# 18.**168**





# **Concrete Repairs, Ardrossan**

Swart & Sons were contracted by Viterra in August 2018 to carry out structural concrete crack repairs to more than seventy concrete plinths at their Ardrossan property. Whilst undertaking repairs on site, we were requested to carry out additional repair works on concrete nib walls. All works were carried out in accordance with a specification provided by Viterra.

#### **Problem**

Viterra staff noticed major issues with the walling system including deformation of the walling system with associated rotation in steel girts. Cracking was also evident in concrete plinths.

#### **Solution**

Each plinth was individually assessed to determine the type of repair required. Once the level of deterioration was established, repairs were carried out to each plinth requiring remediation.

#### Result

Cracking in the plinths and walls was rectified using the appropriate techniques and materials; from initial cutting around the cracks and grinding rust from steel, to placement of the appropriate primer and repair materials.

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## The project scope

Before works commenced a detailed Safe Work Method Statement (SWMS) was completed for each process to be undertaken on the project.

Not only did this ensure work was conducted with 'safety first' in mind, it also detailed a step-by-step process of how the project would be completed.

Workers reviewed the SWMS and signed to acknowledge their understanding of all work to be carried out on the project.

To ensure conformity to the Viterra specification, as each plinth was repaired, photographs were taken showing the plinth number and repairs carried out.

### **Quality control**

Prior to works commencing Inspection and Test Plans (ITPs) were completed documenting each step of the work to be performed. The ITP was signed at the end of each work stage before the next stage of works commenced.



Where repairs were minor, injection holes were drilled into the cracks, ports installed and resin injected into each hole; once cured the ports were removed.



Major repairs required us to remove the existing plinth to expose the reinforcing which was then cleaned and primed in preparation for new plinths to be poured.



Once repairs were complete all plinths were ground back to a flat surface and cleaned of any debris resulting from the works.

### **Service checklist**

These services were utilised in the planning and implementation of this project:

#### **Passive fire protection**

- Fire-rated sealouts
- Fire-rated ductwork
- Petrochemical fire-proofing
- Fire sprays

#### **Concrete repairs**

- Building maintenance
- Coating and protection for concrete structures
- Epoxy injection
- Slabjacking
- Concrete repair

#### Waterproofing

- Water seepage control
- Torch-on membranes
- Liquid membranes
- Water-reactive polyurethane injection
- Hyperlon membranes

#### Floor treatments

- Floor sealants
- Epoxy-based coatings

#### Other services

- Industrial grouting
- Abrasive blasting
- Specialty protective coatings
- Heritage restoration



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