

## Project Info



01 / 07 / 16



CC5™ Bulk Rolls



600m<sup>2</sup>



Transverse layers



La Serena, IV region, Chile.



Agrotek Spa



To improve the water management system of La Serena



*The completed drainage channel installation*

In July 2016, Concrete Canvas® GCCM\* (CC) was used to line a drainage channel at La Serena, IV region, Chile. The objective was to stop water infiltration in an irrigation channel at 5 specific points and to improve the water management system of the local area. One of the main reasons that Concrete Canvas® was specified for the install is the fact that the channel dries out for around 5 days a year, so there were no other options to compare in terms of installation speed.

The works were carried out by Agrotek Spa for the Bellavista irrigation community. The weather was fine during installation, with average high temperatures during the daytime being around 15°C. Some rocks were removed, with the area being excavated, levelled and compacted with a Skidsteer. Any vegetation was cleared by hand using a Backhoe and Shovel etc.

The Concrete Canvas was supplied on bulk rolls. The spooled CC was mounted onto a spreader beam and cut to the exact length required using knives, eliminating waste and accommodating any variations in the channel profile. CC's main advantages over conventional concrete are speed and ease of install, cost savings, durability and environmental friendliness. Overlapped in the direction of water flow by 100mm, adjacent layers were underpinned with Sikaflex 11 FC and screwed together using SS screws at 200mm centres. The outside edges of the Canvas layers were captured in a backfilled anchor trench after being pinned to the ground using 250mm steel ground pegs where possible and fixed to the rock surface with expansion bolts in other areas.

\*Geosynthetic Cementitious Composite Mat







*A Skidsteer was used to excavate the area*



*Vegetation removal was carried out by hand*



*SIKAFLEX - 11 FC was used on each 100mm overlap*



*The CC was fixed to the natural rock surface with expansion bolts*



*Hydration taking place*



*The completed installation*





*When in flow, there was a flow rate of 5.7m<sup>3</sup> per second within the channel*

Hydration was completed via a roadside 1000ltr water tank and motor pumps. Each joint was then sealed with Sikadur® 31, Hi-Mod Gel, to ensure a perfect seal. 600m<sup>2</sup> of CC5™ were installed in 5, 8hr days by 6 people,

The project was very successful, the CC was able to stop the water infiltration at all 5 points in the extremely restricted timeframe. Two larger engineering projects are currently in development at the same channel, measuring 16000m<sup>2</sup>; 1km in length, each to be constructed in 2017 and a further two in 2018.