



Case Study Pipe Protection

Telecommunications, London



The Project

A major mobile telecommunications company had identified corrosion under insulation (CUI) with the coolant pipework on the roof of a key data exchange facility in London. The site was a critical infrastructure hub and over 400 linear metres were affected, where preferential corrosion had occurred between different metals. These pipes carried water which was used to cool the exchange network hardware and any failures had the potential to cause overheating, leading to extensive network disruption in Central London.

Adler and Allan were asked to carry out a site inspection and propose a solution to curtail the corrosion and extend the life of the pipework without taking the system off line due to cost of loss of service.

We carried out remedial work and found the corrosion to be most severe around the pipe joints and valves. There was also evidence of some weeping that highlighted the need for urgent action. Adler and Allan were the only contractor able to offer a long term solution without comprising network integrity.

The Solution

All the surfaces were cleaned and with only minimal preparation so as not to further damage the corroded pipes. A very tolerant zinc epoxy coating was then applied to all of the piping. This coating was chosen as it was especially developed for coating electricity pylons, even in the rain. This allowed Adler and Allan to complete the repair whilst the centre was still live and in full operational use.

The joints were then treated with a super-strong, glass flake epoxy system with a reinforcing glass fibre matt layered into it to create a wrapping bandage. Even if the metal pipework completely dissolves underneath, the remaining protective 'shell' will continue to carry the pipe coolant so as not to interrupt service.

Finally, an impact resistant, high strength polyurea seal was sprayed around the main junction repairs to increase the strength and protection of the whole system. This unique technology coating system has the unusual properties of being both very strong, as well as remaining flexible under load.

The Outcome

Our client was delighted with the life of extension to the assets, saving millions of pounds in re-routing the supply whilst the data centre was taken off line.

The refurbishment was completed in time and within budget, leading to a full and continuing partnership.

