

Seton Power Canal & Aqueduct Repairs

Lillooet, Canada (2010)

BACKGROUND

The Seton Canal was constructed in the early 1950s to carry water from Seton Lake at the Seton Dam downstream to the Seton Powerhouse. The canal is an open, concrete-lined trapezoidal-shape, approximately 3850 m (12,600 ft.) in length. The canal had deteriorated over its 55 years in service and had severe large scale cracking the length of the canal, made worse in some areas by alkali-aggregate reaction (AAR). The canal is also exposed to freezing and thawing cycles for much of the year. Water leaking through the canal was corroding the reinforcement and eroding the fill, which could have led to a serious failure if left unchecked.

SOLUTION

The project team needed a repair system with proven performance and success (even under demanding conditions) that would stop the deterioration of the canal structure and extend its service life for many years. Kryton's crystalline waterproofing and repair products were chosen for their long history and proven reliability.

The walls and floor of the canal were pressure washed in sections, cracks and spalls were repaired, and the surfaces were coated using Kryton's Krystol Crack Repair System and Surface Treatment System. In total, over 11,000 kg of Kryton's repair products were used to restore and waterproof the massive concrete structure. The repairs were completed in Spring of 2010 and 2011.

"We've used Krystol products in the past and know that we can trust them, but Kryton's focus on training and proper application is what really made this project a success." – Rob Emlyn, Project Manager, WRDE Management Ltd.

OWNER:

BC Hydro

ENGINEER:

BC Hydro

PROJECT MANAGEMENT:

WRDE Management Ltd.

CONTRACTOR:

BC Hydro Construction Services

DISTRIBUTOR:

Cascade Aqua-Tech

PRODUCTS & TECHNICAL SPECIFICATIONS:

Krystol Plug™
 Krystol Bari-Cote™
 Krystol® T1
 Hydrostop™ Coating



Aqueduct over Cayoosh Creek – water was pouring out of the crack before the dewatering occurred.



Workers performing concrete repairs with Kryton products to portions of the canal's walls and floor.