

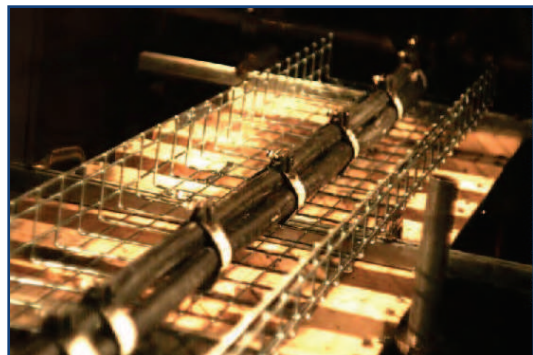
SWCT Technical Information

Short Circuit Testing

Marco Cable Management have carried out short circuit tests at an independent laboratory in Europe in order to prove that their steel wire cable tray (SWCT) has been designed and manufactured with sufficient strength to withstand a short circuit fault.

Although the current British Standard that defines the manufacture of steel wire cable tray, BSEN61537:2007 (Cable Management – Cable Tray Systems and Cable Ladder Systems) does not include short circuit faults, the Marco SWCT has been tested in accordance with the standard that governs the manufacture of cable cleats, IEC 61914:2009 (Cable Cleats for Electrical Installations) in order to prove that the system can be used for installations where there is a fault requirement.

During the test, two lengths of MC106450 (106mm high x 450mm wide) SWCT were supported and attached at intervals of 1.5 metres to three pieces of unistrut supports. The trays were coupled together at 1/5th of the span (300mm from the support) using four MCQC (Marco Quick Couplers), on the walls and base of the tray. The cables used to carry the current for the short circuit were placed in a trefoil installation using Ellis Patent's 'stainless steel' Vulcan+ cleats positioned at intervals of 500mm along the length of the tray.



Testing in accordance with the standard IEC 61914:2009 clause 6.4.3, a current of 106KA was applied to the cable. An inspection of the test object then confirmed that there had been no damage to either the couplers or the tray with both appearing to be in the same state as prior to the tests taking place. In line with clause 6.4.4 another current of 106KA was again passed through the same test object. with an inspection once more confirming that there had been no damage to the system.

Managing Director Ian MacGregor was pleased with the results: 'At Marco we're delighted with the outcome of the testing as we can now prove what we've always expected. The tests confirm that our SWCT is produced with enough strength and quality to withstand short circuits, enabling the system to be specified on a much wider range of electrical installations.'