Rami Izhiman

From: Khalil- CORTEC ME <kabed@cortec-me.com>
Sent: Monday, September 2, 2013 11:02 AM
To: xcm18413@hadeed.sabic.com
Cc: Iyad Alami
Subject: Cortec Corrologic technology for AST bottoms
Attachments: 10043 - Final Paper on Evaluation of the Tank Bottom Corrosion and CP Ef....pdf; 2242 Mitigating Soil-Side Corrosion on Crude Oil Tank Bottoms Using Vol....pdf

Tracking:

Recipient	Read
xcm18413@hadeed.sabic.com	
Iyad Alami	Read: 9/2/2013 11:16 AM

Dear Eng. Mohammed,

Cortec Corporation, a leading manufacturer of high performance and innovative environmentally safe corrosion protection technologies. Cortec holds more than 35 patents, a highly scientific ISO 17025 Certified Lab and five manufacturing facilities in the US and one in Europe supplying a worldwide network of distributors in more than 75 countries.

One of the main applications for Cortec VpCI® technology is mitigating soil side corrosion of Aboveground Storage Tank bottoms. Cortec Corrologic AST is cost effective and practical. It can be applied on CP protected and unprotected new tanks, in-service tanks and also out of service tanks. We also have design solutions for the tanks that have oily sand beneath the floors and can innovate different systems as needed . Our Corrosion Engineering and Field services (CEFS) team has a long history and strong track record in successfully implementing this technology in the united states for more than 300 tanks and more recently in the Middle East. Our Technology is comprehensive and includes a system for introducing the VpCI®, a system for monitoring the corrosion rate and a system for future replenishment, when needed.

Please find below couple of supporting documents for your reference:

1. **"Evaluation of the Tank Bottom Corrosion and CP Effectiveness at Saudi Aramco Crude Oil Tank Farm".** The paper highlights the inevitable reason for the malfunctioning of CP in some areas of the tank bottom, which is the gaps between the bottom plates and the sand due to foundation settlement, high density repair patches and the filling-refilling cycles. Other reasons also thought to exacerbate soil side corrosion are; the use of the oily sand and ingress of moisture/water from the periphery of the tank. The use of Vapor phase Corrosion Inhibitors is one of the recommendations in this paper.

2. **Mitigating Soil-Side Corrosion on Crude Oil Tank Bottoms Using Volatile Corrosion Inhibitors".** This NACE paper describes a pilot project that was conducted in 2011 on an aboveground storage tank (AST) at Saudi Aramco crude oil tank farm. This project was designed to evaluate the procedures for application of volatile corrosion inhibitor VpCI® beneath selected areas of the tank floor and then evaluate the effectiveness of the VpCI® in reducing the corrosiveness of the environment under the tank floor.

Based on our telephone conversation, I will be travelling to KSA Eastern Province next week and I would like to seize the chance to arrange for a presentation on Monday August 9th at your facility to further discuss the details of this technology and how HADEED can benefit out from it in extending the service life of the tank and minimize maintenance cost.

Looking forward to hearing from you soon to fix my travel plan.

Regards,

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