

## PROJECT

# Lining a Water Main in the Heart of the *rivière du Nord* in Sainte-Adèle



## CHALLENGES

Since the water main is in an advanced state of deterioration and submersed in the river at a depth of 2 to 3 meters, we can expect a large amount of water to enter the host pipe prior to and during lining operations. As the ALTRAMD technology is a woven sheath treated with a liquid epoxy resin<sup>1</sup>, the outer surface of the impregnated liner must be protected to prevent water from diluting or even leaching the resin, which would affect the mechanical properties of the installed liner and worst the river! A solution was required to protect the resin-soaked liner so it could be installed by pulling it through the host pipe.

## CONTEXT

SANEXEN submitted the most competitive bid in response to a call for tender by the town of Sainte-Adèle (Call for Tender #GEN-2021-009 – Chemisage de conduite d'aqueduc traversant la rivière du Nord, secteur de la rue Saint-Jean) to rehabilitate a water main located in the rivière du Nord in Sainte-Adèle. This pipe had sustained more than a dozen breaks in the last few years. Each repair requires the intervention of a diver as some operations must be done manually underwater, which considerably increases the cost. The pipe was therefore put out of service until it could be rehabilitated.

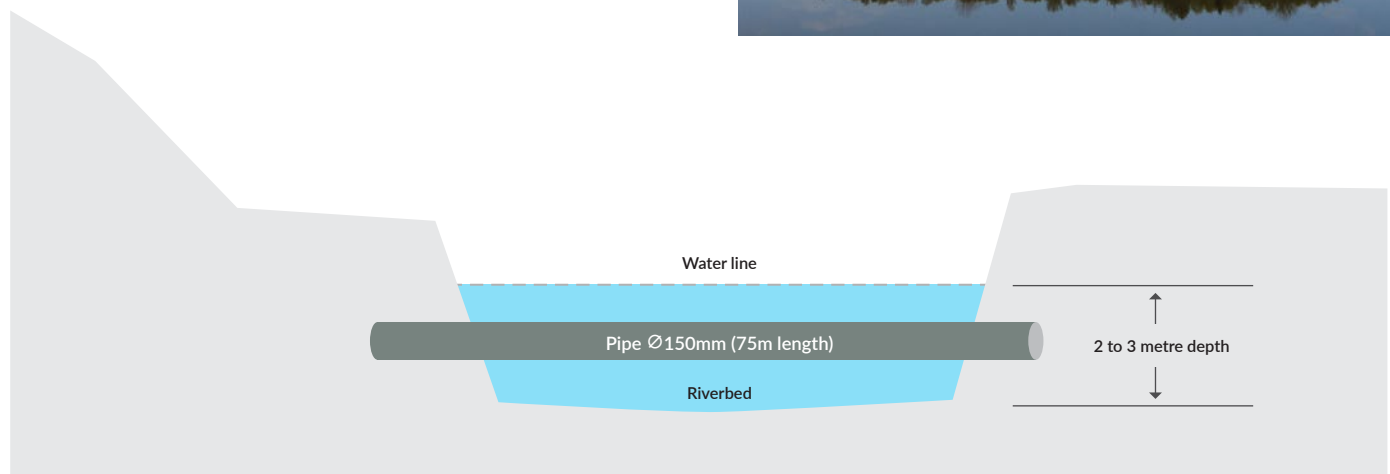


## CONDUCT

Material:	Cast iron
Diameter:	150 mm
Length:	75 m
Project date:	Summer 2021
Caracteristics:	no valves or service connections along the section to be rehabilitated.

## SOLUTION DEVELOPPED

The solution developed by SANEXEN and Niedner was to add an additional waterproof layer around the ALTRA liner. This additional membrane will ensure that the river water in the host pipe does not come into contact with the liquid epoxy during the installation of the liner. Since there are no connexions in this section of pipe, the liner does not need to adhere to the full length of the host pipe to ensure a watertight seal. Instead, a few centimetres of the external waterproof membrane will be removed at each end of the host pipe to allow the liner to adhere and seal the liner-pipe interface.



<sup>1</sup> Once the liner is in place, the resin is heat-treated (cured) with hot water recirculation in a closed loop, which leads to its hardening by reticulation.

## CERTIFICATIONS



## CONTACT

MARTIN BUREAU  
Vice-President, Innovation, SANEXEN  
[mbureau@sanexen.com](mailto:mbureau@sanexen.com)

