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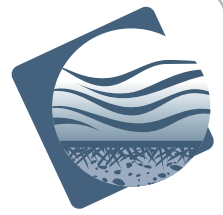
COUPLES SWEPT AWAY RESORT

Westmoreland, Jamaica

July 2006

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QUESTIONS: 604-324-8280 or www.kryton.com



CONCRETE
WATERPROOFING

BACKGROUND

The "Couples Swept Away" Resort is a 312 room luxury hotel located along Negril's pristine seven-mile beach. A popular honeymooner destination, the Couples Swept Away Resort is a tucked away paradise. Its desirable location along the Caribbean coast not only tempts tourists from all over the world, it also means that the ground level of the hotel is well below sea level, with a water table of just under 900mm (3 feet).

During construction in spring of 2005, the 1.5m (4.9ft) below-grade foundation was waterproofed using Kryton's Krystol Internal Membrane™ (KIM®) admixture in the concrete mix. Wall slabs were also waterproofed using KIM®. Due to construction limitations, cold joints between the floor slab and walls were to be waterproofed after the concrete had cured. Construction was completed in December 2005 and the joints were leak-free. However when the hotel was commissioned and in use about seven months later during the rainy season, ground water from the high water table was leaking heavily through the cold joints. Hytech was invited back to repair the leaking joints.

SOLUTION

Hytech Waterproofing Systems Ltd. needed a waterproofing solution that could easily be applied to the wall-to-slab joint. More importantly, the waterproofing had to be a reliable and permanent solution. Because the hotel was already in use, repairs from the positive side of the structure would be



The "Couples Swept Away" Resort in Negril, Jamaica is a leak-free and popular vacation spot

difficult and costly. The Krystol® waterstop system was chosen to stop the leakage and permanently waterproof all joints because of its unique ability to be applied to the negative side (inside walls) of the structure against the water pressure. The system can withstand up to 140m (460ft) of head pressure, and provides dual protection as a physical and chemical barrier.

To begin with the repair process, a 1" wide chase was chipped along the length of the joints. The chase was then filled with Krystol

PROJECT CASESTUDY

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Plug™, which immediately arrests the seepage of water through the cold joints. Within two minutes the leakage had stopped, and the joint was treated with Krystol T1™ dry pack followed by Krystol Bari-Cote™, a waterproofing grout. A final finishing coat of Krystol T1™/ T2™ slurry ensures coverage around the repair area.

Krystol® products contain crystalline waterproofing chemicals. These proprietary chemicals cause a reaction within the concrete matrix to form billions of needle-like crystals that block pores, voids and micro-cracks from water intrusion. The chemicals sit dormant until another dose of water (through a new crack or rising water table) causes the chemical reaction to begin again. The ability to reactivate in the presence of water gives crystalline-treated concrete the ability to self-seal.

Since the completion of the cold joint repairs in July 2006, there has been no trace of leakage and the joints are expected to remain dry indefinitely even if the water table rises.



Krystol T1™ dry pack is mixed to a very putty consistency (approximately 5 parts powder to 1 part clean water) and is applied using a trowel.



The water table where the “Couples Swept Away” Resort is situated just under 900mm, meaning the foundation and basement walls were virtually constructed in water.

LOCATION

Negril, Westmoreland, Jamaica

OWNER

Couples Chain of Resorts

APPLICATOR

Hytech Waterproofing Systems Ltd.

ENGINEERS

Peter Jervis & Associates

CONTRACTOR

Neville L. Daley

DISTRIBUTOR

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