

# kelso coatings



## Client

Renfrew Hydro Inc.

## General Contractor

CR Stop Leaks

## Location

Renfrew, Ontario

## Project type

Repairing & Waterproofing

## Renfrew Hydro - Tunnel Below Dam

Repairing Leaks & Waterproofing against hydrostatic pressure

### PROBLEM

Located in the Town of Renfrew along the Bonnechere River, the site of the Renfrew Hydro Generation Dam has been a major source of power since the early 1800s. In 1901, the Renfrew Power Company constructed the hydro generation dam and generator house, which now distributes electricity to over 4,200 residences and businesses in the Town.

Due to its age, the dam's concrete was in poor condition. The constant freeze/thaw experienced in Renfrew's climate, along with hydrostatic pressures, resulted in many cracks in the dam's walls that needed to be addressed as quickly as possible.

## PROCESS & HIGHLIGHTS

- Remove all previously installed injection ports
- Scarify internal concrete using bushing tool.
- Chase all cracks and cold joints.
- Terminate active leaks using CN2000A
- Apply the CN2000 crystalline waterproofing system.

## PRODUCTS USED

- CN2000A® Insta-plug for the active leak areas.
- CN2000B was applied on the internal side of the concrete dam.
- CN2000 C/D was rolled on the CN2000B crystalline coating after initial set to keep the CN2000B crystalline coating hydrated for the curing process.

## SOLUTION

Kelso Coating was able to stop active leaks in the dam with the CN2000A material, and ensured a watertight seal with the remainder of the CN2000 system. During the preparation of the dam walls and soffit affected by deterioration, many cracks began to leak more than initially and in a couple of instances, Kelso experienced a "gusher". Water pressure was equivalent to a fire hydrant at these areas. The non-toxic CN2000 system resists extreme freeze/thaw cycles, thus ensuring that the dam will operate safely for many years to come.



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