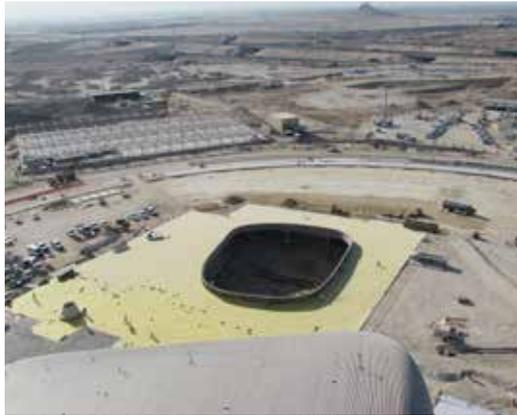


KING ABDULAZIZ CENTER FOR WORLD CULTURE

The King Abdulaziz Center for World Culture is part of an initiative by the Saudi Aramco Oil Company to promote cultural development within the Kingdom. The project contains cultural facilities, including an auditorium, cinema, library, exhibition hall, museum and archive. The foundation stone was laid by King Abdullah on May 20, 2008, and the Cultural Center was completed in 2015. One of the most unique features of the structure is that a 38,000 SQM greenroof/podium is situated entirely over occupied space.



PROJECT

King Abdulaziz Center for World Culture

Design Engineer:
Architect – Snohetta

General Contractor:
Saudi Oger Limited

LOCATION

Dhahran, Saudi Arabia

PRODUCTS

COREFLEX®

CHALLENGE:

Due to the sensitive space below the green roof, there were significant concerns regarding water ingress into occupied space. Several waterproofing systems were originally considered, from fluid applied to EPDM/PVC. Because of the winds blowing sand across the site concrete substrate, fluid applied systems could no longer be considered due to adhesion concerns. Initially EPDM was selected as the horizontal waterproofing system, but due to the substrate condition, there was a significant amount of preparation required in order for the EDM/PVC to have direct contact with the substrate without voids existing underneath the membrane.

SOLUTION:

After looking for waterproofing solutions in the market, COREFLEX® was selected because it was one product that provided a solution to several problems. The technology in COREFLEX® allows the product to be used in environments where typical waterproofing membranes would be unsuccessful. Because COREFLEX® does not rely on adhesion, there is no concern for sand being a bond breaker.

KING ABDULLAH CENTER FOR WORLD CULTURE

The heat welded 60 mm thermoplastic created a first line of defence against water intrusion. If water bypasses a weld in a heat welded system, it migrates under the membrane, which was the concern on this project. The second benefit of COREFLEX® is the active polymer core (APC). The small voids under the APC were not a concern because once the APC hydrates, it is able to fill the same voids under the membrane, unlike traditional passive EDPM/PVC systems.

EXECUTION:

COREFLEX® was delivered to the project in mid 2014 and installation began immediately. The locally trained CETCO COREFLEX® applicator worked diligently to install 38,000 SQM of COREFLEX®, allowing the construction team to meet the demands of a fast paced construction schedule.

RESULT:

COREFLEX® was successfully installed across the podium over a two year period. This was the first time that COREFLEX® was used in Saudi Arabia and the project successfully moved forward without delay despite tight scheduling.