



CONCRETE CANVAS

AGRICULTURAL CASE STUDIES



RAIL



ROAD



MINING



PETROCHEM



AGRO



UTILITIES



MUNICIPAL



DEFENCE



DESIGN



2014 Fast Track 100
16th fastest growing
company in the UK.



2014 Queen's Award
for Enterprise in
Innovation



2013 Macrobert Award
Finalist



2013 Innovation Award Winner
Railtex Exhibition



2012 R&D 100 Award winner
R&D Magazine



2011 Expert's Choice Winner
Most Innovative Product



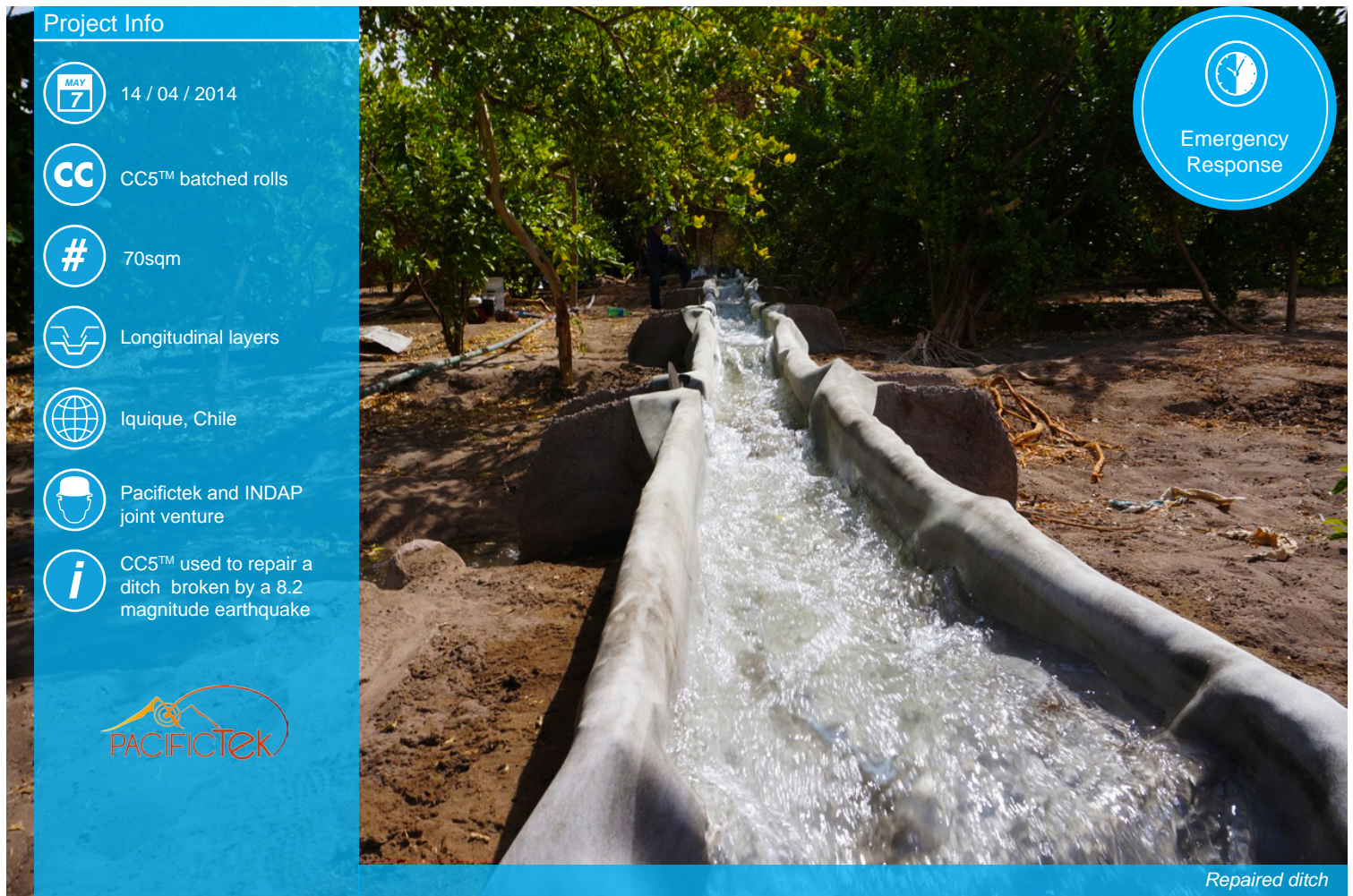
2011 Brit Insurance
Designs of the Year Nominee



2009 Winner
Material Connexion Medium Award
Material of the Year



2007 Winner
D&AD Yellow Pencil Award
Product Design



Project Info



14 / 04 / 2014



CC5™ batched rolls



70sqm



Longitudinal layers



Iquique, Chile



Pacifictek and INDAP joint venture



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



Emergency Response

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, a 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 farmer. 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. The installation was completed by 3 INDAP personnel and a Pacifictek official.

