

Article Overview

Fireproof cable trays are installed by selecting appropriate trays, securing them with attachment strips, applying fireproofing materials, and sealing all penetrations to prevent fire and smoke spread.

1. Planning and Tray Selection

- o **Route Planning:** Align cable tray routes with the building structure, avoiding unnecessary crossings or detours. Keep paths as short and straight as possible to reduce cable loss and simplify maintenance. Segregate power and signal cables using separate trays to minimize interference .

- o **Tray Material:** Use painted steel or galvanized trays indoors, hot-dip galvanized or stainless steel outdoors, and aluminum alloy or fiberglass-reinforced plastic in corrosive or high-humidity environments . Select tray width and thickness based on cable quantity and weight to ensure mechanical strength.

2. Tray Installation and Attachment

- o **Cutting Boards:** For fireproofing, cut boards for the sides, bottom, and top of the tray according to tray dimensions plus additional thickness for fireproofing layers .

- o **Attachment Strips:** Secure strips along the top and bottom of the tray using metal banding, spaced approximately 24 inches apart. Strips back up all bottom butt joints and overlap by at least 1.5 inches .

- o **Securing Sections:** Attach bottom sections to strips with staggered screws and side pieces to bottom sections using screws spaced 8 inches apart and 1.5 inches from butt ends .

3. Fireproofing Materials and Application

- o **Coatings and Tapes:** Apply fireproof coatings such as FLAMMOTECT-A or fire protection tapes like DG-CR 0.7 to form a protective shield around cables and trays, preventing flame propagation and maintaining cable functionality during fire .

- o **Firestop Packs and Caulks:** Use firestop packs, firestop mastic, or intumescent caulks to seal gaps at wall, slab, or shaft penetrations. Ensure gaps between packs and cables do not exceed 1 cm², and packing thickness is at least 24 cm .

- o **Backing Plates:** For large openings, install fire-resistant backing plates before sealing to provide structural support .

4. Firestopping at Penetrations

- o **Slab Penetrations:** Provide 20-30 mm of firestopping and install a fire-support plate at the top. Ensure sealing is tight, without cracks or voids .

- o **Wall and Shaft Penetrations:** Seal all gaps inside and around metal trunking completely, and use cover plates

Installation of Fireproof Cable Trays

of consistent dimensions to close openings .

o UL-Listed Systems: Follow manufacturer guidelines for firestop pillows, putty, or caulks to meet required F- and T-ratings for walls and concrete slabs .

5. Inspection and Coordination

o Verification: Confirm that all cable trays are installed according to design criteria and that fireproofing materials are applied correctly .

o Environmental Conditions: Ensure installation occurs above freezing and in well-ventilated areas. Coordinate with other construction activities to avoid retrofits that could compromise fireproofing integrity .

By following these steps--careful planning, proper tray selection, secure attachment, application of fireproofing materials, and thorough firestopping--fireproof cable trays can be installed safely and effectively, ensuring compliance with safety standards and maintaining system reliability.

Firestopping through concrete barriers, installing wall boxes and using cable trays are the most common problems in this area.

For large openings, install a fire-resistant backing plate before sealing. Layout and positioning must be reasonable to

In accordance with its continuous improvement policy, Legrand reserves the right to change the specifications and illustrations

Firestopping Cable Installations Don't introduce fire hazards when working on a new project. Ensuring your cable runs don't

Discover essential fire safety practices for cable tray systems with Hutaib Electricals, a trusted cable tray

Learn how Cable Trays and Fire Protection Systems work together. They protect cables and help fire alarms,

A practical guide to product selection and installation This guide for engineers and installers has been developed by ABB as a

Cable tray through fire rated wall The most common solution for the fire protection of cable

Cable ladder and cable tray systems The following recommendations are intended to be a practical guide to ensure

Installation of Fireproof Cable Trays

Step-by-step guide to safe cable tray installation for industrial wiring. Improve safety, prevent overheating, and ensure

Use this product in new construction or update your fire protection in a renovation - the optional mounting bracket opens easily

The following charts give the number of 3M pillows needed to completely firestop an opening that cable tray passes through.* Two

Shortest and Straightest Path: To reduce cable loss and simplify maintenance, cable routes should be as

This article will delve into the best cable tray materials for fire-resistant installations, offering

In the power industry, the installation of fire-blocking sections (fire-proof sections/fire-proof

Sinisi Solutions works with major utilities and clients to design cable enclosures that protect critical cabling

Web: <https://millstraining.co.za>

