

Zerust®

TANK SSB IDS SOLUTIONS



Soil Side Bottom corrosion of Storage Tanks is a major cause of tank bottom failures. Zerust VCIs are a Cost-Effective Way to Control Corrosion.

Zerust methods to control corrosion:

- 1 Chime Ring Dry
- 2 Chime Ring Flood
- 3 Underside Injection
- 4 Internal Flood
- 5 Dry Tube
- 6 Underside Drip Tube



The diffusion of VCIs provides corrosion protection from the annular chime ring.



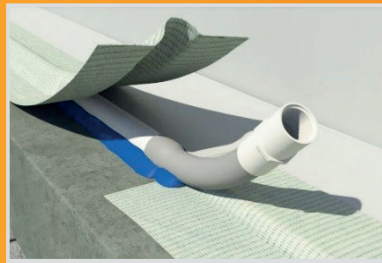
VCIs offer non-permanent corrosion protection at the molecular level that is safe and eco-friendly.



Vapor Corrosion Inhibitors are a cost-effective way to control corrosion.

Chime Ring Dry

Zerust VCI/SCI injection system to protect the tank bottom from corrosion. Perforated PVC pipe is installed around the entire annular chime area. The VCI dry sleeves are installed into the PVC pipe and the system is sealed to create an enclosure to contain the VCIs. The VCIs migrate and absorb onto the metal surface. The diffusion of VCIs provides corrosion protection in the critical 3 to 4 meters from the annular chime ring.



Chime Ring Dry IDS Pipe

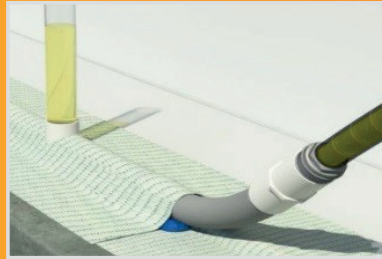


VCI Dispersion from Mesh Sleeve

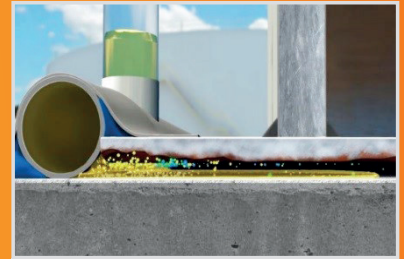
FOUNDATION(S): CONCRETE, BITUMEN, COMPACTED SAND OR SOIL.

Chime Ring Injection

The Chime Ring Injection IDS system features the same delivery installation as the Chime Ring Injection IDS solution. As the inhibitor slurry is pumped into the perforated PVC chime ring system, the VCIs migrate and absorb onto the metal surface. Meanwhile, the liquid inhibitor slurry works to neutralize any contaminants it may contact on either the bottom plates or foundation. The combination of VCIs and SCIs work together to protect vulnerable areas of the tank bottom plates from corrosion.



Chime Ring Injection IDS Pipe

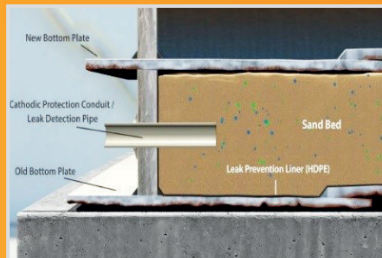


VCI Dispersion from Slurry

FOUNDATION(S): CONCRETE, BITUMEN, COMPACTED SAND OR SOIL (ALL FOUNDATIONS MUST INCLUDE A LINER OR RPB).

Underside Injection

The tank chime is sealed to prevent the ingress of moisture and contaminants. Low-viscosity inhibitor slurry is pumped through designated ring wall ports into the sand bed. As the slurry flows throughout the entire sand bed, the SCIs effectively neutralize contaminants on contact. Conversely, the VCIs emitted by the slurry migrate and absorb onto the metal surface.



Underside Injection IDS Injection

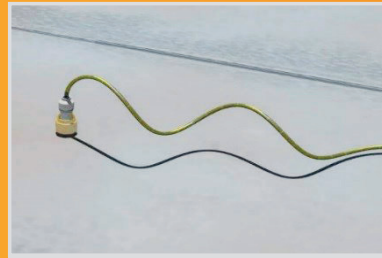


VCI Dispersion from Slurry

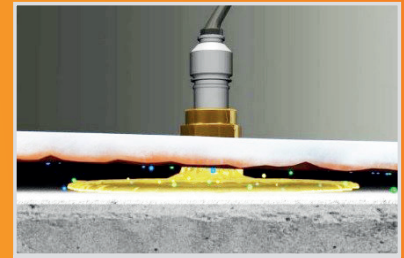
FOUNDATION(S): COMPACTED SAND OR SOIL, DOUBLE BOTTOM DESIGNS WITH COMPACTED SAND OR SOIL, HARDPADS.

Internal Flood

The Internal Flood IDS solution is suitable for tank foundations of concrete, bitumen, or compacted sand with a liner. Low-viscosity inhibitor slurry is pumped into one or more temporary injection ports installed in selected locations through the tank floor. The VCIs emitted by the slurry migrate and absorb onto the metal surface. The SCIs work to neutralize contaminants it may contact on either the bottom plates or foundation. The multiple injection points allow for quick dispersion of the slurry across the entire tank bottom.



Internal Flood IDS Injection Port

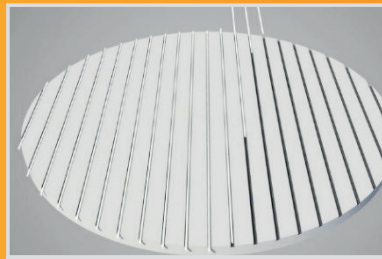


VCI Dispersion from Slurry

FOUNDATION(S): CONCRETE, BITUMEN, COMPACTED SAND OR SOIL (ALL FOUNDATIONS MUST INCLUDE A LINER OR RPB).

Dry Tube

The Dry Tube IDS system is designed to protect tank bottom plates during construction or new floor installation. Shallow trenches are cut into the foundation. Perforated, mesh-covered PVC pipes are placed within the trenches and the trenches are then filled with sand. The system is sealed to allow an enclosed area for the VCIs to rise from the sand in the tube channels, and the VCIs work to mitigate corrosion on the metal bottom plates of the tank.



Dry Tube IDS Pipes



VCI Dispersion from Mesh Sleeve

FOUNDATION(S): CONCRETE, BITUMEN, COMPACTED SAND OR SOIL.

Underside Drip Tube

A network of perforated PVC pipes with mesh sleeves are installed in rings on top of the tank liner. Inlet pipes penetrate the ring wall, allowing access points to the PVC pipe system. Low-viscosity inhibitor slurry is pumped into the designated ring wall ports into the sand bed, and the perforated PVC pipe network distributes the slurry evenly throughout the system. The VCIs are released from the sand bed, protecting the metal bottom plates. The SCIs in the inhibitor neutralize contaminants in the sand bed.



"Underside Drip Tube" IDS Pipes



VCI Dispersion from Slurry

FOUNDATION(S): CONCRETE, BITUMEN, COMPACTED SAND OR SOIL (ALL FOUNDATIONS MUST INCLUDE A LINER OR RPB).