

PROJECT INFORMATION



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Client	<i>Umgeni Water</i>
Project	<i>Inanda Wiggins Aqueduct, Durban</i>
Liner specification	<i>2,0mm Carbofol CHD</i>
Size	<i>9 300m²</i>
Date Completed	<i>1994</i>
Consultants	<i>Keeve Steyn & Partners</i>

Application Details

The Aqueduct carries water through a series of pressured tunnels from the Inanda Dam across the Emolweni Valley to the Inanda Wiggins treatment works. From here water is distributed to Durban and surrounding areas. The inlet and outlets of the Clermont (5,3 km) and Emolweni (5,4 km) tunnels were lined. These tunnels link up to the existing Reservoir Hills tunnel.

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FOUNDED 1984

Inanda Wiggins Aqueduct

2,0mm Carbofol CHD was chosen to line these tunnels due to its flexibility in adapting to uneven surfaces and its ease of jointing using hot wedge welding machines.

A white signal layer surface to the black liner provides evidence of any mechanical damage that might occur during installation. It also greatly improves lighting in the tunnel.



A geotextile is fixed to the surface of the tunnel with rondelles that are compatible for jointing to the 2,0mm Carbofol CHD.

The liner is then placed against the geotextile and welded to the rondelles.

A wheeled scaffold allows easy access to the roof and sides of the tunnel for the installation team.

The joints were welded by automated double wedge welding machines. Photograph below shows fixed liner awaiting welding of the joints.



The lining installation was phased over 8 months to accommodate the availability of sections of tunnel.

Engineered Linings was responsible for the supply and installation of all geosynthetic materials.

OTHER
TUNNELS

- Lesotho Highlands Project - Water Transfer Tunnel - 6 800m² - Carbofol CHD 2,0mm