

Project Info



01 / 09 / 12



CC8™ Bulk Rolls



1,000m²



Transverse layers



4th Region, Chile



Minera Los Pelambres



CC was used to line a tailings ditch, directing flow to specific areas of a dam to ensure a uniform, safe and correct deposit of sediment



Completed channel lining installation in Chile

In September 2012, Concrete Canvas® GCCM* (CC) was used to line a tailings containment ditch in the 4th region of Chile. The ditch was needed to ensure that the flow of tailings was directed to specific areas of a dam, resulting in the uniform and safe deposit of sediment. Over 190,000 tons of tailings would pass through the ditch each day, made up of 60% solids, meaning any material used to line the ditch had to have a high level of abrasion resistance. Both Geoweb and shotcrete had been considered for the project, but would require specialist equipment and labour to install. CC could be installed without any specialist labour, training or equipment, as well as having been proven to have a high level of abrasion resistance during testing, (DIN 52108).

Prior to installation, the ditch was excavated and the ground cleared of any rocks or other debris. Bulk rolls of CC8 were delivered to site and cut to length, eliminating material waste. Each length was laid transversely across the ditch using a truck-mounted spreader beam, then fixed in place at each crest with steel ground pegs. Adjacent layers of CC were overlapped by 100mm and screwed together at 250mm intervals using steel screws. The material was then hydrated using a hose and water truck.

The installation was a success, with the client stating they were likely to use the material in future projects. CC provided savings in both cost and time; a 9-man team was able to complete the 1000sqm installation in a day, in temperatures of up to 35°C. The CC lining the ditch was inspected after 7 months and showed no signs of abrasion damage, despite average flow rates of around 2.5m/s.

*Geosynthetic Cementitious Composite Mat





Ditch excavation



CC8 bulk rolls were cut to length on site, minimising material waste



A length of CC being fixed to the crest of the ditch using steel ground pegs



CC hydrated using on-site equipment



Completed installation showing sedimentation build up along ditch sides