

Project Info



12 / 12 / 16



CC5™ and CC8™ Bulk Rolls



270m²



Longitudinal layers



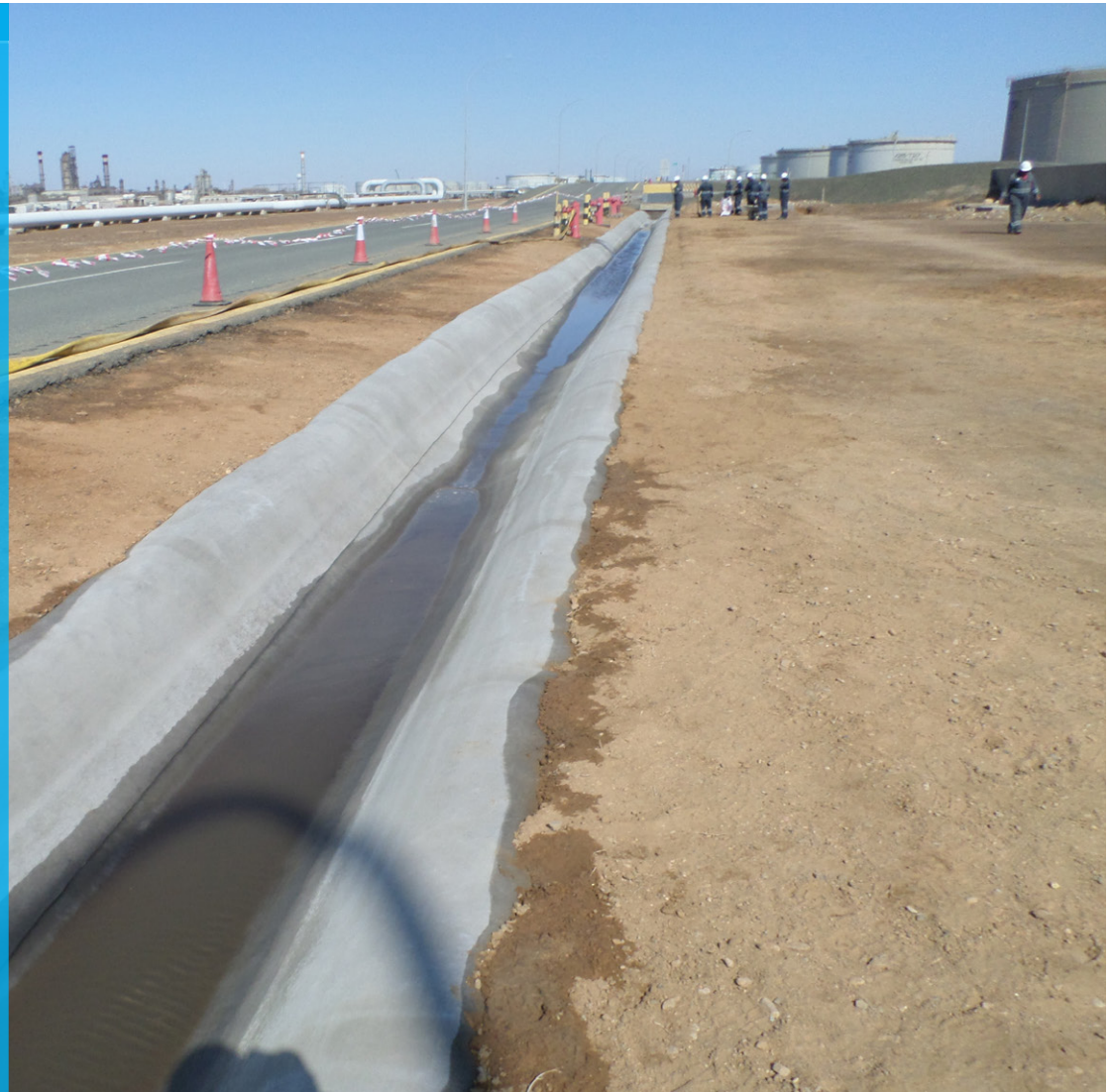
Yanbu Refinery (SAUDI ARAMCO)



FOQSCO



CC5™ and CC8™ were used for the remediation of an existing water channel at a roadside in Yanbu



Channel prior to installation

In December 2016, Concrete Canvas® GCCM* (CC) was used to remediate an existing channel which ran alongside a road in the grounds of the Yanbu Refinery, owned by Saudi Aramco, a Saudi Arabian oil company.

The channel had previously been lined with curved concrete blocks. The existing concrete had cracked and split in several places and was becoming a risk for weed protrusion as well as further erosion and damage.

Fixing the cracks and then laying a fresh conventional concrete had been considered, but as the site is privately owned, there was limited access and time on site. As CC would significantly reduce the time and cost of the job, this was chosen instead. The entirety of the channel, which is around 90 metres in length, and 2.5 metres wide, was fitted with CC.

The works were carried out by FOQSCO for Saudia Aramco.

Ground preparations required repairs to the cracks and filling of the gaps between existing concrete blocks and the preparation of trenches for the laying and fixing of the CC. The CC was laid longitudinally using a spreader beam and crane and cut using basic hand tools. The CC8™ was laid longitudinally down the middle of the rain channel, with the CC5™ laid on either side.

*Geosynthetic Cementitious Composite Mat





Channel prior to installation



Trenches were dug during ground preparations



CC5™ and CC8™ Bulk Rolls were used



CC5™ was laid down the middle of the channel



CC8™ was laid longitudinally down either side



CC was sealed with a hot air gun before fixings were applied



Pegs were used to fix the CC in the trenches



CC was hydrated using a fire hose



Close-up of completed installation



Overview of completed installation

Multiple layers of CC were sealed using a hot air gun, and once laid, the CC was fixed along the sides, into the pre-dug trenches, using pegs. Once laid and fixed, the CC was anchor trenched at the sides and backfilled with marlstone.

Hydration for this project was given using a hose which was attached to a fire house kept on site. Due to very dry weather conditions, the CC was hydrated for one hour, and after an interval of two hours, rehydrated for a further hour. This was repeated the following day to ensure thorough and successful hydration and installation.

At total of 270m² of CC5™ and CC8™ were installed over a period of 17 hours, spread over two days, although the dry weather conditions did slow the process. The project was very successful, and the Client was very satisfied with their experience of using CC, and is keen to use CC for other areas of the site in the future.

“Conventional concrete would have taken much more time to install and would have been much more difficult as well. In the end, cost was saved because of how rapidly and easily CC was installed. The Client was very happy. They would like to use [CC] again and recommend CC to anyone who has similar requirements.”

FOQSCO Ltd.