Minimum thickness of angle steel for cable tray supports

Overview

Technical Specification for Cable tray installation and cable laying workContractor has to fabricate wall mounted support of MS angles (size 50 x 50 mm, 6m.

Key Takeaways

The minimum recommended thickness for angle steel used in cable tray supports is typically 1. 6 mm for light to medium loads, with thicker sections required for heavier loads or industrial environments.

Standard Guidelines

For general cable tray installations, mild steel (MS) angle supports with a thickness of 1. 6 mm are commonly used for supporting standard electrical and control cables. This thickness provides sufficient structural integrity for typical spans and load conditions in commercial or light industrial settings.

Factors Affecting Thickness SelectionLoad-Bearing Requirements: Heavier cable trays or densely loaded systems require thicker angle steel to prevent bending or deformation. For industrial environments with high mechanical stress, thicknesses of 2 mm or more may be necessary. Span Length: Longer spans between supports increase bending moments.

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Reducing span length or increasing angle steel thickness improves stability. Environmental Conditions: Corrosive or outdoor environments may require galvanized or stainless steel with adequate thickness to maintain durability over time. Compliance with Standards: Cable tray supports should comply with BS EN 61537 or equivalent standards, ensuring that the chosen angle steel thickness can safely support the intended cable load and any additional imposed loads such as wind, ice, or maintenance personnel.

Practical RecommendationsLight-duty installations (small cable trays, short spans): 1. 6 mm MS angle steel is sufficient. Medium-duty installations (moderate cable loads, longer spans): 2 mm MS or galvanized angle steel.

Heavy-duty or industrial installations (large cable trays, high vibration, or mechanical stress): 2. 5–3 mm or higher, depending on load calculations and span length. Ensure all fasteners, bolts, and nuts are compatible with the angle steel thickness to maintain structural integrity.

M8 high-tensile bolts are commonly used for 1. 6 mm to 2 mm supports.

Conclusion

While 1. 6 mm is the minimum thickness for standard cable tray supports, the final selection should consider load, span, environment, and compliance with relevant standards. For industrial or heavy-duty applications, thicker angle steel is recommended to ensure long-term stability and safety.

Article Content

Technical Specification for Cable tray installation and cable laying work

Contractor has to fabricate wall mounted support of MS angles (size 50 x 50 mm, 6mm thickness) for cable tray length ~ 150 M (layout as per Fig 1) at ~10M height as stated in the drawing at interval of

Guide to cable support systems

A key factor for the load capacity of the cable trays is (in addition to the support spacing and slant height) the material thickness, which varies ac-cording to type.

GUIDE CABLE TRAYS TECHNICAL

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®

Document DICOS

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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.

Cable Tray Support: Rod vs. Angle Steel

Learn about the different types of cable tray support, including rod supports and angle steel supports, and how to choose the right one for your electrical installation needs. Discover key

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 | PDF | Sheet Metal

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

Best Practice Guide to Cable Ladder and Cable Tray Systems

This guide covers cable ladder systems, cable tray systems, channel support systems and associated supports intended for the support and accommodation of cables and possibly other electrical

B-Line series pan tray catalog

Cable Tray Fittings are designed to support cables as they transition directions. Note: Perforated slot dimensions and patterns may vary depending on tray size and type. Solid and perforated bottoms

Cable Tray Installation Specifications | PDF | Sheet Metal

This document provides installation guidelines for cable trays, including: 1) Cable trays come in perforated and ladder types, with perforated trays made of steel sheets and ladder trays made of

QCS 2010: Cable Tray Specifications | PDF

It specifies that cable trays shall be constructed from hot-dipped galvanized mild steel with a minimum thickness of 1.5mm. Tray components must be accurately formed to tolerances with rounded edges.

B-Line series Cable Tray Design Considerations

As an industry leader in cable tray, Eaton offers one of the widest ranges of cable management solutions available in the market today with its B-Line series portfolio. With unmatched quality and service, we

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Cope Ladder Master Spec

Cable Tray Supports - Shall be placed so that the support spans do not exceed maximum span indicated on drawings. Supports shall be constructed from 12 gauge steel formed shape channel

Wire Mesh Tray Technical Guide

Per NEC 392, the national electrical code section for cable tray, all cable tray systems must be properly BONDED, per section 259.96. To meet this requirement, Cablofil recommends that UL classified

CABLE TRAY SYSTEMS GUIDE

Steel Ladder System Hubbell''s NEXTFRAME® Ladder Tray is the effective and widely used cable runway that supports and delivers bundles of cable between cabinets, racks, and closets, along

Criteria for Sizing, Designing, Installing and Supporting of Cable-Tray ...

9.7 Cable-Tray Support: Cable trays shall be fastened to support steel by using guides that allow for longitudinal movement. 9.7.1 Whenever possible, supports and hangers shall be designed to permit

TECHNICAL SPECIFICATION

GALVANISED CABLE TRAY SUPPORT SYSTEM (WELDED): Hot dip Galvanized MS channels and angles listed in the BOQ (Section- II) shall be manufactured as per details provided in this section.

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Do not use a cable tray as a walkway, ladder, or support for people; a cable tray is a mechanical support system for cables and raceways. Using cable trays as walkways can cause personal injury and can

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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This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

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