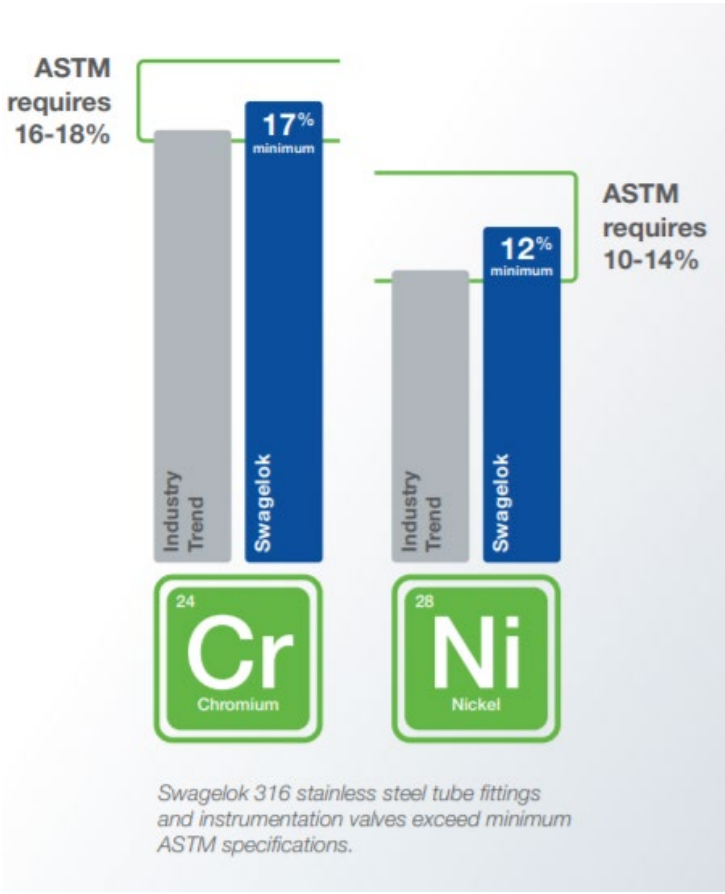
Swagelok Unmatched Material Quality

316 Stainless Steel

In all stainless steels, chromium and nickel are critical for corrosion resistance and ductility. The addition of >10% chromium transforms steel into stainless steel, creating an adherent and invisible oxide layer that is chromium-rich. This oxide layer forms when chromium in the alloy reacts with oxygen in ambient air. This layer gives steel its stainless character. The addition of nickel provides good ductility and ease of forming and welding.

But not all bar stock is the same. Swagelok 316/316L stainless steel tube fittings and instrumentation valves contain more nickel and chromium than minimally required by ASTM standards for bars and forgings.

Note that although stainless steels will not suffer from general corrosion, they can be affected by localized corrosion.



