CASE STUDY

SAFETY CABLE FOR MUNICH'S UNDERGROUND RAILWAY

Munich's Underground Railway Department has trusted Datwyler with the safety cable for the extensions to lines 3 and 6. In the north of Munich a total of 100 kilometres of safety cable has already been laid. Many stretches underneath the railway stations are equipped with so-called "Hermann" cable supports.

In 2001 Munich's Underground Railway Department started the extensions of the lines 3 and 6. The aim of these extensions is to provide better connections to the Garching research site and the Moosach district.

Most of the heavy duty cables for the new stretch of line 3 come from Datwyler. In the north of Munich a total of 100 kilometres of safety cable has already been laid. These are halogen-free cables and, in case of fire, are guaranteed to function as designed for at least 30 minutes.

Datwyler Pyrofil safety cables are being installed in the new sections of the underground railway and are used, among other things, for emergency lighting, lifts and emergency power supply. An important requirement for this is that the cables have been awarded the necessary test certificates for use with different cable mounting systems and trays. In addition they offer the advantage of large installation lengths between mounting clamps (up to 1.20 meters when laid individually).

Many stretches underneath the railway stations are equipped with so-called Hermann cable supports from Datwyler. "Safety cables equipped with these multi-cable supports for cable installations with functional integrity can be installed efficiently and cost-effectively", explains Johannes Peter, owner of Elektro Peter.

Emergency power supply cabling

Elektro Peter is responsible for the mounting and installation of the electrical plant. The laying of emergency power supply cabling is very demanding. This involves a six centimetre thick safety cable of type Pyrofil Keram (N)HXCH 4x185/95 FE 180/E30 which has to be laid at a height of approximately five metres, from station to station. Because of its halogen-free ceramic insulation this cable is relatively light; however, it still weighs around eleven tons per kilometre.

Safety cable systems from Datwyler fulfil state building regulations, which stipulate that the functional integrity of the total length of the installation must comply with the DIN 4102-12 requirement of at least 30 minutes circuit integrity for all electrical plant.

Avoid or reduce damages

It is in underground railway tunnels that safety cable systems make an important contribution towards minimising the spread of fire. On the one hand they supply the installed safety systems during evacuation of the passengers over an adequate period of time. On the other hand they help health and material damage to be avoided or at least reduced.

Safety cables from Datwyler are used everywhere where large numbers of people gather and where there are very high requirements for protection from fire: underground railways, train stations, airports, offices, hospitals, hotels and sports stadiums, as well as concert halls and theatres.

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