

Conquering Corrosion

By standard definition,
Corrosion is “the physical degradation of a material due to interactions with its environment.”

It occurs when a metal atom is oxidized by a fluid, leading to a loss of material in the metal surface – which, in turn, leads to the reduction of wall thickness in a component. And that, of course, often results in the mechanical failure of a fluid system. Not only is worker and asset safety highly compromised, but your overall repair cost can be exceedingly expensive. In fact, a recent report from NACE International stated that corrosion costs the global Oil & Gas production industry more than \$1.3 billion annually.

Even though virtually every metal corrodes under certain conditions, you can avoid major problems by ensuring that your component supplier employs stringent quality control measures to prevent corrosion.

For example, is the outgoing bar stock subjected to visual inspection? Is the material free from surface flaws? Are tests performed to detect the susceptibility of corrosion? But also consider the quality of the materials: Are they premium?

Remember: Not all stainless steel is the same, and, thus, neither is its metallurgical performance.

The ASTM (American Society of Testing & Materials) requires Chromium content of between 16% and 18%; Nickel content ranging from 10% to 14%. **Swagelok, in its never-ending quest to deliver the highest quality products, maintains a minimum of 17% Chromium and 12% Nickel in its 316 Stainless Steel.** And we’ve done so for many years while many other manufacturers have stayed at the lowest possible end of the aforementioned ranges.



Our proven history in Materials Science makes a bottom-line difference in your fluid system safety, productivity, and profitability.

We have conducted extensive Chloride Stress Corrosion Cracking testing on our 316 Stainless Steel tube fittings. The results speak for themselves:

- ***After more than 700 hours in our test environment, the nuts of 43 of 110 competitive fittings cracked and three leaked.***
- ***NONE of the 72 Swagelok fittings tested visibly cracked or leaked.***



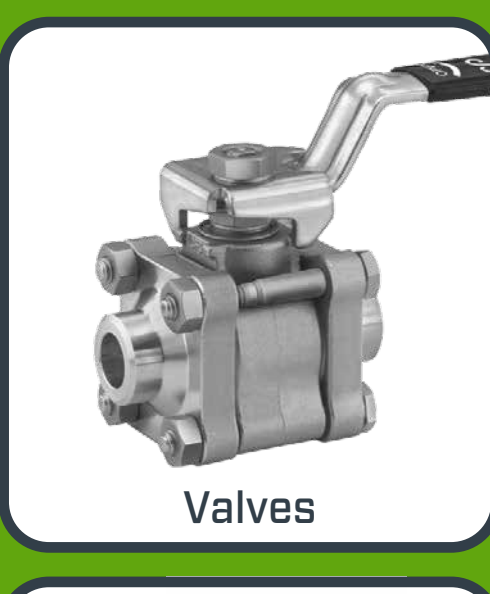
In the ongoing battle against the destructive extremes of corrosion, trust Swagelok – for how we design our products, what we put into our products, how we make our products, how we support our products, and how we understand your most severe application challenges.

Click Here for more Corrosion Information

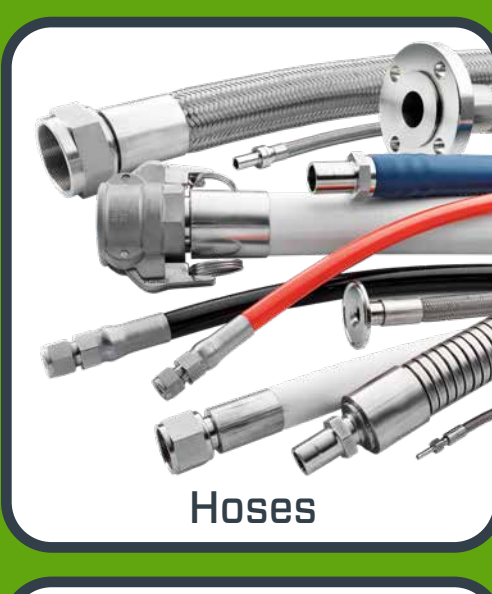
Unsurpassed performance in even your most challenging applications and environments!



Tube Fittings



Valves



Hoses



Gauges



Grab Sample Systems



Seal Support Systems

Our Promise:

In each and every customer engagement and interaction, no matter how challenging your application or operating conditions, we will deliver premier-quality Swagelok Fluid-System Product Solutions and value-added Strategic Services that will positively impact your Bottom Line.



WE'RE YOUR SWAGELOK FLUID-SYSTEM SOLUTIONS PROVIDER



Industry-Best Componentry



Masterful Custom Fabrication



Expert Technical Training



Extensive Energy Evaluations



Unparalleled Application Knowledge



Comprehensive Hose Advisories



Proven Inventory Management Support



Genuine Swagelok Tool Rentals



WE CAN HELP YOU SAVE TIME, MONEY, AND WORRY:



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