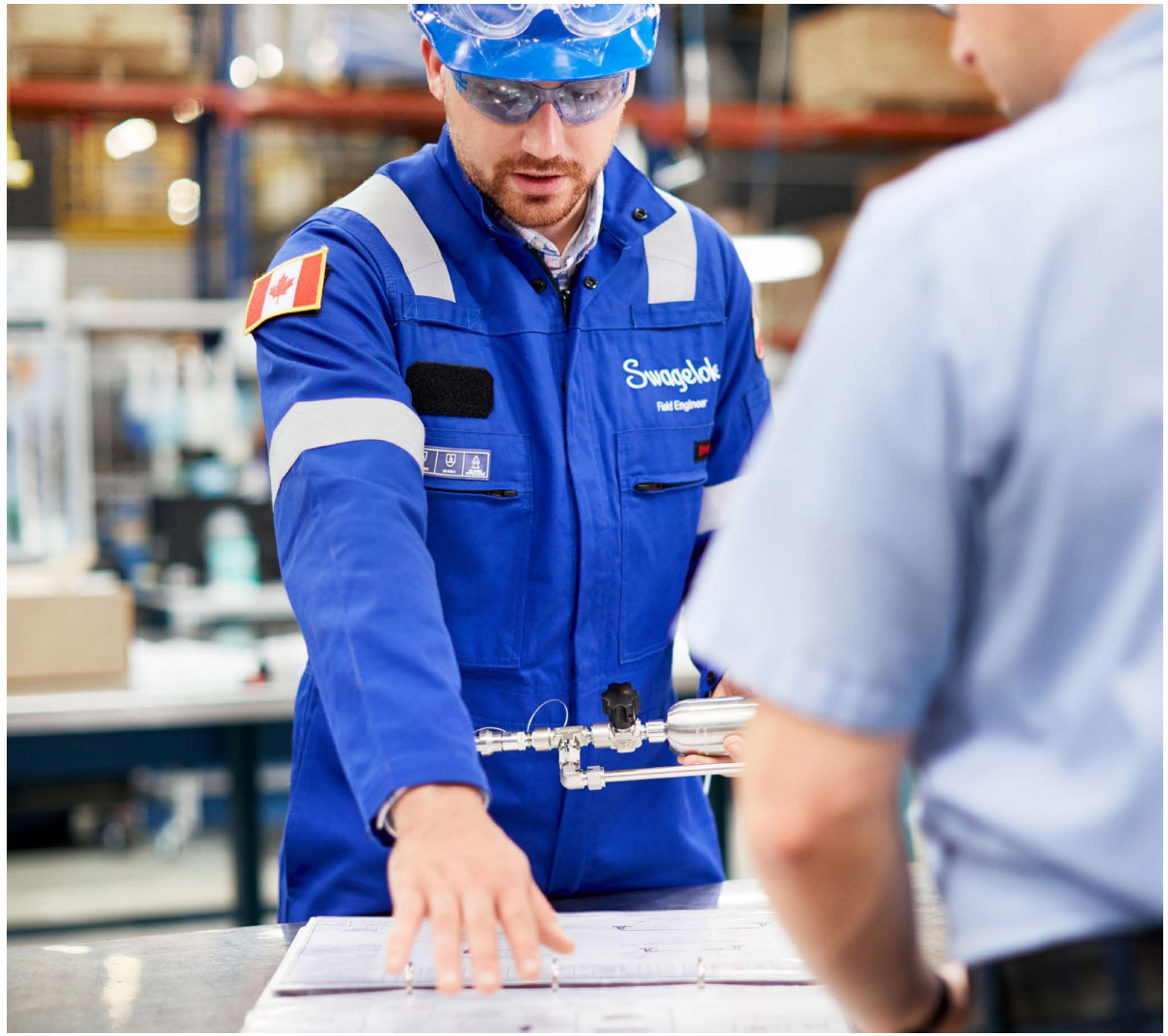
Swagelok 316 stainless steel tube fittings and instrumentation valves exceed minimum ASTM specifications.

Achieve More With the Help of Local Fluid System Specialists

Every day, experienced Swagelok® professionals apply their technical and application expertise to help customers across the globe solve pressing challenges related to fluid system design, installation, operation, and maintenance.

Swagelok onsite services can develop and prioritize solutions to help you:

- Improve reliability and performance
- Promote onsite safety
- Reduce operating costs
- Boost system productivity
- Mitigate environmental risk and reduce emissions
- Increase sampling reliability



Onsite Services Help Promote Safety

Protect your people, systems, and reputation from potential safety incidents or violations by using Swagelok field engineers to recommend and help prioritize the implementation of solutions and supervise installation as needed. Capabilities include:

- Process and design recommendations
- Personalized training
- Product selection assistance
- Leak identification
- Fluid, sample, and steam system analysis

Onsite Services Help Reduce Costs

Swagelok field engineers can uncover the most efficient and effective means of reducing costs related to fluid system operations and maintenance by identifying:

- Design optimization opportunities
- System standardization opportunities
- Installation errors
- Costly leak points
- Ideal components for the application

