Cable tray cover plate construction process

Overview

1. The document outlines codes and standards that must be followed for design and construction of cable trays and their components.

Key Takeaways

Cable tray cover plates can be fabricated from sheet metal, cut to size, drilled for fasteners, and installed to protect and secure cables.

Materials and Tools

Material: Use sheet metal such as galvanized steel, aluminum, or PVC depending on environmental conditions and load requirements. Tools: Metal shears or saw, drill with appropriate bits, deburring tool, measuring tape, marker, bending brake (for flanged edges), and fasteners (bolts, nuts, or self-tapping screws),.

Fabrication Steps

Measure the Tray: Determine the width and length of the cable tray to ensure the cover plate fits flush over the tray edges. Cut the Sheet: Cut the sheet metal to the measured dimensions, allowing for flanges on the sides to secure the cover to the tray. Bend Flanges: Use a bending brake to create flanges along the edges of the cover plate.

Flanges typically range from 0. 5 to 1 inch to provide a secure attachment point. Mark and Drill Holes: Align the cover plate over the tray and mark the locations for fasteners.

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Drill clearance holes through the flanges to match the tray's side rails. Standard hole sizes are often 3/8” or 1/4” depending on the fasteners used. Deburr Edges: Smooth all cut and drilled edges to prevent injury and avoid damaging cable insulation.

Installation

Align the Cover: Center the cover plate over the tray, ensuring it is flush with the tray edges. Secure Fasteners: Attach the cover using bolts and nuts, or self-tapping screws through the drilled holes. Torque fasteners according to the tray manufacturer's specifications (e.g., 3/8” bolts to 19 ft-lbs),.

Check Stability: Ensure the cover is firmly attached and does not move under light pressure. Proper installation prevents cable damage, maintains system stability, and allows for easy maintenance.

Additional Considerations

Ventilation: For ventilated trays, consider perforating the cover to allow airflow while still protecting cables. EMI/RFI Shielding: Solid covers can provide electromagnetic interference protection for sensitive circuits. Outdoor Use: Drill weep holes in solid covers to prevent water accumulation if installed outdoors or in humid environments.

Compliance: Follow local electrical codes and NEMA standards for cable tray systems to ensure safety and reliability. By following these steps, you can fabricate and install cable tray cover plates that are durable, safe, and compliant with industry standards.

Article Content

Cable Tray Technical Guide A practical guide to product selection and ...

In designing supports for a cable tray system, consideration should be given to the loads associated with future cable additions and any additional loading that may be applied to the cable tray system (e.g.,

Cable Tray Design and Standards Guide

1. The document outlines codes and standards that must be followed for design and construction of cable trays and their components. Standards listed include those for materials, rolling and cutting

GUIDE CABLE TRAYS TECHNICAL

NEMA VE 1-2017 Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian Electrical Code, Part I and the National Electrical Code®

Full cable tray systems specification document

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The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, tests and services to install complete cable tray systems as shown on the

Cable tray manual

There are several sections which cover the requirements for the use of single conductor cables in cable tray even though they only comprise a small percentage of cable tray wiring systems.

Perforated Cable Tray Specifications

The document details the specifications and manufacturing quality plan for perforated cable trays and covers ordered by K Kumar Raja Projects. It includes technical particulars such as dimensions,

Best Practice Guide to Cable Ladder and Cable Tray Systems

This publication is intended as a practical guide for the proper and safe* installation of cable ladder systems, cable tray systems, channel support systems and associated supports.

Document DICOS

Tray-rated cables are required for cable tray installation, so using a channel cable tray system or wire mesh system for exits may be more convenient and economical.

Guide to cable support systems

The total system weight, including cable tray, cover and ballast block, is calculated taking the gravitational acceleration and safety factor into consideration.

ITER Cabling Handbook

All PIC cable trays shall be equipped with metallic cover, whilst non-PIC cable trays not required cover from safety point of view. The Non-PIC sensitive trays are covered for Electromagnetic compatibility

Full cable tray systems specification document

All covers and splice plates must also be hot dip galvanized after fabrication; mill galvanized covers are not acceptable for hot dipped galvanized cable tray. All hot dip galvanized after fabrication steel

Method Statement for Installation of Cable Tray or Trunking

Use fish plate to joint & align cable tray where cable tray passes through fire rated wall, approved fire shop drawing installation method shall be followed. On completion of cable tray/ ladder

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Mastering Cable Tray Installation | Step-by-Step Guide for a Seamless ...

Learn how to install cable trays correctly. Get the ultimate step-by-step guide on setting up a seamless and reliable cable management system.

Cable Tray Technical Guide A practical guide to product selection and ...

SOLID-BOTTOM CABLE TRAY Providing additional cable protection, solid-bottom cable tray is sometimes preferred to support and protect numerous small instrumentation and control cables.

GUIDE CABLE TRAYS TECHNICAL

In accordance with its continuous impro-vement policy, Legrand reserves the right to change the specifications and illus-trations without notice. All illustrations, descriptions and technical information

METHOD STATEMENT FOR CABLE TRAY INSTALLATION

1.0 This method statement will serve as a minimum guideline to carry out the Cable Tray Installation activities for commercial buildings, plants and refineries in accordance with Project Drawings and

Installation of Cable Tray, Trunking And Accessories

Before beginning installation, be sure that the method statement for installation of cable tray, trunking, and accessories is approved by the project and construction manager before the

CABLE TRAY INSTALLATION PROCEDURE

Cable trays shall be provided with covers where there is high risk of mechanical damage during normal operation or maintenance periods. Cover fabrication shall be the same as that of cable

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

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