

9060127. Golden Bay Cement Silo 3 & 4 Life Extension

New Zealand



General contractor

Freyssinet NZ

Customer/Owner

Golden Bay Cement

Engineer

Freyssinet AU/Beca

Freyssinet subsidiary

Freyssinet New Zealand Ltd

Others subsidiaries

FPC

Works period

Start date: July 2017

End date: September 2018



PROJECT DESCRIPTION

Golden Bay Cement was established in Portland, Northland in the 1870's. Today, Golden Bay Cement is New Zealand's largest cement manufacturer and supplier. Cement has been manufactured on the site since 1917 and over 850,000 tons of cement are currently produced per annum for the NZ market. There is currently 5 damaged concrete silos that were constructed in the 1960's. Freyssinet NZ has been engaged to undertake concrete investigation of all of the silos on site, and propose a concrete remediation solution on silos 2, 3 and 4. Silos are 33m high, 7.7m in diameter, concrete wall thickness 230mm. After successfully completing Silo 2 remediation works the same methodology was proposed and executed on Silos 3 & 4.



FREYSSINET MISSION

Freyssinet, having proposed a remediation strategy that was accepted by the client, was granted a design and construct contract works such that Silos 3&4 can be returned to its full storage capacity of 1300 tonnes (cement) and with a minimum design life of 25 years.

The contract works included:

- Removal of the existing coating with Ultra high pressure washing;
- Removal of unsound concrete and reinforcement;
- Reinstatement of reinforcement and of concrete by dry-spray shotcrete;
- Application of weather proof protective coating and post tensioning strengthening to the silo using the proprietary 1X15 anchorages.

The biggest challenge on this project was to keep the silos in operation at all times so that the production process and supply to the market was uninterrupted. With the proposed methodology that was achieved thus Freyssinet NZ has been recently chosen to perform the same life extension works on Silo 5 & 6 to.

