PROJECT PROFILE

CONCRETE REPAIR

VersaFlex® INCORPORATED

MARKET Concrete Repair / Rehabilitation

SYSTEM Quick Mender® X.O. Repair Polymer

PROJECT Cold Storage Freezer, Dallas, TX

OWNER Private

CONTRACTOR Exposed Floors, Garland, TX

Food processing facilities rely heavily on the concrete floors for the most basic of their business needs, forklift traffic. The concrete floors in cold storage facilities take an even greater beating due to the -20+ degree temperatures they endure. Crumbling concrete infrastructure is a serious issue in these facilities as it poses a safety hazard, as well as potential lost revenue as a result of lengthy repairs.

In a cold storage facility in Dallas, TX, this scenario became a reality. Two large crater-like holes were beginning to form and the concrete was crumbling badly. The crater-like holes had grown to sizes of about 5 ft. by 3 ft. and 2 ft. by 3 ft. at a depth of about 5 inches each, meaning it was no longer safe to to drive forklifts in the area, causing traffic to be re-routed to other areas of the warehouse. The facility owner decided to get it repaired quickly, and called Steve Cassity of Exposed Floors of Garland, TX to help.

In order to begin making repairs and ensure a fast return to service, the Exposed Floors crew began by using chipping hammers to

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remove all of the crumbled concrete to approximately 5" deep where they found, at the bottom of the crater-like hole, an insulated panel that was covered with a metal plate and plastic sheeting. The crew then proceeded to removed all remaining rubble and debris and proceeded with repairs.

The original plans called for concrete rebar to be inserted into the surrounding concrete in order to provide support, but when the Exposed Floor crew tried to drill holes for the rebar, the concrete crumbled. So, the crew proceeded with "Plan B", which was to re-cover the metal plate at the bottom with 15 mils of plastic sheeting and continue with repairs. Next the crew used a 110v concrete saw to cut around area to create a clean edge for the repair.

Due to the -20 degree temperature inside this freezer, it was not possible to make the repair with concrete. But Cassity had an alternative, VersaFlex's Quick Mender® X.O. concrete repair polymer, which was perfect due to its ability to fully cure in -20 degree temperatures and specially designed for confined space concrete repairs such as this. In addition, the Quick Mender® X.O. provided the rapid return to service that the facility owner desired.

Cassity decided to mixed the Quick Mender® X.O. with pea gravel and 3 different sized dry quartz sand in order to increase compressive strength of the repair to prevent future concrete crumbling in the area.

Mixing of the Quick Mender® X.O. was

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done in a 6 gallon pail with a drill mixer. Once mixed, the product was poured into the crater-like cavity, packed tight and hand troweled. Once the Quick Mender® X.O. had fully cured, the Exposed Floors crew used a diamond grinder with 100 metal diamond plates to grind the surface smooth and level with the existing concrete surface. They completed repairs by vacuuming and removing all dust and debris from the surface and surrounding area.

Cassity and the Exposed Floors crew began the repair in the morning with newly repaired area returned to service later that evening. The crew battled freezing -20 degree temperatures, while wearing protective equipment and only working for 20-30 minute periods with 10 minute breaks in between. Additionally, working in extreme temperatures it is important to stay hydrated. The facility owner was very satisfied with repairs completed on time, on budget and quality of repairs.

Visit our website for more information on this application and other outstanding products.

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