LIFELAST™
Innovation Through Formulation

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Case Study

Elimination of Condensation and CUI on a Flash Tank

Corrosion Under Insulation (CUI) caused by condensation and personnel protection were two major concerns on flash drum tanks at General Electric's Schenectady plant. ThermaLast insulative coating was used to create a non-corrosive vessel, as well as a safer workplace for GE's employees.

ThermaLast can comply with OSHA personnel Protection standards such as 1910.261(k)(11) for steam and hot water fixtures.

Case Study: Industrial Application

Manufacturing at an industry-leading energy generation equipment maker requires a world-class production environment, yet taking equipment out of service for repair or maintenance is costly and detrimental to productivity. Long lasting reliable production systems are essential to the bottom line.

Engineers at GE's Schenectady turbine manufacturing facility noticed condensation on a production floor flash tank. The vessel held hot liquids whose extreme heat overpowered the existing insulation, leading to surface corrosion and creating a potentially unsafe work environment. Safety was of concern because tank surface temperatures posed a burn threat to personnel. Surface readings with the original conventional insulation on the flash drum registered 215°F. Plant engineers sought to bring surface conditions down to a level that wouldn't pose a burn threat from incidental contact.

Enter ThermaLast. Unlike traditional products, this spray-applied protective coating was designed with both corrosion protection and insulative properties as its objective. Its tenacious sticking power discourages corrosion cells from forming under its tight bond to the substrate. The beauty of the apply-in-place ThermaLast system is that it doesn't require impeccably clean new surfaces to perform effectively. The GE plant's flash drum was coated after a simple SSPC-SP3 Power Tool Cleaning procedure and a quick SSPC-SP1 Solvent Wipe. LifeLast provided the applicator guidance to determine an appropriate coating thickness to achieve the customer's final desired exterior surface temperature requirements. High temperature primer followed by three coats of ThermaLast created the 80 mils needed to meet the GE's personnel protection requirements. *This process was performed while the tank was still in service!* No downtime and end result exterior temperatures of a remarkable 145°F, a decrease of 70°F.

The Nitty Gritty

Project: Elimination of Condensation on a Flash Tank

Scope: 80 mils ThermaLast applied to a Flash Tank

Owner: General Electric Turbine Manufacturing Plant, Schenectady, New York

Completion Date: February, 2013

"The ThermaLast spray was used on a high pressure condensate flash tank, and we reduced the surface temperature from 215 °F to 145°F. We were very impressed, as the ThermaLast is a permanent installation, and is not subject to water damage or steam tunnel moisture."

—Michael J. McGowan, P.E., Facilities Mechanical Engineer, GE Power & Water

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Case Study: Type of Transmission

Not only was the goal of personnel protection achieved, but the coating's insulating properties realized a 70% energy savings by mitigating convective heat loss between the coating and drum surface.

Since the material bonds directly to the substrate, GE's selection of ThermaLast as a permanent solution means their trouble with Corrosion Under Insulation (CUI) is a thing of the past.

ThermaLast offers superior insulative performance and corrosion protection that save money beginning with its minimal down-time application all the way through its performance-extending service life. The value of a safe, accident-free workforce is also captured in the selection of ThermaLast to create safer work environments.

Questions or technical assistance on your specification or project? Contact us; we're happy to help. Email us at info@LifeLast.com or call (512) 628-2112.

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