



Zero Corrosion

SHELL L13 FI1 Case Study

Oxifree TM198 Flange/Valve encapsulations.



Title of photos

Location	HSM Yard, Rotterdam
Local Environment	Onshore
Date	10/04/2017
Condition	New
Total Coatings	66
Substrate Type	Flanges/Valves
Duration	10 Days

Summary

In Nov 2013 Shell Project Delivery Lead visited Zero Corrosion BV to discuss Oxifree cost-saving measures to protect the complicated flange/valve configurations on the new-build SHELL L13 FI-1 Gas platform from drilling fluid damage, which cause expensive delays in the commissioning phase. The platform being un-manned, long-term corrosion protection was also an issue.

Introduction

The SHELL L13-FI-1 is located in the L13 licence block in the Dutch North Sea, 60 Km NW of Den Helder.

The platform is powered by solar panels and windmills and is un-manned to help lower SHELL's environmental footprint.

Production is expected to commence 2018 Q4.

Objective

The initial Scope of Work (SOW) included all the flange/valve connections on the platform.

Due to changing production timescales the SOW was revised to just focus on the substrates most affected by the drilling fluids on the Main Deck, with the remaining SOW to be completed offshore early in 2018.



After



Before



After



Case Study



Title of photos

Process

Two Polymelt ATEX 50 machines were used for the project, in non-ATEX mode.

Each flange in the SOW was measured (pipe diameter, flange width and flange diameter). This allowed us to keep track of progress and check actual material used v estimated material.



Solution

Initial application:

First the underside of the first flange was coated with Oxifree TM198, then the top-side.

Fireproof tarpaulin and aluminium trays were used to collect any dripping material, which was then put back into the machine for re-use.

Throughout the application process our personnel regularly measured the material thickness to make sure the minimum thickness of the Oxifree TM198 was 4mm.



Conclusion

Approximately 1/3 of the total SOW was completed onshore.

Shell were very pleased with the project and the remaining SOW will be completed offshore early 2018, once drilling activity is completed.

