

At their Houma, Louisiana site, Shell has conducted a number of investments in recent years to develop its support capabilities to offshore operations, including new warehousing facilities and the HQ for Shell's pipeline maintenance in the Gulf of Mexico. For a floor under and around gas storage tanks, Shell implemented an efficient, economical and sustainable three-dimensional reinforcement solution based on Dramix[®] 5D steel fiber concrete reinforcement from Bekaert.

The challenge

The Shell principal engineer was looking for a construction method that would make savings in both the construction schedule and the costs. At the same time, the final solution had to be high performance in terms of its durability and mechanical properties, while meeting Shell's sustainability requirements.

The solution

The Bekaert technical team worked very closely with the Shell engineer and proposed replacing the proposed rebar with Dramix[®] 5D 65/60 steel fiber in a mat concrete slab. Bekaert's recommendation trimmed two days off the production schedule and reduced cost by around a third. Bekaert also worked closely with the readymix supplier to ensure all quality control procedures were followed and that the steel fibers were properly dosed. A further benefit for Shell was the reduced environmental footprint of the Bekaert solution. By reducing the mat slab thickness by one inch, significantly less concrete was needed, which ultimately cut the CO2 emissions associated with this construction project.

SHELL OFFSHORE SUPPORT WAREHOUSE

HOUMA, LOUISIANA, USA

PROJECT SPECIFICATIONS

Project type: Warehouse/distribution center

Application: Mat slab

PARTNERS

- Concrete contractor: Smith Tank & Steel, Inc.
- Readymix: Leblanc Brothers Ready-Mix Inc.
- Designer: Menard

