MT Supertube in ground-breaking application at Tate Modern extension

Marshall-Tufflex's MT Supertube is at the heart of an iconic London development being hailed as Britain's most important new cultural building for almost 20 years.

Tate Modern's new extension, the £260m Switch House, required a highly creative approach to the installation of electrical services in a concrete core that rises through the centre of the 10-storey building, designed by internationally-renowned architects Herzog & de Meuron.

London-based contractors REL Building Services ruled out the use of traditional galvanised conduit as too costly and unworkable, opting instead for Marshall-Tufflex's MT Supertube and in doing so breaking new ground in the application of the product. The cable management – carrying power, lighting, data, fire alarms, security, access control and CCTV services – was encased within the building's concrete core and delivered the architectural vision for flush-mounted electrical accessories without the use of voids for cable concealment in floors, walls or ceilings.

Steve Jamieson, REL Technical Manager, said: "Only a flexible solution like MT Supertube could have been used to deliver this installation as it allowed the team to bend lengths of conduit to fit into position around the steelwork and maximised the lengths we could use without a termination.

"MT Supertube's smooth inner surface also allows cables to be inserted using a traditional draw wire, enabling cable pulls of up to 50m in length through a tube with no fittings. This minimises the risk of cables snagging during the build or any future electrical refurbishment, which would not have been possible using a traditional galvanised conduit and fittings arrangement."

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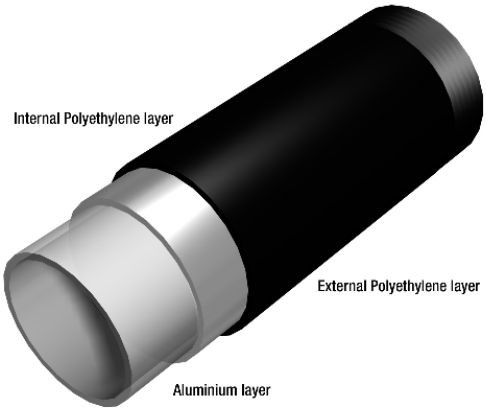
Marshall-Tufflex
Cable Management

MT Supertube is a strong, robust, lightweight three-layer tube-style conduit pliable by hand. The system was fabricated on deck at site and laced through the steel rebar network. Cable ties secured it to the rebar. Insulation tape was applied to each conduit connection over a 50mm width each side to ensure moisture resistance.



"We allowed an excess of around two metres on each length to protrude beyond the concrete pour so that we could simply connect the next sections to the existing installation after each concrete pour had cured," said Mr Jamieson.

Jon Chamberlain, Marshall-Tufflex UK Sales Director, praised the project for utilising MT Supertube in such an innovative manner: "This is a stand-out application for our product and really showcases what can be achieved when interdisciplinary teams work closely together and think outside the box to solve specification dilemmas. It also shows just how beneficial considering the electrical specification very early in a project can be. MT Supertube matched the electrical infrastructure requirements of Switch House perfectly. It's a brilliant project."

Electrical wholesaler Medlock Electrical Distributors, Waltham Cross, supplied the MT Supertube. Concrete formwork contractor was Byrne Group.

Contractor cost & labour saving example *(based on contractor purchase price)*

Costs calculated on using 100m of 20mm conduit with 8 off 90° bends and estimated manpower costs of £30 per hour.

Galvanised steel
Material cost @ £2.20 per metre + fittings = £230
Labour @ 30mins per metre = 2 metres per hour
50 hours @ £30 = £1500
Galvanised steel overall costs = £1730

MT Supertube
Material cost @ £2.75 per metre + fittings = £288.71
Labour @ 10mins per metre = 6 metres per hour
16.67 hours @ £30 = £500
MT Supertube overall costs = £788.71

The savings on this job amount to £941.29
54% cheaper than galvanised steel

It is also possible to reduce overall project costs by using MT Supertube as it can be bent into position by hand thus reducing the need for as many fittings.

Visit www.marshall-tufflex.com to find out more about MT Supertube

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