

Cortec VpCI Technology for Corrosion Protection of Assets in Petrochemical Facilities

CORTEC
MIDDLE EAST
Environmentally Safe VpCI®/MCI® Technologies



Products enduring time while preserving the Earth.

Cortec Corporation

- Established In 1977
- 10 Production Facilities
- ISO 17025 Certified Laboratories
- Professional Corrosion Engineering & Field Services (CEFS) can offer turnkey solutions



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Corrosion Prevention Solutions

- AFIC was formed in 1982 and has been serving the kingdom's O&G, Utilities and Petrochemical companies, in the protection of their assets, for over 30 years.
- Specialists & Leading turnkey provider of cathodic protection solutions, products and services.
- Highest Number of NACE Certified Engineers, available in Kingdom.
- Manufacturing & Service Facility covering 10,000 msq

Mission

AFIC's mission is to provide customers with a diverse range of latest technological solutions and services for the Corrosion Prevention & Mitigation Industry



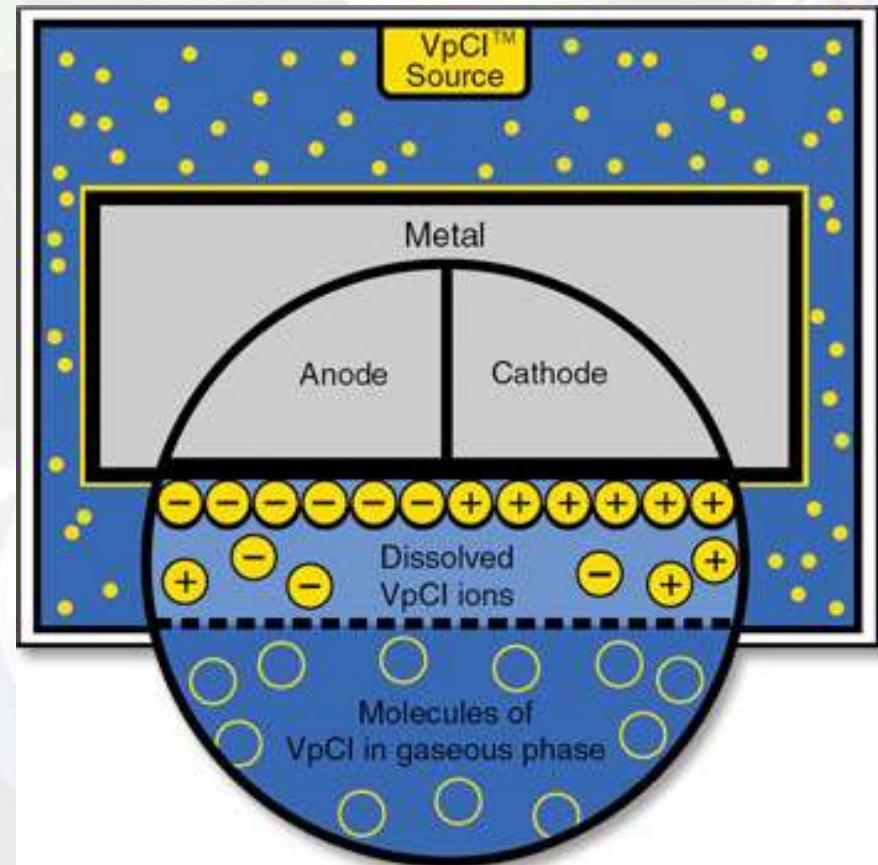
What Are VpCIs ?

- **VpCI** = Vapor phase Corrosion Inhibitor
- Chemical description: an amine carboxylate
- Protects in **three phases** : vapor, liquid and interface of vapor & liquid
- Forms a protective mono-molecular film on the metal's surface
- Inhibits the electrochemical reaction on the metal surface.

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Cortec VpCI® Technology

- There is a growing industrial awareness about the added value of using suitable vapor phase corrosion inhibitors
- They are organic salts that possess enough vapor pressure to enable them to diffuse through sand and provide protective layer



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VpCI Delivery Forms



Mitigation of Soil Side corrosion on Above storage tank bottom



- Effective control of soil-side corrosion on aboveground storage tank bottoms during the complete life cycle of the tank is key, from both operational and environmental perspective.
- CorroLogic™ material is a Vapor phase Corrosion Inhibitor (VpCI®) that acts to reduce soil-side corrosion by a combination of volatilization from the VpCI® media, vapor transport in the headspace between floor plates and the tank pad atmosphere, and adsorption onto surfaces in the space.
- It can be applied on CP protected and unprotected new or existing tanks, in-service or out of service. We also have design solutions for the tanks that have oily/bituminous sand and asphalt/concrete pad beneath the floors.

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Preservation and protective solutions using Cortec VpCI

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Types of Equipment to be Preserved

STATIC EQUIPMENT AND PIPING

- Vessels and columns
- Furnaces
- Boilers
- Shell-and-tube heat exchangers
coolers, condensers
- Air-cooled heat exchangers
- Piping and fittings
- Valves and attachments
- Stuffing box packings
- Gaskets
- Relief valves
- Flares and flare lines
- Cooling water systems
- Fire-fighting systems

ROTATING EQUIPMENT

- Centrifugal pumps
- Reciprocating pumps
- Compressors and blowers
- Steam turbines
- Gas turbines
- Internal combustion (gas and diesel)
engines
- Bearings/Gears/Couplings

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Types of Equipment to be Preserved

ELECTRICAL EQUIPMENT

- Electric motors
- Generators
- Transformers
- HV and LV switchgear
- Rectifiers and inverters
- Batteries

EQUIPMENT INSTRUMENTATION

- Plant instrumentation
- Indoor instrumentation

CIVIL ENGINEERING ITEMS

- Storage tanks and spheres
- Stacks
- Structural steelwork
- Steel wire ropes
- External insulation
- Fireproofing
- Drainage system

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Internal Preservation of Tanks using Cortec VpCI

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