

FREMANTLE PORT – BERTH 11

CONCRETE REPAIRS

LOCATION

1 Cliff Street
Fremantle, WA

CLIENT

LKS Constructions

PROJECT MANAGER

Graham Murphy

DESCRIPTION

Opened in 1897, Fremantle Port is WA's biggest general cargo port and Australia's fourth largest container port. In November 2018, BUSS was engaged by LKS Constructions, maintenance contractor for Fremantle Port Authority, to complete concrete repair works at Berth 11.

Located at the North Quay of the Port, Berth 11 is a heavy-duty berth. With good road access, fitted bunkers, water outlets, electricity and substantial stacking areas this berth is well-suited for the handling of general and break-bulk cargoes, including motor vehicles.

Prior to site mobilisation, BUSS personnel completed the relevant Port inductions and obtained their MISC cards - Australia's nationwide identification card for the maritime industry.

Berth 11 exhibited extensive areas of spalled and delaminated concrete resulting in the exposure of the steel reinforcement. BUSS' experienced concrete repair team completed the repair works as specified by Fremantle Ports engineering team; this included the provision of 50mpa concrete with Dramix steel fibres 65/35, bonded to repair surface with Parchem Nitobond EP, thus ensuring a robust and long-lasting repair.

Completed over a four-month period, all works were carried out with strict compliance to the regulations and procedures of the Fremantle Port Authority Act and the Western Australian Marine Act. BUSS' staging of the repair works around shipping movements ensured there was no disruption to shipping schedule or Port operations.

PRODUCTS USED

- Holcim 50mpa concrete (with Dramix steel fibres)
- Parchem Nitobond EP
- Parchem Concure 99
- BASF MasterEmaco 5000AP

POINT OF INTEREST

- BUSS' recommendation of alternate products to address issues of shallow steel in repair areas was well received by the Port's engineering team.



Fig.1 Excavator, with rock breaker, removing concrete



Fig.2 Concrete breakout (under rebar) underway



Fig.3 50mpa concrete repair, coated with Concure 99

