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EUPEN AG
cable



SMART Tunnel Kuala Lumpur



STORMWATER MANAGEMENT
AND ROAD TUNNEL (SMART)
Flood and Traffic Congestion Solution for the City Centre

Eupen delivers +30km Radiating Cable
TETRA optimised Radiating Cable

Customer

Syarikat Mengurus Air Banjir dan Terowong Sdn

Situation

SMART is an acronym for Storm-water Management and Road Tunnel, a project under the Malaysian Federal Government initiated to alleviate the problem of flash floods in Kuala Lumpur and to reduce traffic jams during rush hour. There are two components of this tunnel, the storm-water tunnel and motorway tunnel. It is the longest multi-purpose tunnel in the World. The tunnel enables floods to bypass the centre and what makes this Solution extraordinary is the fact, that two levels for Vehicle Traffic are incorporated into the Tunnel, allowing three types of operations. The first mode, under normal conditions where there is no storm, no flood water will be diverted into the system. When the second mode is activated, flood water is diverted into the bypass tunnel underneath the motorway tunnel. The motorway section is still open to traffic at this stage.

When the third mode is in operation, the motorway will be closed to all traffic and water-tight gates will be opened to allow flood waters to pass through the motorway section as well.

The motorway will be reopened to traffic within 48 hours of closure.



Challenges

Baring in mind that the two levels of Road Sections will be submerged, all Radiating Cables and their Connectors had to be proven fully watertight and equivalent to withstand water depth to 35m for 1 hour and a performance guarantee in excess of 15 years was required.

At the same time, multi-frequency, multi-operator RF coverage, including FM-Radio with "Break-In" Facility, had to be reliably broadcast into the Tunnel, as the FM-Radio would be the sole means to alert drivers to possible incidents when in the Tunnel Area.

Solution



EUPEN RMC-Type Radiating Cables are used to provide seamless, fully redundant Radio Communications coverage throughout the Tunnel System and approach roads for:

VHF FM Broadcast, allowing local "override" of the Program, for 7 commercial Radio Stations

VHF Maintenance & Tunnel Management

UHF Emergency Services Radio Systems, including TETRA

GSM Public use Mobile Networks

Moreover, EUPEN's specific cable design and fully watertight connector and accessories product range conform to IP68, meeting the most stringent water-tightness tests, allowed to offer a fully and rugged transmission solution for this harsh environment.

Contact

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