

Tunnel Metro Helsinki, Finland

POLYUREA

Client	Helsingin Metro OY, Helsinki
Consultant	--
Coating Contractor	TEKE OY, Valkeala
Project	Tunnel Coating & Sealing Helsingin Metro OY
Area	approx. 8.000 m ² tunnel sealing and Internal coating
Construction	December 2011
VIP System	QuickSpray Industrial



Project Description

The Helsingin Metro Authority had extensive problems with water ingress in their tunnel network. It was therefore searching for an internal waterproofing system to control the flow of water in ingress areas and to waterproof the ceiling and walls permanently. On this basis TEKE OY the VIP approved applicator for Finland advised the use of Polyurea as a new variant for permanent waterproofing in existing metro tunnels. It was also deemed appropriate for any new tunnel developments for Helsinki's new metro lines. To save time and money the customer chose the use of QuickSpray Industrial (aromatic) a 100% Polyurea 2-K coating based on Prepolymer and Polyamine technology.

Work was carried out in 3 easy steps:

1. The tunnel ceilings and walls were cleaned and blasted simultaneously with the Sponge Jet System to SA 3 grade.
2. Any water ingress areas were afterwards treated with TEKE's special crystallisation method.
3. Afterwards the aromatic Polyurea QuickSpray fast was applied by Graco Reactor HX-P2 Hotspray machine .

These steps could be completed in a very short space of time. By using the Polyurea System the application could be done in steps in the short closing periods during the night, without disrupting the normal Metro traffic.

