



## Phenol Pipeline Flange Protection - Singapore Case Study

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*Before and after coating of application*



After



Location	Singapore
Local Environment	Onshore
Date	11-12 October 2017
Condition	Dry
Total Coatings	13 flanges
Substrate Type	Flanges
Duration	2 days

### Summary

Oxifree TM198 was used to protect 13 flanges onshore in Singapore. The 13 flanges had suffered extensive corrosion on the phenol lines due to the environment. Oxifree provided the perfect solution being applied with minimal preparation and offering immediate protection. The flanges would then be completely protected from any further corrosion damage.

### Introduction

Our client in Singapore produce and process methanol and phenol. The production process produces highly acidic gases which in addition to the harsh weather the equipment is exposed to in the coastal location, cause heavy corrosion.

The client's common practise was to coat a primer paint as their primary protection however this can not withstand the harsh environment. Oxifree TM198 provides the perfect solution with minimum preparation and providing immediate protection to help prevent corrosion on their equipment.

### Objective

Mun Siong were asked to coat 13 flanges ranging from 2" to 6" with Oxifree TM198. After inspection a few flanges were discovered to be more severely corroded, this did not prove a problem for using TM198.



# Case Study



## Process

A team of 1 supervisor and 1 technician applied Oxifree TM198 to 13 flanges on a Methanol/Phenol pipeline in a Zone 2 hazardous area. Surface preparation was minimal, a wire brush was used to remove the loose debris. No degreasing or blasting was required which is advantageous in such a hazardous environment.

The Polymelt 50 ATEX Machine was used which is rated for use in Zone 2 environments. A 15meter hose was used within the congested area due to the limited access areas.

A total of minimum 4mm coating thickness was achieved to protect the asset from further corrosion and contamination.



## Solution

13 flanges with sizes ranging from 2" to 6" were coated with Oxifree TM198. The coating provides immediate protection against corrosion and contamination. The client was very happy with the speed of application and overall solution which was much quicker than the previous approach of blasting and painting.



## Conclusion

The customer was very positive about the Oxifree TM198 coating and application.

They appreciated that they can avoid the downtime time usually experienced with the blasting and painting approach, since Oxifree TM198 does not need the same preparation nor a long curing time as does a paint solution.

The client was also very positive on being able to start the plant immediately without any major downtime.

The work will be reviewed within 12 months for the coating's condition.