

Project Info



08 / 10 / 16



CC8™ Bulk Rolls



800m²



Transverse layers



Haradh Gas Plant
(SAUDI ARAMCO)



FOQSCO



Construction of
Pyrophoric treatment
Area



A layer of CC Hydro™ being installed

In October 2016, 800m² of CC Hydro™ (CCH8™) was used to construct a Pyrophoric treatment Area at Haradh Gas Plant, Saudi Arabia. Reinforced Concrete Slab was considered but CC Hydro™ was chosen due to its reduced installation time, lower cost and for the life expectancy of 50 years+. The works were carried out by FOQSCO for Saudi Aramco. During installation, the weather was mainly dry with intense sunshine. The temperature was moderate to cold as this installation took place during the Winter months.

After the ground was cleared and levelled via the use of an excavator and grader, it was then covered in four 20cm layers of Marl and compacted after each layer, then tested and approved by a third party company, specified by the customer. A Dyke/Bund was created on three sides of the containment area, which was covered by a 300gsm Geotextile on completion.

The CC Hydro™ was laid in transverse layers using a spreader beam and crane then subsequently cut with basic hand tools. Once laid the CC Hydro™ was thermally welded using wedge welder and hot air gun. Inspection was carried out by using a thickness test, air pressure test, spark tester and tensiometer (Peel and Shear), then finally a visual inspection. CC Hydro™ was anchor trenched at the four sides and backfilled with Marl. After installation the CCH8™ was hydrated for 1 hour and then rehydrated again after 2 hours for a further 2 hours, due to the prevalent dry conditions. The same hydration process was repeated the next day.

*Geosynthetic Cementitious Composite Mat





Area prior to installation



4 layers of Marl were added prior to a Third-party Soil Compaction test



Perimeter Dyke/Bund prior to installation of CC Hydro™



An anchor trench being excavated around the perimeter



Installation of a 300gsm Geotextile



Bulk Roll of CCH8™ Mounted on a spreader beam



Each layer of CC Hydro™ was thermally welded to the next with a thermal welder



The site after hydration had taken place



Another 300gsm layer of Geotextile and 10 - 15cm of Marl was added



Compaction of Marl prior to interlock installation



Installation of interlock (100mm x 200mm x 80mm)



Installation of concrete barricades



The installation took place in around 24 hours over a course of 4 days by 5 installers



The complete installation

On completion of hydration, the CCH8™ was then covered in another layer of Geotextile and a further compacted layer of Marl, prior to being covered in a layer of interlock bricks, to protect the surface from heavy plant machinery. The edges were then grouted to add a neat termination detail, followed by the installation of concrete barricades to also protect the three sided Dyke/Bund area.

Reinforced Concrete Slab would have taken much more time to install and would have been a lot more difficult to work with. In the end, cost was saved because of how rapidly and easily CC Hydro™ was deployed and installed.

In total, 800m² of CCH8™ were installed within 24 hours (over a 4 day period) by 5 people. The project was successful, Saudi Aramco were very happy with the end result and would like to use CC Hydro™ on other projects in the future, stating they would recommend CC Hydro™ to anyone who has similar requirements.