Retailer Saves on Concrete Mezzanine Repair

Retailer of Apparel and Home Fashions had a severely damaged 7,000 square meter concrete mezzanine floor at their distribution center.

"We introduced pallet jacks to the mezzanine floor and it was just too much weight and deflection. As a result, the pallet trucks broke through the concrete mezzanine flooring in 3 different places and cracked the mezzanine concrete floor in numerous areas. We had a real mess on our hands."

Retailer's Project Engineer

Daigle Engineers, Inc. was hired to investigate the structural integrity of the floor and to provide solutions.

"The damage to the floor was extensive and it was unsafe to continue to use in its condition. The obvious and common solution was to remove and replace the existing steel and concrete structure with a new one. Not only was this going to be incredibly expensive, the disruption and down time to the material handling area and the floor beneath it was unacceptable. There had to be a better solution."

Jon Longchamp, President
Daigle Engineers, Inc.

Concrete mezzanine flooring with significant damage prior to ResinDek

Attempted repairs beneath the mezzanine to block debris from falling through
How they saved $$

Daigle Engineers, Inc. contacted Cornerstone Specialty Wood Products, LLC with their money saving solution. By placing steel sleepers on the damaged concrete and directly over the steel bar joists below, the loads could be transferred through the cracked concrete directly onto the substructure. By installing the steel sleepers and ResinDek® Xspan® over the existing slab, it would avoid flexural loading of the damaged slab and deck.

Daigle Engineers, Inc. performed all of the structural analysis on the existing mezzanine structure to determine the new allowable loads for this material handling platform. “We selected ResinDek® Xspan® because of its structural integrity and ability to span over intermittent supports,” commented Longchamp.

“Cornerstone Specialty Wood Products, LLC (manufacturer of ResinDek® Xspan®) was very helpful during the evaluation stage of this process. They came to visit several times, showed us numerous 7-10 year-old ResinDek® floors in the area and really stood by their product during design & construction.”

Jon Longchamp, President
daigle Engineers, Inc.

The customer (Retailer) saved over $1 Million by using this repair method instead of replacing the 7,000 square meter structure. The construction process was trimmed by several months and significantly reduced the disruption of their operations.

Partially as a result of this very successful repair, ResinDek® has been continually specified over the last 5 years. The Retailer has now used ResinDek® panels at 11 different distribution centers around the United States, encompassing more than 75,000 square meters of elevated warehouse flooring space.