



SF6 Gas Release Prevention Case Study

OXIFREE®
METAL PROTECTION

SF6 Gas Release Prevention solution



Location	Bournemouth
Local Environment	Substation
Date	October 2013
Condition	Dry
Total Coatings	1
Substrate Type	220kv Circuit Breaker
Duration	1 Day

220kv Circuit Breaker application process



Summary

SSE contacted Oxifree as they have potential SF6 leaks on a 220kv circuit breakers at a substation in Bournemouth.

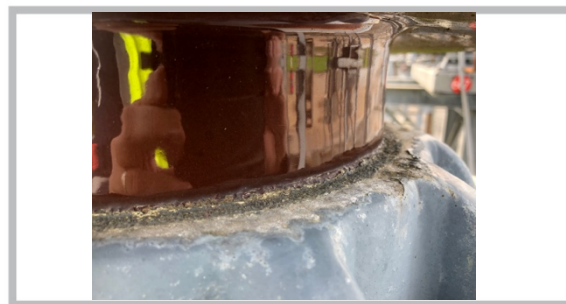
SF6 is one of the most potent greenhouse gases.

Objective

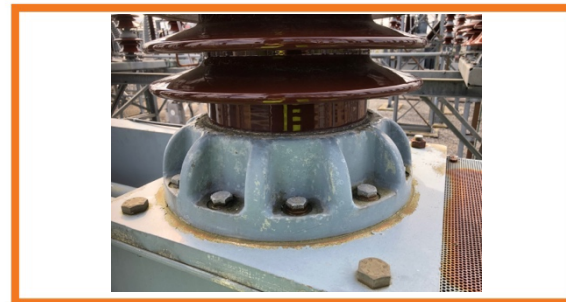
Oxifree were commissioned by our client to provide a solution to prevent SF6 gas release on the 220kv circuit breakers.

The client was looking for a solution to protect the pillar support from corroding and developing an SF6 gas leak.

Prior to Oxifree Coating



Prior to Oxifree Coating



Process

The first step was to fully understand the nature of the leaks. After years of vulnerability to weather and pollutants, the interface between the ceramic and aluminium support become porous and allow exertion of the contained SF6 gas.

After TM198 application



Case Study



Solution

The agreed solution was for Oxifree to apply two layers of Oxifree TM198 to give an overall thickness of approximately 4mm.

The malleability of applied Oxifree also provides a visual aid should any further leaks occur, by forming a highly visible bubble on the coating. Oxifree will contain low pressure release of the gas, but the use is purely corrosion and degradation protection.

Due to the nature of the application area and the size of the area where Oxifree was applied to, the Polymelt 12 unit was utilised, which only required a 240vac 16amp power supply.

The project was completed by an Oxifree team consisting of a supervisor and an application technician.



Conclusion

The project was completed and the area protected from any further corrosion and the potential for an SF6 gas leak stopped. Oxifree have not had to return to this site, so the project was deemed a success.

