

Project Info



03 / 10 / 17



CC5™ Bulk Rolls



38,400m²



Transverse & Vertical layers



Salwa Resort, Water & Adventure Park, Qatar



Rousse Contracting Co. & Al Ali Engineering Co. W.L.L



CC5™ was used to create artificial rockwork at an adventure park in Qatar.



Completed rockwork sample

In October 2017, Concrete Canvas® GCCM* (CC) was used to create artificial rockwork at the Salwa Resort Water & Adventure Park in Qatar.

Traditional sprayed concrete would typically be used, however, Rousse Contracting Co. (RCC) was approached by a consultant who suggested CC as an alternative. Following a series of technical evaluations, CC5™ was specified for the construction of more than 70,000m² of canyoning and rockwork. CC's lightweight, waterproof, fire resistant properties and its ability to be easily manipulated and installed inspired the concept and lead to its specification. The works were carried out by RCC and Al Ali Engineering Co. W.L.L. with consultancy and designs provided by European AWJ.

Creating the Artificial Rockwork consists of forming metal cages in the shapes of natural rocks and coating them with CC. The primary shape is then coated with Cement Plaster which in turn is textured, carved, and scenically painted to mimic real rocks.

The CC, when placed on the steel caging, follows the contours and recesses where its fixed in place with Hog Ties and hydrated. Due to the hot climate, the CC was hydrated four times at intervals of 25 minutes and cured for 3 days. The use of CC has increased productivity and has been cost effective on the overall project by using a lighter metal structure and space frames compared to what is normally required to hold the heavy weight of conventional sprayed concrete. A total of 38,400m² of CC5™ material was installed in extremely hot weather conditions, often reaching 50°C.

*Geosynthetic Cementitious Composite Mat





Wire frame constructed to create rock form



Completed wire frame and epoxy coating prior to carving



Cement plaster carved and covered with CC for realistic shape and texture



Hog rings and screws used to fix and joint CC to frame



CC hydrated following installation



Spray painting of sculptures to create realistic aesthetic



Large rockform constructed around hollow steel and concrete frame



Part completed sculpture



Completed rockwork examples following scenic painting



Close up of completed rockwork - careful carving and paint detailing make the hollow sculptures look realistic