

Fireproofing and sealing function of cable trays

Article Overview

Fireproofing and sealing of cable trays involves using intumescent coatings, firestop pillows, and certified sealing materials to prevent flame propagation and maintain cable functionality during a fire.

Fireproofing Cable Trays

Cable trays must be protected to ensure electrical safety and system reliability in case of fire. Fireproofing can be achieved using coatings, tapes, or fire-resistant materials that form a protective barrier around cables. Products like FLAMMOTECT-A coatings and DG-CR 0.7 fire protection tapes provide a robust shield against flames, heat, and environmental factors such as UV radiation, moisture, and chemicals, ensuring cables remain operational during a fire. These solutions are suitable for indoor and outdoor installations, including high-risk areas like hospitals, power stations, and industrial plants.

Sealing Cable Tray Penetrations

When cable trays pass through walls, floors, or slabs, openings must be sealed with firestopping materials to prevent fire and smoke spread. Common methods include:

- o Intumescent fireproof pillows: Products like AF BAGS are certified under EN 1366-3 for up to EI 240 fire resistance. They expand under heat to seal gaps around cables, requiring minimal depth (e.g., 120 mm for cables up to 21 mm diameter) and are easy to reposition for maintenance.
- o Firestop packs and mineral wool: For larger openings, a fire-resistant backing plate or mineral wool can be installed before sealing with firestop packs or mastic to ensure complete coverage.
- o Moldable putty and caulks: UL-listed products like 3M Fire Barrier Moldable Putty or IC 15WB caulk adhere to metallic and non-metallic surfaces, expanding under heat to block smoke and fire while allowing retrofitting and reuse.

Installation Guidelines

- o Tray layout: Keep cable routes short, straight, and segregated between power and signal cables to reduce interference and simplify maintenance.
- o Tray material: Use galvanized or stainless steel for outdoor use, painted steel for indoor, and aluminum or fiberglass-reinforced trays in corrosive or high-humidity environments.
- o Firestop placement: Ensure tight, crack-free sealing around all penetrations. Gaps between firestop packs and cables should not exceed 1 cm², and packing thickness should meet the rated fire resistance.
- o Maintenance: Fireproof pillows and caulks should allow easy repositioning or replacement to accommodate cable modifications without compromising fire protection.

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Compliance and Certification

All fireproofing and sealing materials should comply with relevant standards such as EN 1366-3, UL-listed systems, and local building codes. Proper documentation ensures that cable trays maintain rated fire resistance, supporting safe evacuation and continued operation of critical systems during a fire. By combining fire-resistant coatings, intumescent pillows, and certified sealing materials, cable trays can be effectively protected against fire, smoke, and heat, ensuring both safety and operational continuity.

Firestopping has three elements: the fire-rated walls, partitions, floors, or ceilings that have been penetrated; the cables, cable trays,

Why Heat Insulation Matters for Fire Safety and System Longevity Thermal insulation is not merely an add-on--it's a

It specifies which materials and components must be fireproof and to what extent in order to enable safe firefighting and evacuation.

Fireproofing prevents the spread of fire through cable trays and conduits, maintaining critical systems such

The mostly combustible cable sheaths and insulation allow a fire to spread along the cable at rapid speed. Our tested solutions for

Fire Protection: Cable Trays in Oil and Chem Refineries One of the most significant fire

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

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

The fire protection of electrical raceways or cable trays that act as conduits for cables supporting these process critical

Cable tray type, ducts and conduits Although the type of cable and conductor is the determining factor in the fire

The product is certified for "small" - "medium" and "large" cable penetrations, to create a fireproof seal for cables with a diameter of

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Firestop Cable Coating is a white, water based synthetic resin which is applied by airless spray, or painted onto cables & cable trays

Do you know everything there is to know about the importance of fireproofing electrical cable trays? Look no further,

Sometimes the entire cable tray is requested to be protected from fire, ensuring the

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

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

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