

Al Jassasiya South House

Jassasiya, Qatar (2016)

PRODUCTS USED:

Krytol Internal Membrane™ (KIM®) Krytol® Waterstop System

ENGINEER:

Dorsch Qatar

CONTRACTOR:

Urbacon General Contractors

READY-MIX SUPPLIER:

Al Wataniya Concrete Co. Ltd.

APPLICATOR/DISTRIBUTOR:

Al Jaber Structural Protection Co.

BACKGROUND

Sometimes lost in the vast construction explosion of the Middle East and the United Arab Emirates, Qatar has been growing and building rapidly on its own. Pushing the limits of constructability, Qatar has planned the construction of the City of Lusail, enormous stadiums, great buildings, and more. All of which require developers, engineers, and contractors in the country to remain quick and efficient.

That would be no different for the Al Jassasiya South House. Located in Jassasiya, Qatar, it was designed to be a palace built at the edges of a seashore. That would leave it 30 m (90 ft) from the water, which meant the palace's concrete structure would be exposed to the water pressure of the ocean, putting the durability of the concrete at great risk. To ensure that durability remained intact, the palace project team knew it would need protection from a waterproofing system that could not only ensure a long service life but could also save time and money for their project.

SOLUTION

The team investigated the use of a traditional torch-applied bituminous membrane. However, they found that it would have been complicated to install and would have consumed a lot of time considering the size of the project. Instead, the engineering consultant, Dorsch Qatar, recommended the use of 4,500 m³ (160,000 ft³) of KIM-treated concrete to waterproof the palace's isolated footings, grade beam, column neck, and water-retaining structures. That would not only provide the team with a completely watertight concrete structure, but it would also save the team time, labor, and overall cost, which are three significant aspects to construction in Qatar.

In addition to this, the team applied the Krytol Waterstop System to the palace's construction joints for permanent waterproofing protection, which had been another concern when the team was initially considering applying an external membrane.

In the end, both KIM and the Krytol Waterstop System provided the Al Jassasiya South House with a completely tanked foundation while saving the project time, labor, and money.