Man portable 7-10sqm 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 water flow, 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 70sqm of CC5™ was installed by a team of 4 in one afternoon. **The speed of installation resulted in the lemon trees and the farmer's business 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

Project Info


 30 / 03 / 2011


 CC5™ Bulk rolls

 60sqm

 Transverse layers

 Jacobsdal, Freestate, South Africa

 Oranje Riet Water Users Association

 The objective of this trial was to establish whether CC could be used to reline existing canals that have deteriorated and need either localised repair work or need to be completely relined. The profile of this canal measured approximately 2.9m in laid width. A 'surface-to-surface' bonding technique, where the material is folded back on itself by 50mm so that there is CC to CC contact was used for the securing the joints with the overlap in the direction of water flow. The trial was completed within 3 hours and the result is a durable, efficient and neat section of canal that was relined with relative ease and at a very good rate of implementation. The joints proved to be very strong and rigid which results in a new relined section of the canal that is completely waterproof.



Project Info



02 / 12 / 2010



CC5™ bulk rolls



180sqm



2 longitudinal layers



Malkerns, Swaziland



Concrete Canvas SA



Crop irrigating canal required upgrading during peak irrigation season. Water flow was dammed briefly to allow re-shaping of the existing earth profile and installation of CC5™. Hydration was conducted under flow conditions meaning re-commissioning of the canal took place much earlier than previously anticipated. The CC5™ was installed in under 2 hours.



No skilled labour required



Project Info



18 / 01 / 2012



CC13™ & CC8™
Batch Rolls



240sqm CC8™
10 sqm CC13™



Transverse layer



Aysen, XV region
Chile



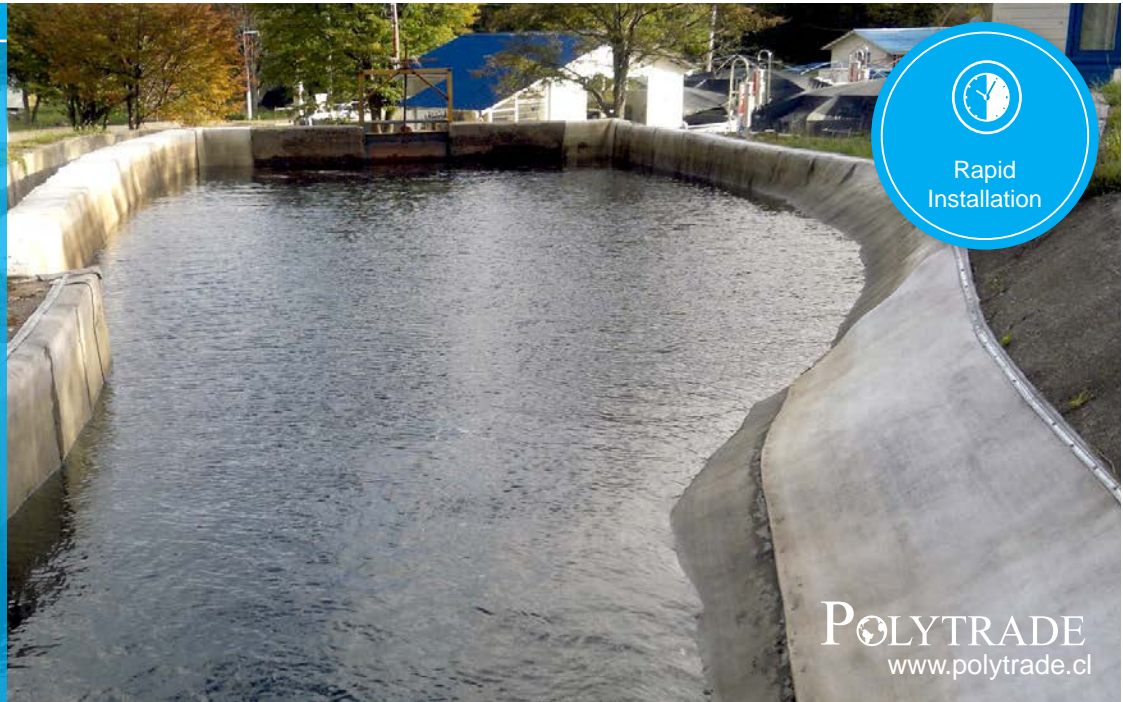
Mendez Soluciones
& Polytrade



CC used for time critical remedial work of a fish farm, lining a cracked and dilapidated concrete reservoir.



Rapid
Installation



POLYTRADE
www.polytrade.cl

Reconditioned fish farm reservoir which was restocked 1 day after CC installation



Dilapidated concrete reservoir



Unrolling CC8™ batched rolls into position



Fixing CC to the existing concrete substructure



Lined concrete reservoir with sealed joints



Refilling the basin to hydrate the CC



Completed reconditioned fish reservoir



Project Info



25 / 04 / 2012



CC5™ Bulk rolls



200sqm



Vertical transverse layers



Nocaima, Colombia



MERT S.A.S



CC was used to line a sandbag and gravel bed ditch designed to prevent ground saturation of nearby private properties in a remote jungle area.

The customer was Concesión Sabana De Occidente who have specified CC on previous works.

The installation was completed in 4 days using a team of 5 workers. Limited site access and inclement weather prohibited more traditional concrete solutions so CC was specified as an environmentally friendly high performance liner to prevent erosion of the sandbag wall structures.



Completed CC lined ditch section, Nocaima, Cundinamarca, Colombia



Ditch profile prior to lining with CC



CC dispensed from a bulk roll on site before being cut to length





CC pre-cut sections of 1.5m positioned over sandbag wall prior to fixing



Hydration of the CC layers using local water source



Adjacent CC layers were overlapped and screwed together



Wooden beams were used to close voids immediately after hydration



CC was applied to both sides of the 80 linear metre long ditch



Completed CC lined ditch with redirected water flow