

An easy alternative to nitrogen purge for void space layup

Is there an easy way to prevent corrosion inside void spaces of idle equipment or permanent structures? This is a major need, particularly in the oil and gas industry. However, this issue also impacts any industry that deals with metal tanks, piping, boilers, heat exchangers, hollow metal structures, or even hard-to-reach areas between the layers of metal coils. Fortunately, Cortec has developed VpCI-337, a time-tested alternative to nitrogen blanketing for easy, effective corrosion protection of void spaces.

Every aspect of Australia's infrastructure should be protected from deterioration.



The challenges of nitrogen purge

Nitrogen purge or nitrogen blanketing is commonly used to protect metal void spaces from corrosion by replacing the oxygen with nitrogen gas. However, there are three major challenges to the success and efficiency of this method.

Firstly, nitrogen gas is expensive; raising a cost barrier especially where large spaces are concerned. The second challenge is that nitrogen requires constant pressure with an airtight seal. This necessitates regular monitoring and complete reapplication if a leak does occur. Third, leaks also pose a safety hazard for personnel who

unknowingly enter an area where the deadly gas has settled and may be overcome in moments.

The advantages of VpCI-337

By contrast, VpCI-337 is much safer, cost-effective, and easy to apply and maintain. VpCI-337 is a waterborne Vapor phase Corrosion Inhibitor that can be applied by fogging into metal void spaces.

This labour-saving technique uses a minimum of product to protect large areas or volumes. Vapor phase Corrosion Inhibitors in the fogging fluid diffuse throughout the void and are attracted to metal surfaces where they condense and form a protective molecular layer.

This layer inhibits the corrosion reaction on the metal surfaces even in the presence of oxygen and residual moisture. The space must be completely closed for the corrosion inhibitors to be effective, but an air-tight seal is not required as for nitrogen purge. At the end of the preservation period, there is usually no need to remove the VpCI layer—although this is easily done if needed.

VpCI-337 scope of use

Another advantage of VpCI-337 is its versatility. VpCI-337 can provide corrosion protection for everything from massive heat recovery steam

generators to small crates of metal parts. The following are real-life examples of how VpCI-337 has been used:

- Internal preservation of pig receivers enroute from construction yard to offshore installation site.
 - One-year protection of aboveground storage tank (AST) internals at a sulphur recovery plant.
 - Preservation of spare heat-exchanger tube bundles (in conjunction with VpCI-132 and MilCorrVpCI Shrink Film) previously stored in nitrogen pressurised canisters.
 - Temporary protection of fuel tanks in retired aircraft stored outdoors during museum renovation.
 - Transit protection of automotive frames shipped inside sea containers (VpCI-337 fogged inside VpCI-126 Film covered skids).
 - Protective packaging element used for shipment of horizontally opposed piston aircraft engines
- VpCI-337 is also an excellent option for manufacturer edge treatment of coils, fogging of oil drilling risers, internal protection of metal tubular structures, and much more.

This product is available through SAVCOR Products Australia Pty Ltd in Australia and New Zealand. **P**

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