WAYOUT Evacuation Systems Pty. Ltd.

World Leaders in the manufacture and supply of Luminous Products using Lumink Technology.

Melbourne Underground Rail Loop (MURL)

An extraordinary innovation as used by Mainco for photoluminescent linemarking in the Melbourne Underground Rail Loop

The contract for the upgrade of emergency signage and linemarking was let by Mainco the infrastructure maintainers for the City of Melbourne Rail Network. The project was managed by Jim Paneras.

Requirements

The original contract called for 3 metre by 0.5 metre marine grade aluminium signs to cover the existing signs painted onto the concrete walls of the tunnels. They were also after a continuous line to be painted onto the walkway alongside the railway track. Way Out Evacuation Systems submitted a tender based on the original specification and a non conforming specification which included the use of A2 Lumink panels as supplied to Railcorp in NSW and the painted line to be luminous enabling the egress route to be visible in smoke or darkness. The authorities went with the alternate tender not only because it was operational in all conditions but it was also more cost effective.

Design Characteristics

At 50 metre intervals throughout the tunnel an emergency fluorescent light is mounted to a Unistrut. Attached to this Unistrut is the Lumink sign which designates the location and metreage from station to station. The panel is 2mm marine grade aluminium with a Lumink coating. The text and pictogram depicting the universal running man symbol is reversed out of a 3M reflective black vinyl film which makes the sign highly visible under normal conditions.The luminous component excels when these conditions no longer prevail. Anti graffiti coating is overprinted onto the panel.

The 50mm luminous line with reflective beads is painted onto the 30cm concrete walkway as a visual guide for maintenance staff or commuters in the case of a breakdown. A specially developed water based paint was sprayed directly onto the concrete through a modified line marking machine at the rate of 1 km per hour. Four days prior to this the surface had been washed down with a high pressure water jet blaster.

Results achieved

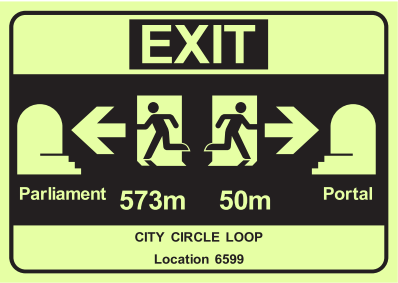
The MURL now have the most highly developed emergency signage and pathway system installed anywhere in the world. All lights have an emergency power supply that will last for 2 hours if the main source fails. All signage is visible whilst the lights are on.If the emergency power fails the reflective component is visible with the aid of torchlight and the luminous component is visible in total darkness. The luminous and reflective line is visible under the same conditions with the added benefit of assisting in guiding commuters to the nearest exit points in the case of smoke logging. Prior to the development of the line marking machine and modified paint this outcome could not be achieved as there is only a 4 hour window during the early hours of the morning when the trains do not run. Other countries around the world have already expressed interest in following the path created by the MURL.

Normal Conditions

In smoke darkened conditions

In power failure conditions

13 kilometres of luminous low location line marking in just 6 days!



Signage detail

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