Sydney Metro West Rail Project

Project overview

Client: Acciona - Ferrovial JV
Project: Twin Rail Tunnels
Value: AU$1.96 billion
Location: Western Sydney, Australia
Date: 2023 - Current
Usage: Controlling concrete tunnel segments



Removing workers from danger through automation

Roborigger ARM1500-50 was employed to remotely control more than 70,000 Concrete tunnel segments, when unloading the trucks, storing, and lowering through the 35m access shaft to feed the Tunnel Boring Machine (TBM) without damaging the delicate panels.

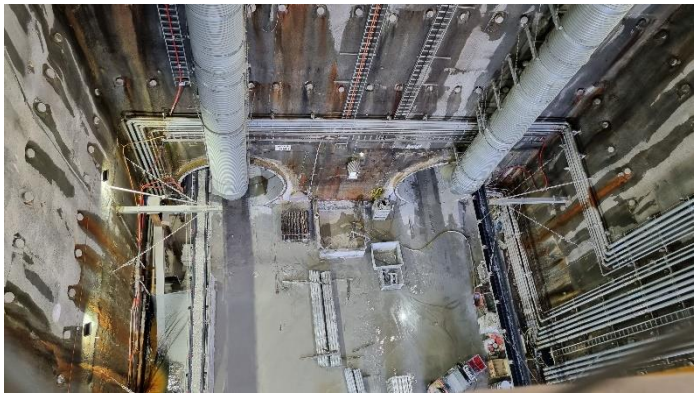
The panels are released remotely, removing the worker from the bottom of the shaft in the line of fire.

Roborigger also handles the heavy rotation work of the load, resulting in lowered worker fatigue, risk of manual handling and crushing injury and better staff retention.

Fewer workers, less risk, faster operation.

Damage mitigation

A big focus for Acciona was protecting the fragile rubber seals on the segments from damage. Using Roborigger ensured the panels were protected, avoiding costly delays.



24x7 operation

The Roborigger unit was run day and night. This was managed by utilising a Roborigger external battery pack, which allowed the depleted pack to be swapped in about 5 minutes to a fully charged pack every second or third shift to ensure uninterrupted work. Roborigger has clearly proven its built tough and can reliably meet the demands of 24x7 operation.