

LEONI *projectreport*

Safety technology 6/2007



Renovation of the Metro Amsterdam

The "Tunnelwerk 2008" project is divided into the renewal of train tracks and the improvement of the safety within the tunnel

Since 2005, Amsterdam has adopted a new safety concept for tunnels. The renovation project of a 30 year old tunnel was carried out under consideration of this safety concept. A key issue for this project was to find out the most convenient year period to complete the works.

A low passenger traffic frequency is generally observed during July and August: so, a shutdown of the Oostlijn during this period was decided. It was a challenge to carry out the required works during 8 weeks. Increasing the safety in Oostlijn included an elevated escape path, lighting and passenger guidance along the tunnel.

Business Unit Infrastructure & Datacom

LEONI Studer AG
Herrenmattstrasse 20
4658 Daeniken · Switzerland
Phone +41 (0)62-288 82 82
Fax +41 (0)62-288 82 83
infrastructure-datacom@leoni.com
www.leoni-infrastructure-datacom.com

LEONI Studer GmbH
Stahlbaustrasse 56
64560 Riedstadt-Goddelau · Germany
Phone +41 (0)6158-9208-0
info@leoni-studer.de

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The project "Tunnelwerk 2008" is a part of a major renovation of the Oostlijn Metro in Amsterdam.

The requirements

Safety cables with circuit integrity according to DIN 4102-12, laid in robust conduits and fulfilling the same fire requirements, were specified for the electrical installation.

LEONI safety solutions

Cable Masters, our partner in the Netherlands, supplied the safety products for the tunnel evacuation system, which included:

- 6,000 m BETAfixss® G-conduit
- 15,000 m BETAflam® NHXH power cables and
- 10,000 m BETAflam® JE-H(St)H signal cables, all with reduced smoke and corrosivity in case of fire.

In addition, the BETAflam® E60 and E90 safety cables of LEONI Studer are an integral part of the new built LED passengers guidance system, which task is to channel passengers to the nearest emergency exit. It is a vital function in the tunnel safety concept: the guidance system needs to work under all conditions.

Forward-looking customized installation

LEONI safety solutions accommodated the Amsterdam tunnel project specific requirements: narrow inner space and limited time frame for works completion. BETAflam® cables with its optimized sizes and the BETAfixss® laying system with its wide variety and components flexibility provided an easy and quick installation.

The benefits for all involved parties in the project were remarkable. All Metro stations will be, during year 2009, upgraded to include the same safety aspects as in Oostlijn. Cable Masters, LEONI Studer, MNO-Vervat and Koldijk are planning to repeat the successful experience and carry out together the planned parts of the project.