

Marine corrosion protection a focus for Duratec in NSW



Eden Chip Mill wharf, Twofold Bay, New South Wales.

As experts in the mitigation of corrosion in steel-and-concrete structures, Duratec can implement cathodic protection systems. It is currently forging a name for itself in New South Wales' marine sector.

Cathodic protection (CP) is an electrochemical means of controlling corrosion, which is a major cause of asset degradation.

Duratec can offer several types of CP systems, including:

- Sacrificial anode CP systems, where a metal anode is attached to surfaces that are most vulnerable to corrosive environments
- Impressed current CP systems, which use inert anodes with an external power source for assets with high-current demand
- Hybrid anode CP systems – a combination of both systems – which uses an external power source to provide initial polarisation to the asset

All structures are different. A preliminary concept design helps identify which system is best suited to each asset.

CP is used on many structures in a variety of environments.

These include steel-reinforced concrete structures, such as bridges, basement car parks, tunnels, heritage facades and commercial/residential buildings; steel structures, such as ports, wharves and jetties; and water utility, and oil and gas infrastructure, such as pipelines and tanks.

With in-house engineers and technical experts, Duratec provides a holistic approach to its CP services, administering all stages of the project. The team undertakes design and trial services, provides installation and supervision, takes care of commissioning, and offers monitoring and maintenance. This whole-of-lifecycle method ensures design optimisation and value engineering.

One of Duratec's recent projects was the Eden Chip Mill wharf in Twofold Bay. The company was engaged by Professional Diving Services to design a sacrificial anode CP system, providing corrosion protection to the steel piles.

In December 2020, 44 aluminium anodes were installed across 11 structural bents. Post-installation, measured potentials confirmed they all met performance criteria, which meant they were receiving adequate cathodic protection from the anodes. Duratec has recommended that the system be monitored periodically to ensure it continues to protect the structure from corrosion.

The successful delivery of this project has shored up Duratec's place in marine infrastructure remediation in New South Wales. The company looks forward to undertaking more projects in waterways across the state.

[View other marine infrastructure projects](#)

Fast fact

- In 2020, Eden Chip Mill exported 785,000 tons of wood product



Looking out to the Port of Eden from the Eden Chip Mill wharf, Twofold Bay, New South Wales.