Onsite Services Help Increase Uptime and Reliability

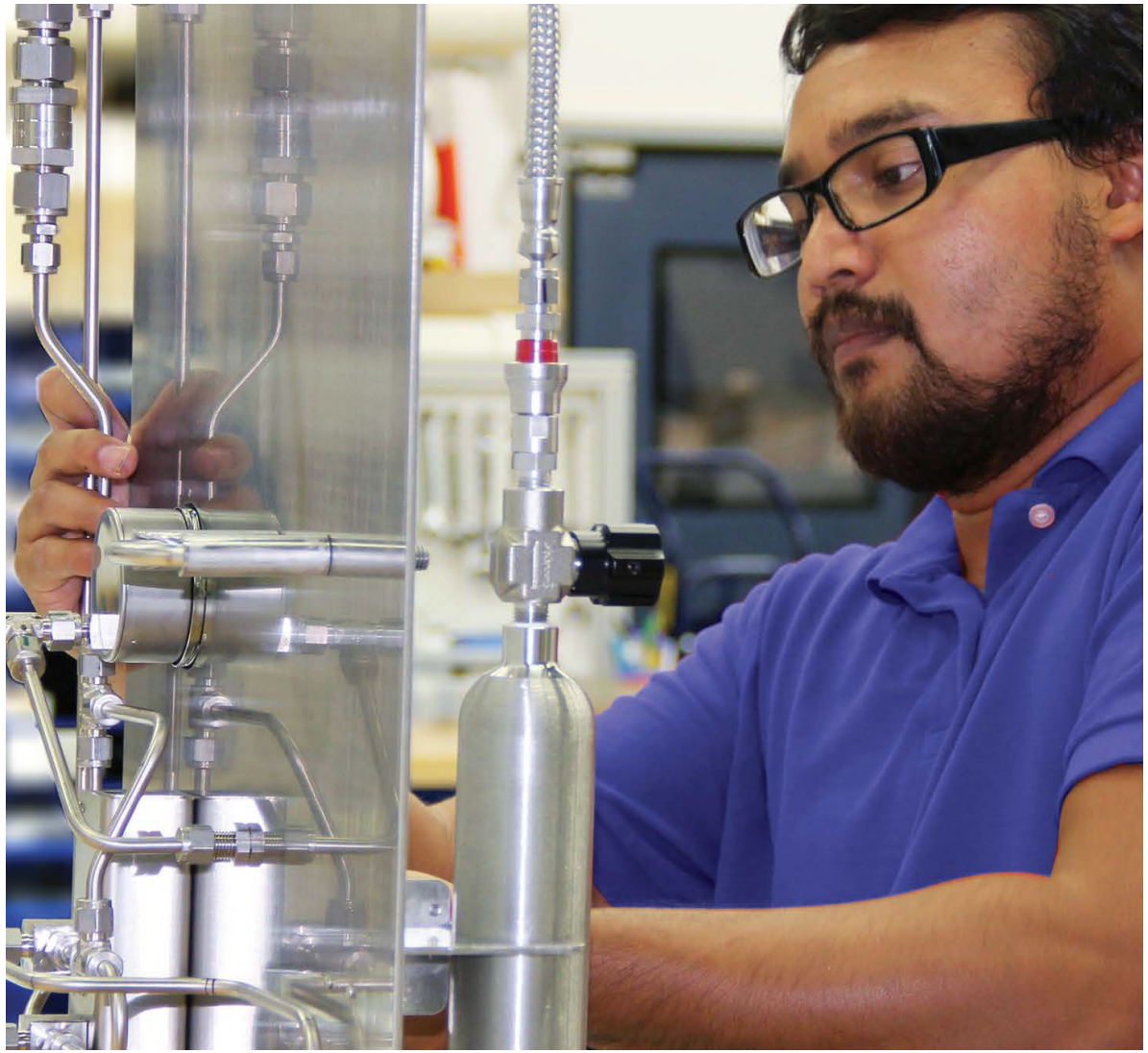
Swagelok fluid system experts help you maintain the health of your fluid systems, avoiding equipment downtime, lost production revenue, and unnecessary troubleshooting and repairs. Our ability to find and measure the scale of fluid system problems, prioritize improvement recommendations, and supervise installation will help you with:

- Optimized sampling system design
- High-quality component selection for peak life span
- System component documentation for easy reorder
- Leak detection and potential failure point identification
- Hose selection, documentation, installation, and maintenance recommendations

Onsite Services Help Optimize Resources

If you're being asked to do more with reduced budgets and fewer experienced staff, we can help you make the most of your limited resources. Receive recommendations to streamline system installation, lower maintenance and repair requirements, and improve system designs. Through onsite services, we offer:

- Design services
- Fabrication and assembly services
- Training on product installation and best practices
- Product selection consulting
- Bill of materials (BOM) and piping and instrumentation diagram (P&ID) generation
- Leak identification and repair prioritization
- Preventive maintenance recommendations



Our Onsite Services

Whether you are seeking to ensure reliable fluid system operation, boost process efficiency, reduce unplanned downtime, 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.

