



constructive solutions

CASE STUDY

Nickel Concentrator

Kambalda, WA

CUSTOMER BHP Nickel West
SECTOR Mining
DATE 2022

PRODUCTS

- Fosroc Nitoprime Zincrich
- Fosroc Renderoc LA55
- Fosroc Renderoc HB40 Plus
- Fosroc Nitocote EP410



A break out and rebuild strategy was required to repair a structural concrete column supporting the sag mill concentrator. Being in the acid splash zone had led to concrete contamination and extensive re-bar damage. More than 20% of the steel reinforcement had to be replaced.

THE PROJECT

Fosroc ANZ visited the Kambalda mine to inspect the contaminated concrete and recommend a specification. The specialist mining engineers at Minprovis executed the repair strategy.

THE SOLUTION

Four Fosroc ANZ products were included in the specification. The repair scope of works included the following steps.

Step 1: Break out all contaminated concrete.

Step 2: Cut out and replace the damaged re-bar. Coat all exposed steel with Fosroc Nitoprime Zincrich to protect against corrosion.

Step 3: Wash down the remaining substrate. Rebuild and pre-soak the column structure with form board.

Step 4: Reinststate the concrete with two pours of Fosroc Renderoc LA55, a high strength, free-flowing micro-concrete.

Step 5: Clean the area and remove any waste.

Step 6: Recreate the chamfers at the top of the column with Fosroc Renderoc HB40 Plus.

Step 7: Strip the form board and cup grind the chamfers.

Step 8: A protective coating of Fosroc Nitocote EP410 will be applied at the final stage of the project. This two pack epoxy coating is highly chemical resistant and ideal for mining environments.

THE BENEFITS

Renderoc LA55 and HB40 Plus enabled a complete structural repair. LA55 is ideal for deep section repairs, while HB40 Plus handles vertical, overhead and angled repairs. Both deliver high strength and compatibility with existing concrete.

Nitoprime Zincrich is formulated for use with Renderoc repair products. Touch dry after 15 to 45 minutes, this single component primer is an efficient anti-corrosion solution for steel reinforcement.

Nitocote EP410 protects concrete and steel from aggressive chemical exposure. It is easily applied by brush, roller or airless spray.

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