

Project: Portainer Crane Machine Corrosion Treatment and Repainting

Sector: Ports and Critical Infrastructure



Project Overview

As Australia's largest container terminal operator, Patrick Terminals plays a critical role in the nation's supply chain, its facilities operate around the clock to keep freight moving efficiently across the country.

Anchor Safe Rope Access, in collaboration with Anchor Safe Height Safety, was engaged to treat severe coastal corrosion, replace failed sealants and door awnings, install new height safety systems, and repaint its high-value Portainer Crane Machines.

Challenges & Issues

Maintaining these high-value assets presents significant logistical and technical challenges that require stringent site inductions, controlled access tracking, permit systems, engineering approvals, and strict compliance with Patrick Engineering Standards.

With every activity carefully coordinated to ensure zero disruption to terminal operations:

- **Extreme Coastal Environment & Corrosion**
Exposed roof flashing perimeters, walls, and structural steel sections exhibited localised surface rust, oxide deposits, mill scale, and aging, delaminating paint films requiring mechanical intervention.
- **Failed Weather Sealants**
Deteriorated vertical and horizontal joint sealants across wall panels, rear windows, and vent connections compromised the weather envelope of the Machine House.
- **Corroded Awning Fixtures**
Awning required full removal and replacement due to environmental degradation.
- **Complex Operational Constraints**
Industrial rope access rigging was required to safely reach high-elevation surfaces without impacting terminal operations.

Solutions

Anchor Safe Rope Access technicians completed the refurbishment through a structured, staged approach, supported by specialist equipment and site safety management systems.

1. Specialised Surface Preparation & Degreasing

- **Contaminant Removal:** All surfaces were degreased and cleaned in accordance with Patrick Terminals specifications.
- **Adhesion Testing:** Executed cross-hatch adhesion testing to verify integrity of existing coatings, removing any failing or unsound films.
- **Mechanical Rust Removal:** Prepared rusted metal surfaces using power tool cleaning. All sharp metal edges were ground and weld spatter was removed to ensure proper coating adhesion.
- **Feathering & Abrasion:** Coating edges were feathered back to eliminate ridges and create a mechanical key for seamless primer integration.

2. Structural Repairs & Joint Resealing

- **Mechanical Rust Removal:** Prepared rusted metal surfaces using power tool cleaning. All sharp metal edges were ground and weld spatter was removed to ensure proper coating adhesion.
- **Awnings Replacement:** Removed and replaced damaged door awnings.

- **Perimeter Resealing:** Removed aged perimeter roof edge sealants. Resealed rear windows, vent connections, and wall panels.
- **High-Performance Sealant Application:** Applied sealant to vertical and horizontal expansion joints strictly between the prime and topcoat layers.

3. Structural Repairs & Joint Resealing

- **Applied site-specific industrial coating systems** in accordance with Patrick Engineering Standards, ensuring spot primers overlapped existing sound coatings.
- **Stripe Coating:** Detailed brush application to all sharp edges, fasteners, nuts, bolts, and hard-to-reach connection points to guarantee uniform film thickness.
- **Multi-Coat Application:** Applied initial and final protective coats to prevent flash rusting.

Results

Using industrial rope access, the team completed the works safely without disrupting terminal operations. All preparation, testing and coating applications were completed in line with Patrick Terminals Engineering Specifications, providing a proven maintenance approach that can be replicated across future Portainer assets.





