



Peak Gas Installation – Flange Protection Case Study



Oxifree Flange Protection

Location	The Netherlands
Local Environment	Onshore Gas Storage
Date	14 th – 30 th January 2020
Condition	Cold & Wet
Total Coatings	51
Substrate Type	Flanges
Duration	16 days

Summary

Oxifree was asked by TAQA (Netherlands) to protect all flanges with Oxifree TM198. The flanges were in reasonable condition; however extensive corrosion could be seen on the bolted areas, which were currently being protected with plastic caps, which had failed. After encapsulation with TM198 the flanges would be completely protected from any further corrosion damage.

Introduction

Peak Gas Installation (PGI) is an underground natural gas reservoir used to store and deliver natural gas to meet peak demand from the Dutch national grid (GTS). PGI uses the Alkmaar gas reservoir located near the city of Alkmaar and is situated approximately 2,200 meters underground.

Objective

PGI were experiencing significant corrosion problems on the bolts on the flanges due to the failure of the bolt caps currently installed for protection.

Oxifree was called in to protect 51 flanges of varying sizes with Oxifree TM198.

All coated flanges were noted on a daily basis and doublechecked at the end of the project.

Before



After Oxifree Application



Before



Case Study



Since TM198 can be applied to live equipment there was no need to shut down any operations so the plant could remain fully operational. The application of TM198 would halt any further corrosion and protect the flanges immediately, allowing for inspection at any time.

Process

Minimal surface preparation is required with the application of TM198, bolt caps were removed, and any loose surface was simply brushed away with a wire brush before coating.

With the number of flanges to be protected, the team worked 8-hour days to speed up the overall process of application.

Our team of 2 Oxifree technicians completed the applications in 16 days.

2 x Polymelt 50 machines were used for this workscope.

A range of flange sizes were coated from 16" to 30".

Solution

The Oxifree applications to the scope of work (51 flanges) were successfully completed within the timeframe and budget, despite the weather

Conclusion

The client (TAQA) was extremely happy with the project and will look to carry out further applications in the future pending workscope planning and budgeting on other sites throughout the Netherlands.

The application of TM198 will extend the life of these assets and protect them from the harsh environment they are exposed to. The material can easily be removed for inspection and simply refilled.

Failure of bolt caps



During application



Failure of bolt caps

