

Protecting Exchanger Parts

Tube sheets, Channels, Covers, and Floating Heads

Project Objective:

When it comes to coating Heat Exchanger Components it is important to understand that not all parts experience the same operational conditions. Diver and pass partition plates can cause a Cold Wall effect that can prematurely damage many coatings. Cold wall can occur in a structure where the atmospheric temperature on the outside of the tank, vessel, or divider plate is lower than the product stored inside or on the coated side.



Project Description:

Curran International offers a solution to clients who are looking for longer asset life and more reliability from their exchanger parts.

Tube Sheet Damage: Typically, not a Cold wall situation

Curran 1000 Series

Apply at 30-40 mils thick to repair or protect tube sheets. This rollable grade coating can be applied to tube sheets without the need for coating plugs. Thermally stable up to 365F with steam out tolerance of 400F.

Channels, Covers, Floating Heads: High potential for Cold wall issues.

Curran 1500

Apply at 30-50 mils thick to repair or protect channels, covers, and floating heads. The Curran 1500 provides protection against cold wall. This paste grade material is trowel/stiff brush applied in one coat and can fill in corrosion pitting on used parts. Thermally stable up to 365F with steam out tolerance of 400F.

Conclusion:

The proper selection in coating materials can be the difference between an application that lasts for 1 year and one that could give you multiple turnarounds. Below are pictures of sister cooling water exchangers that were installed by a client in 2011. The tube sheet on the left was coated with Curran 1000 and the one on the right was not coated. The below pictures were taken in May 2018 post coating removal by grit blasting. The Coated tube sheet shows almost like new condition where the uncoated one shows pitting corrosion.

