

Berth Impact Damage Repairs



Client: TasPorts
Value: \$200k
Completed: July 2016

THE DEVONPORT 3 EAST WHARF WAS SUBJECT TO ACCIDENTAL COLLISION BY A SHIP, CAUSING SIGNIFICANT DAMAGE TO THE BERTH. THE WORK UNDER THIS CONTRACT INVOLVED REMOVAL OF DAMAGED SECTIONS AND THE RECONSTRUCTION OF THE WHARF TO ITS ORIGINAL CONDITION, AS WELL AS WORKS REQUIRED TO REPAIR OF THE WHARF STRUCTURE. VEC UTILISED OUR IN-HOUSE STRUCTURAL REMEDIATION CAPABILITIES AND PLANT TO DELIVER AN AESTHETICALLY PLEASING AND FUNCTIONAL RESULT FOR THE CLIENT.

THE PROJECT

The collision of the ship caused significant damage to a pile, front edge beam, fender and the crane beam. This project involved the replacement of the damaged pile with a new one in the extension of the crane beam and the extension of the crane beam to tie-in with the new pile. To enable our crew to perform these works, they had to expose the existing reinforcement. This was done using VEC's high pressure water jetting unit to remove the existing concrete. The existing reinforcement was then spliced to extend the crane beam.

Furthermore, the crew fixed the damaged edge and front beam, reinstated the water main and fender attachments and placed a new fender.

The damaged pile was replaced by a new 600mm steel pile that VEC drove using their Junttan Pile Rig. The pile was wrapped with a Denso Sea Shield System. Further repairs were completed to damaged sections of the crane beam.

VEC designed, constructed and installed an access system that was utilised to provide safe access under the wharf. VEC's robotic frame was used to improve safety when removing the damaged concrete and exposing the reinforcement prior to repair.

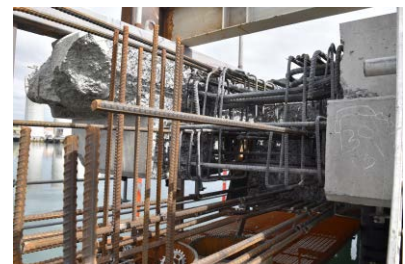
CHALLENGES

Extreme tidal movements and performing these works on a live wharf were challenges that our crew faced on-site. A meticulous program and stringent management of the project ensured that these challenges could be overcome to deliver the project.

Also, to enable the crew to splice and extend the crane beam, they needed to blast sound concrete that was situated behind a significant amount of existing reinforcement. This situation enabled our team to gain valuable experience with using the high pressure water jetting unit and the robot system under diverse conditions.

INNOVATION & EXCELLENCE

This was one of the first major projects that VEC completed using our high pressure water jetting unit and robot system. Having this equipment in-house allows us to offer the Client a one-stop-shop for all of their wharf remediation needs. Throughout this project, our crew were able to self-perform all the required tasks from piling, steel tying, to hydro demolition and concrete repair patch work.



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