

WHARF CONTAINER CRANE

A major Australian stevedoring company was looking for a solution to the problem of corrosion on the cleats and pigtails of their aging mobile portainer crane servicing the Fremantle Port. Of paramount concern to the operators was the potential hazard to wharf workers below if parts were to break free. Enviropeel was applied to prevent corrosion damage and secure the components to the crane platform and jib.



Fremantle Port is one of Australia's five major ports and is often the first and the last port of call for a variety of shipping between Australia and overseas. During 2004/2005 just over 5 million tonnes were shipped through Fremantle in nearly half a million containers. The crane requiring attention is the oldest in the port and has been in service at the Port since 1978, loading sea containers to and from visiting vessels.

The cleats and pigtails securing the rails on the crane platform suffered severe corrosion caused by the marine environment and exposure to high winds, rain and extreme variations in temperature. The corrosion made them prone to breaking free and created a falling debris hazard for personnel working below.

*Above: A view of the Fremantle Port Portainer Crane
Left: A length of track on the crane platform showing the corroded cleats and pigtails*

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Top: A single cleat and pigtail prior to coating
 Above: Cleat and pigtail after being coated with Enviropeel

Right: A length of track on the jib showing coated cleats linked with Enviropeel to improve security
 Below Right: Views of Enviropeel coated cleats

After viewing a demonstration of Enviropeel applications at the AAL Perth site, the crane owners, who were very impressed with Enviropeel, decided it was the ideal solution to immediately halt the situation. Alcit Australasia was contracted to apply a coating of Enviropeel to the cleats and pigtails on the crane which was causing the most safety concerns.

The Enviropeel coating was essential to stop corrosion and prevent separation. For extra security an additional 'strip' was applied to link the outside cleats to each other. Surface preparation was minimal, requiring no more than a brush down of loose material and dirt. The elongated bolt holes on the cleats and the irregular curved shape of the pigtails allowed the Enviropeel to flow beneath the nuts and around the pigtails thereby 'locking' the material in place, pull checks on the set Enviropeel confirmed the encapsulation of the material with the substrate. In total 208 cleats on the outside of the rail and 104 pigtails were coated with Enviropeel to complete the work.

CONCLUSION

Coating the cleats and pigtails on this aging crane with Enviropeel has solved two problems for the operators. All further corrosion has been prevented by the anti-corrosion inhibitors within the Enviropeel and the safety hazard to personnel from falling debris has been eliminated. This was a cost-effective option compared with the need to decommission the crane before the expected 2007 schedule or having to replace all the cleats and pigtails.