- Explore Swagelok Onsite Services:
- Fluid System Evaluation & Advisory
- Sampling System Evaluation & Advisory
- Grab Sampling Support
- Hose Advisory

- LEARN MORE
- VIEW REPORT EXAMPLE

Fluid System Evaluation & Advisory Services

Have our field engineers conduct a site evaluation of your facility, detect and calculate costs of leaks, advise on design and installation practices, and recommend prioritized system enhancements in a comprehensive report. Our report will provide solutions that address vibration concerns, corrosion potential, incorrect component choice or installation, inadequate supports, and more.

Receive the insights you need to:

- Improve fluid system performance, productivity, and reliability
- Enhance the safety of your fluid systems
- Reduce costs related to downtime
- Mitigate environmental risks and reduce emissions
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- VIDEO: Hear Field Engineers Explain How They Work With Customers

Sampling System Evaluation & Advisory Services

Improve sampling system reliability, reduce operating and maintenance costs, and identify unseen opportunities for system improvement with our expert, in-depth analysis of every sampling system component and subsystem, from tap to analyzer.

We document your existing sampling systems and provide a detailed report, helping you:

- Decrease time delays
- Obtain more representative samples
- Eliminate causes of poor sample quality
- Reduce required maintenance and analyzer calibration/downtime
- Resolve issues caused by high particulate loads
- Make the right design choices and integrate the right assemblies
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- VIDEO: How We Solve Common Sampling System Challenges

Grab Sampling Support

Without proper grab sampling system design and maintenance, critical actions like capturing, handling, or analyzing samples that are timely and representative of your process can be difficult to achieve. Work with our experts to produce more accurate, compliant, safe samples while reducing your costs.

Our team of certified fluid system specialists can:

- Identify issues affecting sample quality and compliance
- Provide insights to make grab sampling systems safe and more accurate
- Reduce required maintenance and analyzer downtime by optimizing system design
- Design and assemble reliable, tested grab sampling systems
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- ARTICLE: See How to Reduce Plant Costs with Smarter Grab Sampling

Hose Advisory Services

Eliminate a variety of hose-related issues that cause safety concerns, unplanned downtime, low product yield, or costly part replacements by engaging with Swagelok hose advisors who conduct site evaluations and provide prioritized improvement recommendations.

We help you by:

- Providing feedback on hoses, installation, inspection, and maintenance
- Explaining hose selection criteria to improve hose life and performance – check compatibility with media and related pressure and temperature
- Suggesting standardized end connections and couplings
- Developing preventive maintenance schedules and managing inventory
- Documenting hose installation and wear concerns

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VIDEO: See How Hose Advisory Services Can Benefit You

Discover the Swagelok Difference

Swagelok® onsite services are driven by local field engineers and fluid system specialists who provide rapid support, application expertise, and actionable recommendations to help customers increase operator safety, decrease costs, and improve profitability.

When you work with Swagelok, you have access to a team that:

- Is engineered to perform under pressure, built upon a foundation of success started 70+ years ago
- Completes a rigorous training and development program taught by recognized industry experts
- Has experience working with diverse industrial fluid systems and OEM equipment packages
- Is supported by a global network of experienced professionals with ties to more than 200 authorized sales and service centers in 70 countries
- Has designed and optimized systems that overcome challenges for a broad variety of customers worldwide
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FAB - Fabrication, Assembly & Build

Allow our Swagelok engineers to conduct a fabricated system review detailing major observations and proposed corrective solutions upon your request.

Our dedicated team of experts can review and assist in delivering a comprehensive report on your systems in aim to:

- Locate and improve mechanical defects
- Optimize operator safety and ambient conditions
- Increase flow and pressure testing capabilities
- Reduce costs and labour time
- Deliver advice on material compatibility
- Provide recommendations which prioritise for largest impact
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Process Instrumentations- Measurement Devices

Every day a small or large volume of fluids are conveyed through your network and sometimes even get stored. The process information, analogue or digital, are capital for your operations.

Let us put our experience to advise on right components and maintenance plans for your company.

- Check if the device is operational
- Revie hook-ups and isolations fundamentals
- Check compatibility with media and necessary technology
- Working range
- Review with the Instrumentation team the calibration for the devices and create a strategic plan to ensure effective transition & interchange
- Check ergonomics and orientation
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Invasive Tube Fitting Inspection

Tube fittings are managed by our dedicated engineers who carry out invasive and non-invasive observation to alleviate your pressures. Helping customers to generate success, we look down a line of analysis, providing recommendations to solve seen issues and increase productivity.

