Cable tray encasing a round column



Overview

Cable tray installed in a hazardous location must contain only those cables that are appropriate for this type of environment as defined in Chapter 5 of the NEC.

Key Takeaways

Cable trays can be routed around a round column using curved sections, custom elbows, or wire mesh trays to maintain support, proper bend radius, and accessibility.

Choosing the Right Cable Tray Type

For routing around a round column, wire mesh (Cablofil) or ladder-type trays are often preferred due to their flexibility and ease of modification. Wire mesh trays can be bent or cut on-site to follow the column's curvature, while ladder trays can use prefabricated elbows or segmented bends to navigate around obstacles. Solid-bottom trays are less flexible and may require custom fabrication if used around a column.

Installation Techniques

Curved or segmented elbows: Use pre-manufactured 90° or 45° elbows, or create segmented bends with multiple short straight sections to approximate the curve around the column. Custom supports: Suspend the tray from the ceiling or attach brackets to the column to maintain proper alignment and support. Ensure the tray is securely fastened to prevent sagging or stress on cables.

Maintain bend radius: Especially for fiber optic or coaxial cables, ensure the tray's curvature does not exceed the minimum bend radius to prevent signal loss or cable damage. Wire mesh flexibility: Wire mesh trays can be cut and bent to wrap partially around the column, providing a continuous path without sharp angles.

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Additional Considerations

Accessibility: Ensure the tray remains accessible for maintenance and inspection, even when routed around the column. Ventilation: Open designs like ladder or wire mesh trays allow heat dissipation, which is important if the column area is enclosed or tight. Aesthetics: For visible areas, consider using covers or painted finishes to match the surrounding structure.

Load capacity: Verify that the tray and supports can handle the weight of the cables, especially when bending around a column, as stress points may increase. By selecting a flexible tray type and using curved sections or wire mesh modifications, a cable tray can be effectively routed around a round column while maintaining safety, cable integrity, and accessibility.

Article Content

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Cable tray installed in a hazardous location must contain only those cables that are appropriate for this type of environment as defined in Chapter 5 of the NEC.

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Cable Tray Types and Sizes

The channel cable tray features a simple, U-shaped or channel-like structure that provides a compact and straightforward solution for supporting electrical cables.

B-Line series Cable Tray Design Considerations

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Cable Tray Fill Rules (NEC 392)

Cable Tray Fill and Installation per NEC 392 Cable tray types, fill rules for single-conductor and multiconductor cables, ampacity derating, separation requirements, and when to use

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Cable Trays and Accesories

SFSP manufactures a wide range of products capable of providing the characteristics which respond to the proposed application, along with quality of

Best Practice Guide to Cable Ladder and Cable Tray Systems

Any vertically orientated component, whether cable ladder, cable tray or support, acts structurally as a column; it is not usual to consider cable ladder or cable tray in this way because they are not

Cable tray

ABB designs and manufactures cable tray systems, including perforated tray, cable ladder, channel tray and strut (metal framing), directly from production facilities in Canada and Saudi Arabia.

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CABLE TRAY SYSTEMS GUIDE

Cable Tray Systems Guide HUBBELL Hubbell Wiring Device-Kellems and Hubbell Premise Wiring are divisions of Hubbell Incorporated, a U.S. headquartered manufacturer with over 130 years of

Cable Tray

Hello there. I am designing a 3D frame inside of a building to be used to support a cable tray running across the length of the building. The cable tray runs the entire length of the 3D frame I

Cable Trays

Cable trays are systems that distribute bundles of insulated electrical cables from power supplies to electrical equipment, consisting of metallic trays supported from structures like walls and ceilings.

Column Casing

Providing architects, specifiers and contractors with the perfect solution for concealing structural steelwork with column casings.

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Fire Rated Cable Encasements: Invicta Durasteel

Our 4-hour fire rated cable encasements provide comprehensive fire and blast protection, shielding cables from fire and containing high voltage cable fires

Cable Tray SHIB NAL

Cable trays are not raceways, but they are treated as a structural component of a facility''s electrical system. Cable trays are a part of a planned cable management system to support, route, protect and

Tray Installations

Tray Installations The placement of cables, ducts, and conduits can be done using cable trays – for both outside plant (OSP) and interior spaces (ISP). This allows cables and ducts to be installed quickly

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