



At the Lab. In the Field.
By Your Side.

DUBAI DRYDOCKS

Dubai, United Arab Emirates



CONCRETE
WATERPROOFING

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QUESTIONS: 1-800-267-8280 or www.kryton.com

BACKGROUND

Located on the Dubai waterfront, Dubai Drydocks is one of the largest in the world. The shipyard employs more than 5,000 workers and as many as 1,500 subcontractors. More than 5,000 vessels and oil rigs have been built, repaired and maintained at the facility since it opened in 1983.

A vessel requiring repairs at Dubai Drydocks is pulled into a shiplock, where a massive door closes behind it. Water is pumped out in about 4 hours, leaving the vessel resting on supports on the shiplock floor.

Once the water is pumped out, the shiplock must be kept dry to enable repair staff to work and operate cranes and other vehicles. The floor is 12 metres below sea level and the structure is subject to enormous hydrostatic pressure when empty. Construction joints are continuously monitored to prevent leakage, which can be difficult and costly to repair.

Several years ago, water was observed to be seeping through a joint where the shiplock wall and floor meet. Facility managers tried a number of repair methods including epoxy injections to stop the leak. However, none of the repairs was successful in withstanding the hydrostatic pressure and the leak persisted.

PROJECT NAME

Dubai Drydocks

OWNER

Dubai World, United Arab Emirates

APPLICATOR

City Diamond Contracting LLC

KRYTON DISTRIBUTOR

Giant Star Trading LLC



Dubai drydocks aerial view



Severe leakage of Dubai drydocks before Krystol Crack Repair System was applied

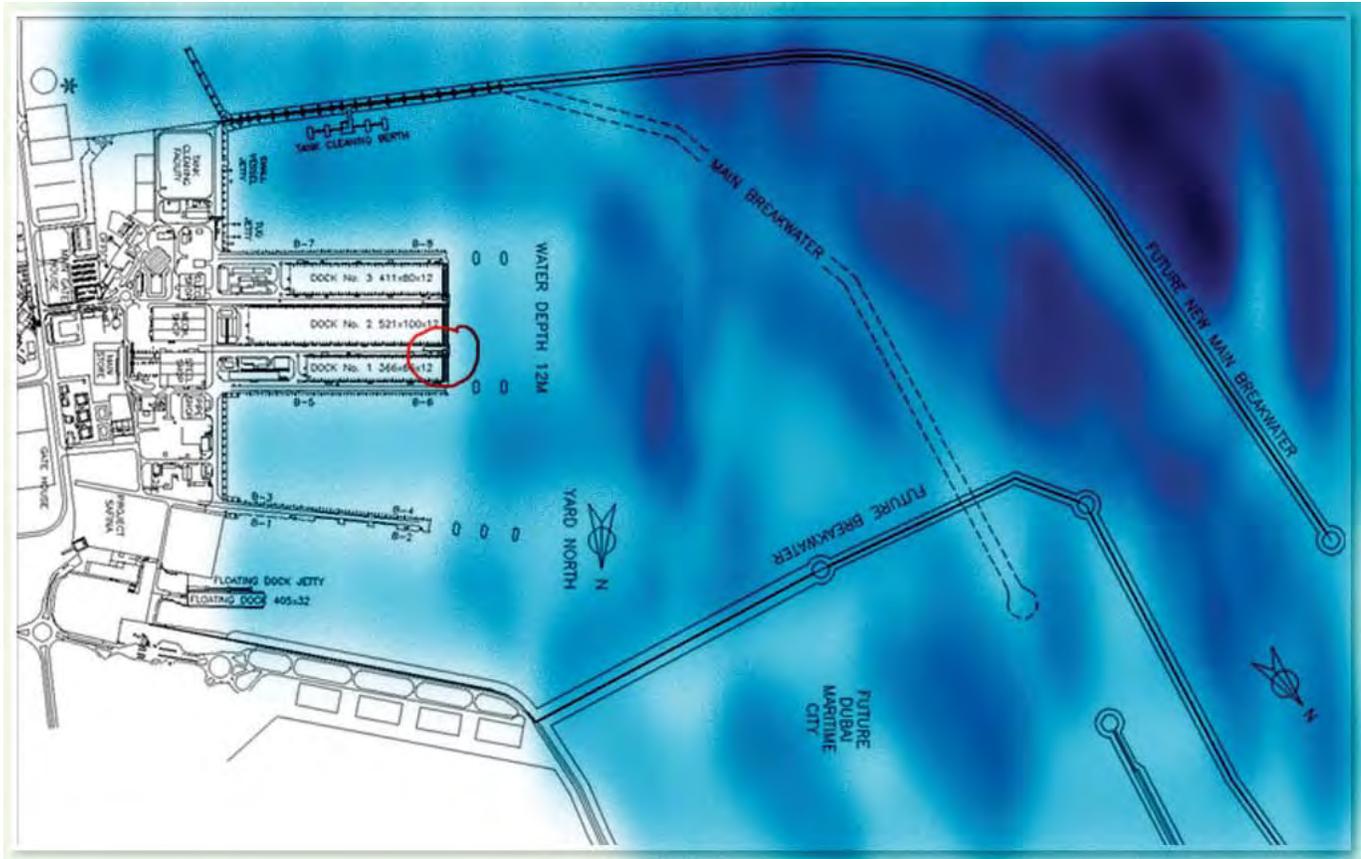


Crack repair as of June 8, 2006

PROJECT CASESTUDY

The Kryton Group of Companies.

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Dubai drydocks overview. Red circle indicates crack repair area.

SOLUTION

After several other repair methods had failed, the repair team contacted Kryton International's local distributor, Giant Star Trading, who suggested that they try the Krystol Concrete Repair System™.

Based on Kryton's proprietary Krystol technology, the Repair System is a cementitious, chemically reactive, surface-applied waterproofing treatment. When applied to existing concrete, the system's crystalline chemicals diffuse deep within the structure, causing millions of needle-like crystals to grow. These crystals spread throughout the concrete, self-sealing cracks and permanently blocking the movement of water in all directions. The crystals then remain dormant until another crack forms, at which time they will react with incoming water to self-seal the crack and maintain a watertight seal.

