



**AIR**  
**PRODUCTS** 

Protecting infrastructure at a gas manufacturing facility

Case Study

**OXIFREE**<sup>®</sup>  
METAL PROTECTION

## Protecting a vent/exhaust connection to prevent leakages



Application photos

Location	Rotterdam. The Netherlands
Local Environment	Onshore
Date	Initial work October 2012
Condition	Dry
Total Coatings	1
Substrate Type	Bolted flange connection
Duration	2 days



### Summary

The job was a combined effort between two Oxifree representatives working in conjunction with BILFINGER to provide a solution to contamination from the outside entering a vent/exhaust structure which was suffering from corrosion due to the proximity to the coastline.



### Introduction

In October 2012 Air Products contracted site fabric maintenance providers BILFINGER to assist during a scheduled shutdown to upgrade and replace a venting/exhaust structure at a gas manufacturing facility in Rotterdam. The generator housing had been specifically designed to vent heat and gaseous waste in a specified direction.



The venting of gas and heat by-products was causing on-going maintenance issues due to the size and weight of the vent (approx. 12m x 12m) with the bolted flange connection suffering from seal issues from corrosion. A solution was required to protect the flange from corrosion, thus stopping unwanted contamination from the outside getting into the duct.



### Objective

Oxifree TM198 was identified as the ideal solution to protect the flange connection from further corrosion and create a seal. The material would be easy to apply with minimal preparation required but allow for ease of maintenance at any time.

# Case Study



## Process

A planned 2 day project was undertaken at a height of approximately 25 metres using the Oxifree Polymelt 12 and Polymelt 50 application machines, both of which were manoeuvred into position onto scaffolding. All machines were lifted into position with the use of a standard crane and client supplied basket. Weather conditions were dry.

## Solution

The project involved encapsulation of the entire joint along the rectangular edge, which measured approximately 48 metres along a straight edge at a depth of 6mm and profile of 10cm. The project was successfully completed within the 2 days.

## Site updates

### 13 May 2014

Air Products/our representatives present.

As with all Oxifree applications it is important that we visit the site at a later date to talk to the client about the ongoing protection Oxifree is providing and for our technical engineers to inspect the coating/coatings.

After initial discussions Air Products, concerning the effectiveness of Oxifree in sealing the flange it was decided to pay a visual inspection.

Access was limited as there was no scaffolding in place, so a QA/QC inspector from our representative climbed the adjacent ladders both sides of the flange to inspect visually and take photos. The Client was only concerned about an area of coating underneath the flange where he thought there was a crack. With the limited accessibility available no cracks or imperfections were visible in the coating and apart from external contaminants such as dust it looked in a very similar state to the initial application 19 months ago.

*Inspection photos*



Upon our next visit, a camera with a strong telephoto lens will be used to specifically examine this area to gather more accurate information.

## 20 June 2016

Air Products / Our representative QA/QC Supervisor present.

During this site visit we used a strong telephoto lens to take better quality images. As you can see, Oxifree TM198 is still in excellent condition and is providing full protection against corrosion almost 4 years after the initial applications.

The project is proving to be a success and the client is very happy with the protection that Oxifree TM198 is providing to their equipment.

