



**Braskem**

## Protecting equipment in a Chlor-Alkali unit. Case Study

**TECNOFINK®**  
||| PARCEIRA EM MANUTENÇÃO |||

**OXIFREE®**  
METAL PROTECTION

## Protecting flanges and valves in a heavily corrosive environment.

Location	Alagoas
Local Environment	Onshore
Date	6-22 June 2011
Condition	Dry, humidity
Total Coatings	Multiple across the plants
Substrate Type	Flanges and valves
Duration	16 days

### Summary

Oxifree TM198 was used to protect flanges and valves in the Chlor-Alkali unit at Braskem Alagoas plant. Due to the nature of the environment, being a mixture of chemicals combined with the proximity to the coastline (salt, water, humidity), the equipment was in a heavily corroded state.

Oxifree TM198 provided the perfect solution being applied with minimal surface preparation halting further corrosion.

### Introduction

Braskem is a Brazilian petrochemical company headquartered in Sao Paulo. The company is the largest petrochemical company in Latin America. The company produces over 16 million tons of thermoplastic resins and other petrochemicals per year

### Objective

TecnoFink were commissioned by Braskem to protect flanges and valves in various plants in Alagoas, against corrosion and contamination. Specifically, the equipment was located in the Chlor-Alkali unit, a very corrosive environment. In the photos you can see the extent of the corrosion to the flange and bolts before applying TM198.

## OXIFREE<sup>®</sup>

METAL PROTECTION

*The bolts are in a very heavily corroded state prior to application.*



After



Before



After





# Case Study



*Simple wire brushing prior to application removes any loose debris. Application was by the Polymelt 50 AI machine.*

## Process

The areas were simply cleaned of contaminants and corrosion using a wire brush.

After cleaning Oxifree TM198 was applied directly onto each of the affected areas using the Polymelt 50 AI machine for hazardous environments to a thickness of 4mm.

The material can be applied to operational equipment without the need for an expensive shutdown which saves the client time and expense.

After application TecnoFink technicians and the client completed a visual inspection, the service was approved. The coating may be removed for inspection at any time and the area cut away simply refilled.



## Solution

An Oxifree team consisting of a supervisor and an application technician completed the project (both trained by Oxifree Global). The project was conducted over 16 days.

TM198 cures instantly on application and protects the equipment immediately from further corrosion.



## Conclusion

The client reviewed the equipment following application and was happy with the completed project.

Oxifree TM198 allows the valves and flanges to remain protected from corrosion and contaminants extending the life of the equipment, and reducing the need for service



## Conclusion Continued - Inspection 14 months later

The coating was removed after 14 months for inspection. The protected areas showed no further corrosion from prior to application and the outcome was deemed a success as can be seen in the pictures.

The area which had been left unprotected showed substantial corrosion to the bolts and flange.

The TM198 protected areas were fully operational and remained as free from corrosion as the day they were protected.

In summary the clients agreed Oxifree TM198 requires minimal surface preparation and can be easily removed for inspection and handling.

It is suitable for coating flanges, valves, lines, pipes, bolting, bearings, bearing housings and any other surfaces, metal or not, of any size or shape, exposed to harsh environments.

TM198 will provide protection for many years to come bring savings to both Capex and Opex for the client.

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METAL PROTECTION

*These photos show the success of using TM198, the equipment shows no signs of corrosion where it has been protected.*

