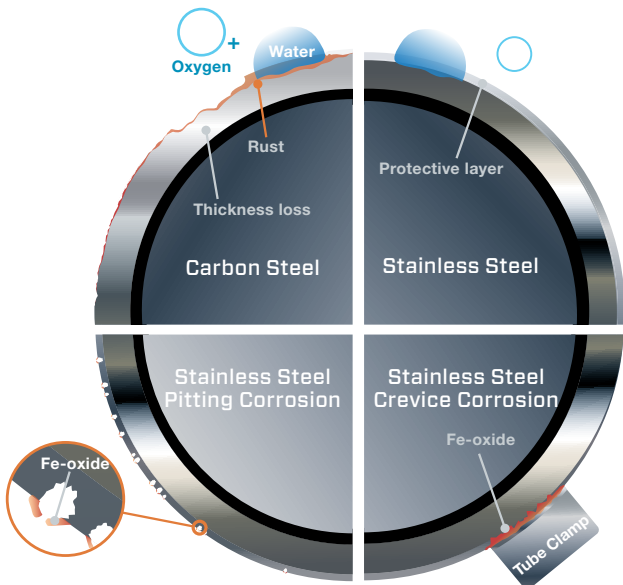


Swagelok® Materials Selection Guidance

Simplify Your Selection With Our Corrosion Expertise

An offshore platform can have more than **20,000 fluid system components** and as many as **8,000 mechanical connections**.



Choosing the right materials for your application is not easy. Swagelok® can help.

Take Steps to Control Corrosion

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. This reduces the surface's thickness and makes it more prone to mechanical failure.

While corrosion is prevalent, there are steps you can take to counteract it.

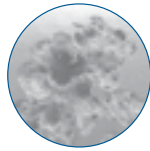
1. Identify **types of corrosion**.
2. Select **materials resistant to corrosion**.
3. Minimize locations where **crevice corrosion** can occur and reduce contact with noncompatible metals.
4. Specify everything from the **supports and clamps** to the **tubing** itself to reduce the potential for corrosion.
5. Understand **requirements and standards**.



Types of Corrosion



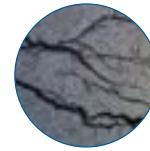
General (or Uniform) Corrosion



Localized Pitting Corrosion



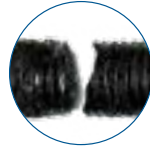
Localized Crevice Corrosion



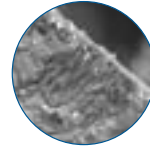
Stress Corrosion Cracking



Sour Gas or Sulfide Stress Cracking



Hydrogen Embrittlement



Intergranular Corrosion



Galvanic Corrosion

Selecting Materials Resistant to Corrosion

It is best to understand the properties of the materials available for resisting many types of corrosion. Your Swagelok team can teach you about the most common, which include:

- 316 Stainless Steel
- Alloy C-276
- 6-Moly Alloys
- Alloy 400
- 2507 Super Duplex Stainless Steel
- Titanium Alloys
- Alloy 825
- Engineered Combinations of Alloys
- Alloy 625

The Best Decisions Are Educated Decisions

With stringent quality control measures, expert-led instruction, and authorized sales and service center support, Swagelok offers unmatched expertise in the world's toughest environments. We make materials selection a matter of confidence for our customers, with our deep understanding of factors that contribute to corrosion, as well as the properties of the materials that help fight it.



Get Started Today

Learn more about how we can take the pressure off of your materials selection decisions by **contacting your authorized sales and service center** or viewing the **Swagelok Materials Selection Guide** at www.swagelok.com/prevent-corrosion.

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