

Project Info



01 / 03 / 18



CC8™ Bulk Rolls



6000m²



Vertical layers



Oil Pumping Complex,
Southern Russian
Federation



Seti Sroy



CC was used to provide
slope protection to a
steep, rocky slope at
one of Russia's largest
oil pumping complexes



Completed installation

In March 2018, Concrete Canvas® GCCM* (CC) was used to provide protection to a steep slope in one of Russia's largest oil pumping complexes, located in the south of the Russian Federation.

The slope was 45m at its highest point, and 120m wide. The slope required protection to prevent erosion and vegetation growth due to its proximity to pipes.

A metal grid and geogrid solution were also considered, but would have been time consuming to install, while some areas of the slope would have been incredibly difficult, if not impossible to protect using these methods due to the limited access. CC was chosen for the project due to its speed and ease of installation compared to alternatives.

The works were carried out by Seti Sroy for The Sheskhari Transshipment complex operated by oil & gas company, Chernomortransneft, JSC.

In preparation for the installation, any large, protruding sharp rocks, tree and vegetation stumps and roots were removed to prevent damage to the material's PVC membrane backing during installation, and to provide a smoother surface on which to install the material. Due to the nature of the rockface, the slope was still uneven. However, the flexible nature of the CC allowed it to be installed and meant it was able to conform to the slope's varying profile.

*Geosynthetic Cementitious Composite Mat





Site overview



Rocky surface requiring protection



CC deployed from spreader beam



Installation team used climbing equipment



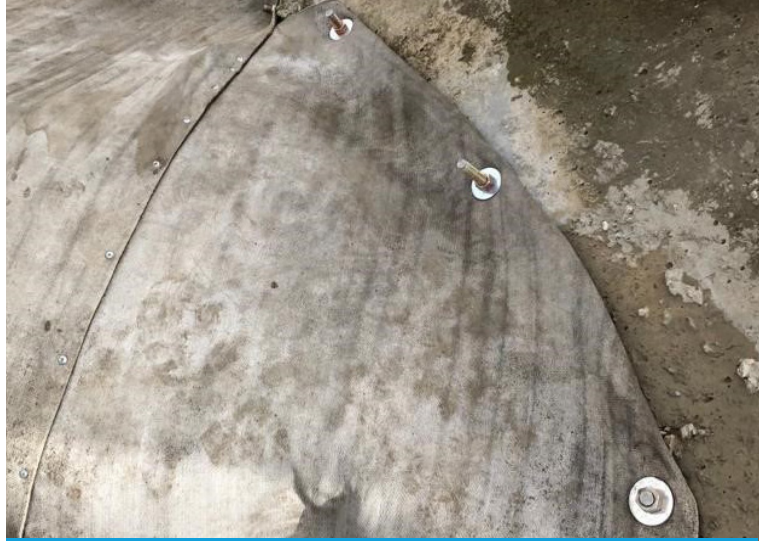
Installation was completed over 30 days



Installation viewed from slope crest



CC edges pegged at crest



CC fixed to concrete using concrete bolts, and jointed with screws



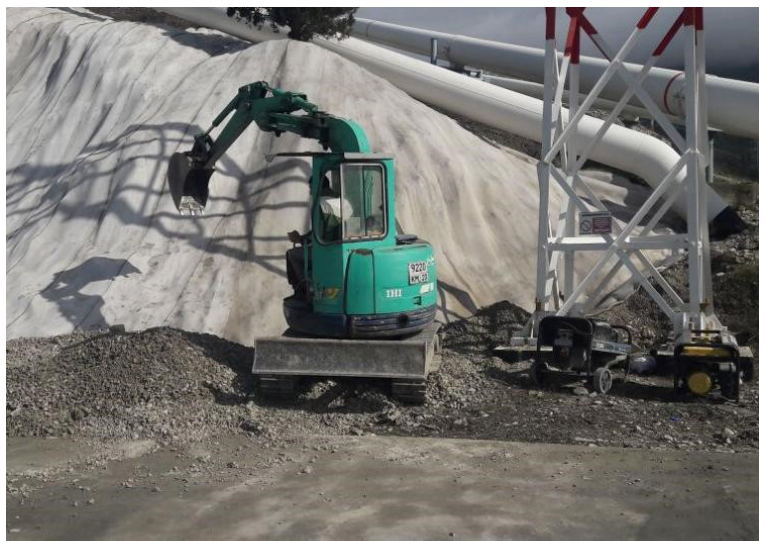
CC easily accomodates complex infrastructure



CC fitted around and underneath pipework



Hydration



Anchor trenches backfilled with gravel and small rocks



Lower section of completed slope and backfilled anchor trench



Completed section of installation



CC's flexibility allowed for easy accommodation of the slope's rocky surface

CC8™ was specified for the project in conjunction with engineering anchors to provide additional protection. Bulk rolls were delivered to the site and mounted onto a spreader beam hung from a truck crane at the base of the slope. The roll was then lifted and positioned at the top of the slope, the edge of the material fixed at its crest using ground pegs, and the CC unrolled down the length of the slope. Due to the sheer nature of the slope, the installation team often had to manually assist deployment using climbing equipment.

Subsequent layers were overlapped by 100mm and jointed at regular intervals. Where the CC met existing concrete infrastructure, engineering anchors were used to secure the material. The team often had to install the CC material around complex sections of existing infrastructure, including concrete walls and pipework, as well as accommodating the slope's varying profile.

Once the installation was completed, the CC was hydrated and left to set before an excavator was used to backfill the pre-dug anchor trenches with gravel and small rocks to prevent ingress.

A total of 6000m² of CC8™ were installed in 30 days by a team of 10 people, working 8-hour days. The works were carried out in temperatures of between 0 – 15°C, and often in rainy conditions, on a site with transport access limitations. The customer was happy with the results and are planning to specify CC for further projects in the near future.