

Shanghai Subway

Shanghai, China (2000)

BACKGROUND

Concrete corrosion is a very real problem for the concrete industry and has been since the beginning of time. The fact is, an insurmountable number of buildings across the globe are experiencing corrosive infiltration due to improper concrete waterproofing methods. In order to fit the durability measures of any concrete structure put forward through the environmentally conscious act of sustainable building, concrete must be sufficiently waterproofed.

An example of this is the Shanghai Subway where different sections of the new line faced problems due to sulphate attack, chloride penetration and corrosion. An effective waterproofing system and watertight corrosion free concrete solution was needed to overcome these issues. The system also had to provide cost effective quality and low cost maintenance while performing without coatings or a surface-applied membrane. Furthermore, the Huangpu River's mighty flow also had to be protected against to ensure no service interruptions for the population of Shanghai.

SOLUTION

Due to the unrelenting current of the Huangpu River, Kryton's Krystol Internal Membrane™ (KIM®) admixture was chosen as the waterproofing method because of its ability to withstand hydrostatic pressure. KIM is the only PRAH (Permeability Resistant Admixture for Hydrostatic conditions) on the market and has been proven effective in a number of different situations to provide a watertight seal despite the constant battering of water flow. Over 60,000 kg's (60 t) of KIM went into the precast tunnel sections of the Shanghai Subway.

Moreover, to ensure effective protection to the reinforcing steel, 5,000 kg's (5 t) of Krystol T1® & T2® was used in each station. Both the use of KIM and Krystol T1® & T2® proved effective and were able to meet the cost effective specifications outlined by the Shanghai Subway Corporation, keeping the population of Shanghai in constant motion.

OWNER/DEVELOPER:

Shanghai Subway Corporation

APPLICATOR

Kryton Person Ltd.

DISTRIBUTOR:

Kryton Person Highly Efficient
Waterproofing Materials Co.

PRODUCTS:

Learn more at kryton.com
Krystol Internal Membrane™ (KIM®)
Krystol T1® & T2®



Shanghai Subway is currently dusty dry despite the hydrostatic pressure from the Huangpu River.



60,000 kg's (60 t) of KIM was used in the precasted concrete.