By providing a permanent waterproofing barrier, Krystol protects concrete and steel reinforcements from water and waterborne contaminants, even against significant hydrostatic pressure. And because the majority of the system's chemicals migrate into concrete within the first 28 days, its waterproofing properties are not compromised even if the application is later chipped off.

Four hours after the Krystol Crack Repair System was applied to the drydock crack, the leaking stopped. To date, no further leaks have been reported in the repaired area.

"We are pleased to confirm that the Krystol Concrete Waterproofing System has been used successfully to stop the flowing water," wrote project manager, David Laird, in a letter to Giant Star Trading. "Unlike previous attempts with other materials, the Kryton system worked as specified to stop the leaking water. The repaired area and the construction joint are now completely dry." Pleased with Kryton's successful performance, Dubai Drydocks are now considering further applications with this advanced waterproofing method.

Kryton's KIM-ES at The Big 5

Kryton is recognized and acknowledged as a prominent in taking the risk out of concrete waterproofing globally. Attendees visiting The Big 5 will learn about Kryton's Krystol Internal Membrane-Extended Set (KIM-ES) which has been optimized for hot climate challenges and mass concreting. KIM-ES is a modification of Kryton's KIM, the world's first integral crystalline waterproofing admixture for concrete that turns an entire concrete mass into a waterproof barrier. Being cognizant of unique regional needs have won Kryton major projects such as the Atlantis Hotel and Dubai Dry Docks.

Kryton International Inc. provides the most effective concrete waterproofing systems in the world. With over 40 years of experience, 50 distributors worldwide, and more than 10,000 successful waterproofing projects, Kryton is the expert that mitigates the risk in concrete waterproofing. Whether you are an engineer, architect, property developer or general contractor, Kryton helps industry professionals solve the most dif-



Kryton products waterproofed below grade water storage tanks at Atlantis Hotel

icult concrete waterproofing challenges by providing innovative, time-tested solutions, backed by service and support that are second to none. Visit Kryton at the Canadian Pavilion at The Big 5. ■