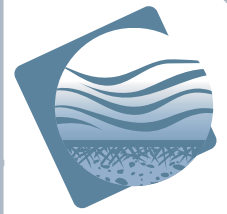




At the Lab. In the Field.
By Your Side.

Shangri-La's Rasa Ria Resort Hotel

Kota Kinabalu, Sabah, Malaysia



CONCRETE
WATERPROOFING

Page 1 of 2

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

BACKGROUND

Shangri-La's Rasa Ria Resort, nestled against the clear azure waters of Dalit Bay, is just 40 minutes from Kota Kinabalu International Airport and the shopping district. The 330-room resort is surrounded by 400 acres including a nature reserve with orangutans making it one of Malaysia's magical, pristine destinations. In response to the growth and popularity of worldwide visitors to the resort, the owners have undertaken a 90-room expansion: an extension of two blocks of five-storey buildings with three associated buildings.

The beautiful seaside location of the resort, though, comes with its challenges: a high water table with aggressive and sandy ground conditions. The project consultants encountered various waterproofing products such as conventional "brush-on" polymer/cementitious coating and budgeted pre-formed membranes that did not perform as promised in their product technical sheets. Finally, the project team was faced with the additional challenge to fast track the job in order to complete the project for the highly anticipated Visit Malaysia 2007.



3D aerial rendering of Shangri-La's Rasa Ria Resort Hotel when completed. 90-room expansion is on the right.



Extension of 2 Blocks of Hotel Rooms (90 rooms) in progress.



Shangri-La's Rasa Ria Resort poolside rendering when completed. The new swimming pool will be waterproofed with KIM® admixture in all the slabs and Krystol Waterstop System™ for all the joint areas.

PROJECT CASE STUDY

The Kryton Group of Companies.

1645 East Kent Avenue, Vancouver, BC Canada V5P 2S8 Tel.: 1-604-324-8280 Toll Free: 1-800-267-8280 Fax: 1-604-324-8899 E-mail: info@kryton.com Web: www.kryton.com

SOLUTION

The C & S Consultant, Ir. Walter Shee, in agreement with the other consultants, recommended Kryton's Krystol Concrete Waterproofing System to meet the challenges of the expansion. The world's only permanent, in-depth, surface-applied waterproofing system, the Krystol Concrete Waterproofing System is a cementitious, chemically reactive treatment that turns existing concrete into a permanent and powerful waterproof barrier.

Krystol Internal Membrane™ (KIM®) was used to waterproof the concrete rooftops and tank the lift pits and pools. KIM, the world's leading and original integral crystalline concrete waterproofing admixture, eliminates the need for conventional external waterproofing membranes. Krystol T1/T2® was applied to all wet areas including, bathrooms and concrete (soaked) bathtubs.



KIM® admixture being poured directly into mixer truck.

When applied to concrete, Krystol's crystalline chemicals diffuse deep into concrete and become a permanent part of the structure. Millions of needle-like crystals begin to grow and spread throughout the concrete, self-sealing cracks and permanently blocking the movement of water in all directions. These crystals then remain dormant until another crack forms, at which time they will react with incoming water to self-seal the crack and maintaining a watertight seal.

Krystol can be applied to the positive or negative side of the structure, which made it ideal for treating the aggressive below grade areas at the Shangri-La Rasa Ria Resort that were difficult to reach. Krystol protects concrete and steel reinforcements from water and waterborne contaminants, even against significant hydrostatic pressure. The Kryton tanking system is guaranteed to succeed as the resident engineer, Mr. Tan KG quickly discovered.

Mr. Tan KG, as directed by his boss, Ir. Walter Shee, took up the challenge of KIM's performance by testing it. On the first day of pouring, the concrete was cast in a formwork shape resembling a square box with an open top and 50 millimetre thick walls. On the second day, the formwork was dismantled and the concrete box (lacking reinforcement) was filled with water, which promptly started to leak. However, the crystalline chemicals began to work by growing and spreading throughout the concrete until all the leaking had stopped by the seventh day. The crystalline, noted Mr. Tan KG, was visible on the surface of the concrete.

***"KIM® is an amazing waterproofing product," says Mr. Tan KG.
"Initially I was skeptical but after testing it, seeing is believing."***

Shangri-La's Rasa Ria Resort Hotel expansion is slated for completion in December 2007.

PROJECT NAME

Shangri-La's Rasa Ria Resort

OWNER

Pantai Dalit Beach Resort Sdn Bhd

C & S CONSULTANT

PY Konsep Perunding Sdn Bhd

QUANTITY SURVEYOR

KPK Quantity Surveyor Sdn Bhd

PROJECT MANAGEMENT CONSULTANT

KP Technical Services

ARCHITECT

Chao Tse Aun & Partner P/L in association with L.C.
Chartered Architect

CONTRACTOR

Yoong Yap Enterprise Sdn Bhd

DISTRIBUTOR/ APPLICATOR

Rovski Sdn Bhd & Concrete and Waterproofing
Technology Sdn Bhd

The Kryton Group of Companies.

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