

Editorial Contact:  
Cortec® Advertising Agency

Jeni Duddeck  
(651) 429-1100 Ext. 1114

[jduddeck@cortecvci.com](mailto:jduddeck@cortecvci.com)

Company Contact:  
Cortec® Corporation

Julie Holmquist  
(651) 429-1100 Ext. 1194

[jholmquist@cortecvci.com](mailto:jholmquist@cortecvci.com)

Technical Contact:  
Cortec® Corporation

Rick Shannon  
(651) 429-1100 Ext. 1146

[rshannon@cortecvci.com](mailto:rshannon@cortecvci.com)



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PRESS RELEASE**



## **Practical Preservation Strategies for Oil and Gas Industry Valves**

Ball valves, gate valves, globe valves, butterfly valves, check valves, and valve assemblies: all these are common and critical components in the oil and gas industry. Their job of regulating hazardous fluid flow in pipelines and piping systems underscores the importance of keeping them in peak operating condition. Unfortunately, one of the most common enemies of valve integrity is rust, which can attack and deteriorate



valves during hydrotesting, shipping, and layup. The following tips from Cortec® Corporation make it easy to achieve successful preservation during the three main phases of a valve's non-operational life-cycle.

### **Phase 1: Preserving Valves for the Long Haul (Fabrication and Shipping)**

Before a pipeline or plant starts operating, thousands of components must be fabricated, assembled, and shipped to the construction site. Valves must be hydrostatically tested by the valve manufacturer to ensure

no leaks. Hydrotesting of valves and components may also be done at coastal fabrication yards where components are assembled into modules and often shipped overseas halfway around the world.



Adding [VpCI®-649](#) to the hydrotest water does dual duty by protecting against flash rust from the hydrotest water and leaving behind a thin film of corrosion inhibitors that provide both contact and vapor-phase protection. This offers comprehensive coverage that is typically difficult to achieve due to valve intricacies. A higher dose can be used for an extended period of preservation. Another approach is to fog valve internals with [CorroLogic® VpCI®-339 Fogging Fluid](#), a 100% vapor-phase inhibitor for void space protection.

After internal protection, the entire valve can be enclosed in [VpCI® Film](#) (available in multiple grades for different atmospheric exposure conditions) to keep the Vapor phase Corrosion Inhibitors from escaping and to protect the external surface without cumbersome coating or liquid rust preventative application. The valve is then ready to be shipped through all sorts of environments and arrive in like-new condition at the installation site.

## **Phase 2: Preserving Valves for Backup (Warehousing and Critical Spares)**

Another critical phase of valve preservation ought to occur during warehousing of critical or operational spares. Protection methods are similar to those previously mentioned, with slightly different underlying reasons. For operational plants, preserving spare valves can mean the difference between millions of dollars saved, or millions of dollars lost for lack of a



reliable spare to install when a replacement is needed. If all spares are rusty (as too often happens in non-climate-controlled warehouses or outdoor storage yards), maintenance personnel must choose between installing a rusty, potentially faulty valve that could lead to further failure and disaster, or waiting and experiencing downtime for days, weeks, or months before a replacement arrives.

A much easier path is to “clean, protect, and preserve” valves in advance with these three steps:

1. Remove any existing rust (e.g., use a dip bath of [VpCI®-422](#), followed by rinsing and neutralization with a VpCI®-41x Series cleaner).
2. Fog valve internals with [VpCI®-337](#) or CorroLogic® VpCI®-339 Fogging Fluid.
3. Cover openings or wrap the entire valve in [VpCI®-126 Film](#) (indoor storage), [VpCI®-126 HP UV Shrink Film](#) (outdoor storage), or [MilCorr® VpCI® Shrink Film](#) (outdoor storage) depending on the severity of the environment.

This procedure leaves valves in operating condition, ready to use at a moment’s notice as soon as they are unwrapped.



### **Phase 3: Preserving Valves for a Brighter Day (Mothballing and Layup)**

A third important phase of valve preservation comes when the fluctuating oil and gas market makes mothballing and layup the most cost-effective option, shutting down drilling or refining operations until there is a brighter industry outlook. In the meantime, millions of dollars of equipment must be preserved so that their value is not lost during the idle period. Once again, valves fall into this

category. They can be preserved in much the same way as described for other phases—ensure valves are clean and rust-free, add an internal source of Vapor phase Corrosion Inhibitors, and protect externals with VpCI® Film that has the appropriate degree of weather resistance. When the market brightens, crews can easily go in, remove the VpCI® Film, and get the facility up and running without having to remove a lot of coatings or rust as might otherwise be needed.

Whatever the stage, valves are such a critical part of the oil and gas industry that they deserve special preservation attention for economic and safety reasons. Compared to the serious repercussions of inadequate preservation, corrosion prevention is extremely simple and cost-effective. Contact Cortec® to learn more about the best valve preservation strategies for your oil and gas application:

<https://corrologic.com/contact-us/>

***Keywords: valve preservation, oil and gas industry, hydrotesting of valves, corrosion inhibitors, valve corrosion, spare valves, preservation of critical spares, Cortec, VpCI, valve integrity***

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