



In partnership with



Preservation of gasoline transportation pipes

Case Study



Pipeline protection project in an onshore tanking terminal.

Location	Local petrol tank terminal
Local Environment	Onshore
Date	June 2018
Condition	Shifting weather. Sun and rain
Total Coatings	21
Substrate Type	Flanges, pipe supports and pipe
Duration	10 days

Summary

Cosono was awarded a corrosion protection project for a local tanking terminal in Bergen Norway, providing protection for 3 leading pipelines. The work in this project was carried out with partners committed to provide effective and long lasting environmentally friendly products & solutions. TM198 provided the perfect solution requiring minimal preparation and immediate protection.

Introduction

The petrol tank terminal located in Bergen, Norway, plays a leading role in supplying the region with gasolines, diesel, light and heavy oils, bitumen and lubricants.

The terminal consist of a number of tanks and the daily activity level is high with tankers coming both by road and the seaway 24-7.

The proximity to the coastline means the terminal is subjectected to salt, wind and rain which degrades the metal assets and causes corrosion.

Objective

The pipelines have been suffering in a salt and humid environment for many years, leading to visible and partly severe corrosion. The pipes are approximately 10" and have clamps and supports approx. every 8 meters.

The condition of the pipes had reached a condition where the customer had to make a decision whether they wanted to maintain or replace some of the equipment. A combination of the thermoplastic coating from Oxifree and a viscoelastic coating was chosen to give extended life to the pipe sections.

OXIFREE®
METAL PROTECTION

The photos below clearly show the degradation to the pipelines prior to application of TM198



After



Before



After



Case Study



Process

First, the pipelines were cleaned to approximately ST-2. This was done with Valhall's UltraGel, a green and environmentally friendly alternative to sandblasting when removing corrosion. The pipes were high pressure washed to remove loose particles, then the Ultragel was applied before the pipes were high pressure washed again after approximately 24hrs. This additional cleaning ensured any loose debris was removed.

Once dry, the flanges, pipe supports and pipe clamps were coated Oxifree TM198 using the Polymelt 50 Atex applicator. This machine is suitable for use in hazardous environments.

The pipe bodies were then wrapped with viscoelastic coating as an inner layer before a PE outer wrap was applied. The viscoelastic coating is overlapping the Oxifree TM198 with 1-2 cm.

Here you can see the finished applications with the two products combined.



Solution

Applying Oxifree TM198 on the flanges, pipe supports and clamps and viscoelastic coating on the pipe body, represents a long lasting, cost efficient and environmentally friendly solution. The pipes are now protected with market leading methods complementing each other and should be ready to operate for many years in the harsh environment where it's situated.

An inspection of the viscoelastic coating will be carried out in due course. Oxifree TM198 can be inspected at any time by either NDT using digital/UT inspection tools or by simply cutting away a small area and refilling it.



Conclusion

The project involved people from 3 different vendors (Cosono, Valhall and Surface Integrity) in addition to the customer. Whilst these companies had not worked on a project together before, it all turned out to be a great success with excellent results. The client was happy and a comprehensive corrosion solution was delivered.



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