

Project Info



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CC5™ Batched Rolls



70m²



Longitudinal layers



Iquique, Chile



Pacifictek and INDAP
Joint Venture



CC5™ used to repair a
ditch broken by a 8.2
magnitude earthquake



Repaired ditch

In April 2014 Concrete Canvas® GCCM* (CC) was used for emergency remediation of a concrete irrigation ditch at a lemon farm located in the small oasis town of Pica, 90km east of Iquique, Chile.

On the 1st of April 2014, an 8.2 magnitude earthquake struck off the coast of Chile, 95km northwest of Iquique. The force of the earthquake broke apart the farm's existing poured concrete irrigation ditch, cracking it in several places and making it unusable. This posed an immediate threat to the lemon trees and therefore the livelihood of the farmers. The INDAP (a government agency dedicated to help small farmers) and Pacifictek funded the project as a joint venture, both parties donating time, money and materials.

Man-portable 7-10m² batched rolls of CC5™ were carried to site, as the proximity of the trees would not allow any kind of plant access. Loose stone and rubble were cleared from the ditch, before CC was unrolled down its length and folded over the existing structure. The CC was fixed to the poured concrete form using masonry screws at roughly 200mm centres. Each layer was overlapped by 100mm in the direction of waterflow, screwed and grouted with an epoxy grout. Epoxy grout was also used on the joints created by the steel doors located on the sides of the ditch, which are opened to allow irrigation.

In total 70m² of CC5™ was installed by a team of 4 in one afternoon. The speed of installation resulted in the lemon trees and the farmers' businesses being saved. Batched rolls allowed delivery to site with no damage to the lemon trees and the flexibility of CC meant no expensive or time consuming formwork was needed. The installation has resulted in further project commissions.

*Geosynthetic Cementitious Composite Mat





A batched roll of CC5™ and the broken ditch



An epoxy grout joint to allow for the steel doors



Overlapped and screwed joint



Example of CC conforming to profile



After hydration



The finished ditch