With images included for each point of inspection, our areas of review will consist of:

- Visual examination of all tube fittings within the facility, pinpointing ideas of improvement against:
  missing, intermixed components, tube variables, preparation and incorrectly orientated ferrules.
- Identifying examples of interchange and/or damage to fittings
- Disassembly to an agreed percentage of installed tube fittings for precise review to conclude correct assembly
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Mechanical Seal Support System

With over 70 years experience in manufacturing highly engineered technical components for fluid systems this is where our expertise to assess the regulation and control of the media within the mechanical seal support system can assist in outperforming the reliability of the pump and it mechanical seals

Tagging identified areas of the plant observed, we'll help you:

- Ensure seal support systems and hook-up adheres to API and other relevant standards and sites specifications
- Increase reliability & reduce maintenance time, reviewing safety concerns around component selection
- Work on issues observe by client and assist root cause analysis methodology.
- Determine defective components under cause of operation activity, avoiding incorrect installation practice to prevent fatigue failure
- Offer a variety of custom configurations to cover a range of conditions to match each need
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Gas Distribution & Regulators

Gas the distribution for laboratories and the associated regulators, but not exclusively, are often a point of interest if not the common denominator to ensure tests and experiences are conducted in a safe and optimal way. Therefore, conducting audit to ensure proper sequence and sizing is must

Swagelok review the following point through surveys and deliver in a comprehensible report format:

- Pressure reducing calculation based on downstream pressure and flow requirement.
- Establish correct necessary succession/cascade of elements.
- Review the safety components selection associated to the gas distribution to protect you most expensive devices.
- Deliver training to ensure your business remain in control of the maintenance plan to avoid systemic replacement and excessive carbon foot print.
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Compressed Gas Leak Detection

Often heard in your plant fugitive emission to atmosphere from your airlines and other gases can rapidly become an expensive commodity in your business. This Swagelok survey will identify and quantify the emissions and often assist to make selection for your next investment.

Tagging identified areas of the plant observed, we'll help you:

- Pinpoint the faulty components.
- Estimate the leakage by expressing its value in a flow unit.
- Convert the flow into the £ value and therefore optimize management choice for the future investment.

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Steam Trap Survey

Finally, a comprehensive survey to assess one of the most underrated steam equipment in your plant. Our assistance with an aim to give you back the control on the recovery of your steam and treated water by optimizing these crucial components.

Tagging identified areas of the plant observed, we'll help you:

- Identify faulty components.
- Review their technology based on their process variable.
- Convert them into an easy maintaining station that will reduce downtime cost and keep high operating ratio.

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Heat Exchanger Tube Evaluation

A service elaborated with our steam experts to evaluate in timely manner the tubes still active in your heat exchanger in a cleaner and safer way. So fast that correcting action can happen as we go.

- Identify each leaking tube.
- Supply of the necessary obturator.
- Quick immediate reassessment of the remedy.

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Internal Valve Leak Detection

As many of our clients or shut-off valve users, seeing the non seen can be a peace off mind to assess correct isolation from valves or manifolds

Tagging identified areas of the plant observed, we'll help you:

- Identify faulty components.
- Review their technology based on their process variable.
- Select and prioritize the replacement of the valves.

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Vacuum Leak Detection

If like some of our client, you have experienced some moisture mixed within your vacuum network or even some of your process disappearing without identifying any leakage to atmosphere this specific survey may assist to bring rationality to the phenomenon.

Tagging identified areas of the plant observed, we'll help you:

- Pinpoint the faulty components.
- Provide suggestion of solutions to remedy to the findings.

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FSIO

Looking for a partner company to assist in the supervision of the preparation and installation of small-bore tubing section for a plant, project, large scale endeavor, Swagelok has the capabilities with its international team to support you at nearest point of construction/assembly and also where vendors package reside. A support to reduce drastically unpredicted cost post project delivery by supporting the project at the earliest as soon as Swagelok is specified.

- Overviewing contractor and sub-contractor accreditation on small bore tube fitting installation.
- Suggestion on latest improvement post EPC's design.
- Overview of the small-bore components storing and handling.

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