

Cable safety: fixing cables securely

The Technical Regulations team was shocked to be notified of the untimely death of Mr Peter Paterson, who was killed on 16th August 2010 after being struck by six armoured electrical cables that broke free from a vertical cable tray situated 55 feet above in the roof area. Mr Paterson was unloading a truck that was parked at a loading bay when the incident happened.

Given that this is an area covered by The IET Wiring Regulations, the national committee responsible, JPEL 64, discussed at their February 2014 meeting whether adequate regulations exist for the securing of cables. The underlying activity leading to Mr Paterson's death was a course of work that had been carried out at the warehouse, during which time some armoured cables in the ceiling had been removed. The remaining cables had not been suitably secured, the fixings subsequently gave way and the cables fell, striking Mr Paterson and resulting in his untimely death. The question put to the Committee Members was whether the Regulations provide enough clarity on how cables should be secured.

After studying the circumstances of Mr Paterson's death, and the Regulations that underpin the securing of cables, Committee Members were in agreement that the following Regulations for the installation and fixing means of cables within BS 7671:2008(2013) are sufficient:

Regulation 134.1.1

Good workmanship by competent persons or persons under their supervision and proper materials shall be used in the erection of the electrical installation. Electrical equipment shall be installed in accordance with the instructions provided by the manufacturer of the equipment.

Regulation 522.8.4

Where the conductors or cables are not supported continuously due to the method of installation, they shall be supported by suitable means at appropriate intervals in such a manner that the conductors or cables do not suffer damage by their own weight.

Regulation 522.8.5

Every cable or conductor shall be supported in such a way that it is not exposed to undue mechanical strain and so that there is no appreciable mechanical strain on the terminations of the conductors, account being taken of mechanical strain imposed by the supported weight of the cable or conductor itself.

What does this mean for electricians?

Electricians and installers need to be aware that the Wiring Regulations do not provide detailed guidance on the installation and fixing means of cables. It is imperative that each cable is assessed appropriately to ascertain the unique method by which that cable should be fixed.

The case is a reminder of how quickly safe working conditions can be compromised, whether as a result of negligence – for example, not properly following the regulations – or as a result of outside interference in an environment – for example, theft of cables. Any suspicious activity should always be reported and a robust assessment of all possible resulting risks should be performed where possible.

Where can you get more guidance about how to secure cables?

See Guidance Note 1 Selection and Erection for more details.