



Oiltanking

Protection of Valves, Flanges and Gearboxes Case Study



Corrosion protection to prevent crevice corrosion in an aggressive coastal environment

Location	Oil tanking Tank Farm Malta
Local Environment	Marine Aggressive C5M
Date	2016 and 2017
Condition	Coastal Marine
Total Coatings	50 units and ongoing
Substrate Type	Steel Valves & Flanges
Duration	N/A

Summary

Oil tanking Malta Ltd awarded a contract to Medserv to apply TM198 to protect the majority of valves, flanges and valve gearboxes at their Malta Tank farm located at Malta Freeport.

All work was carried out on live pipelines under strict HSE procedures using the Oxifree Polymelt 50 AI Machine.

Introduction

Oil tanking Malta Ltd is located inside the Malta Freeport in the South part of Malta located on the foreshore in an aggressive highly corrosive coastal environment

Oil tanking required a product that could protect crevice areas, is easy to apply and can be removed for maintenance and inspection purposes. TM -198 was a perfect match to their requirements fulfilling all these criteria.

In addition TM198 can be applied to live equipment eliminating the need for a process shutdown saving valuable time, operational and capital expenditure.

In accordance with the HSE requirements the Polymelt 50 AI machine was used as this machine is certified for use in hazardous environments (Zone 2-22).

OXIFREE[®]

METAL PROTECTION

Photos of Completed Work following application of TM 198



Case Study



Photos of Completed Work following application of TM 198

Objective

Medserv Operations Ltd were commissioned for this project. Most of the items were in good condition with little or no corrosion.

All items were high pressure washed in order to remove chloride contamination, and mechanically cleaned where necessary. Work was carried out during routine operations. Most of the items protected were difficult to access due to walkways above or around them.

Oxifree TM 198 was selected since it can be applied with minimal surface preparation in the hard to reach areas, offers excellent corrosion protection, but can be easily removed for maintenance purposes.

Process

The Oxifree team applied TM 198 following surface preparation procedures described. The Polymelt 50 Al was used in accordance with the HSE requirements for hazardous environments.

Aluminium tape was used on the large 18 and 14inch flanges in order to reduce material wastage between the flange faces. Any waste material during application can be reused.

Solution

Medserv Oxifree team consisting of two trained persons worked on this project, which is still ongoing.

As per standard application practice cable ties are used at the end of each part after application of first coat. This cable tie is sealed by the second coat of TM198 and ensures proper sealing at each end against moisture ingress.



Although TM198 was applied on moving parts, these can still be operated without any adverse effect on the Oxifree coating.

Conclusion

Oxifree TM198 provided Oiltanking a corrosion protection solution to treat the crevice corrosion they were experiencing, which is so prevalent in such an aggressive coastal environment.

In addition, the TM198 solution eliminated their usual maintenance problem of corroded bolts which are so difficult to remove when maintenance is required.

TM198 is proven to withstand many years in harsh environments so Oiltanking can look forward to a longterm solution for their corrosion prevention needs.

