

Can electrical workers weld cable tray bends



Overview

If you must earth a tray for functional reasons (static discharge, RFI), do it at one end only. Bonding both ends can form a loop, increasing magnetic coupling and nuisance RCD trips.

Key Takeaways

Electrical workers can weld cable tray bends in certain situations, but it is generally preferred to use pre-fabricated bends or bolted connections to maintain structural integrity and comply with standards.

Field Fabrication and Welding

Cable trays, especially metallic types like steel or galvanized trays, can be fabricated in the field to fit specific layouts. Welding is sometimes used to attach MS (mild steel) support structures or bridge sections for cable trays, particularly when custom supports or long spans are required. For example, contractors may weld MS 'C' channels or angle supports to create a continuous tray run, after which the cable tray sections are bolted to these supports.

After welding, surfaces are typically coated with primer and enamel paint to prevent corrosion.



Pre-

Fabricated vs.

Field Bends

While welding is possible, most cable tray bends are pre-fabricated with specific radii (e.g., 12", 24", 36", 48") to ensure smooth cable routing and avoid sharp bends that could damage cables. Field bending by cutting and bolting straight sections together is also common, but this creates angular bends rather than smooth curves, which may not be ideal for cable pulling.

The NE

C 392. 18(A) allows field bends, but the method must not compromise cable integrity.

Considerations for Cable Protection

When welding or fabricating bends in the field, it is important to: Maintain the minimum bend radius for the cables to prevent insulation damage. Ensure mechanical support and strain relief for long cable runs. Use insulation or isolation materials at welded points to prevent electrical contact or corrosion.

Best Practices

Use pre-fabricated bends whenever possible for standard radii and easier installation. Reserve welding for structural supports or custom tray configurations where bolting is impractical. Always follow manufacturer guidelines and local electrical codes to ensure safety and compliance.

In summary, while electrical workers can weld cable tray bends in specific structural applications, the preferred approach is to use pre-fabricated bends or bolted connections to maintain proper cable routing, minimize sharp angles, and comply with standards.

Article Content

Earthing or Bonding a Metallic Cable Tray: What the Regs Really Say ...

If you must earth a tray for functional reasons (static discharge, RFI), do it at one end only. Bonding both ends can form a loop, increasing magnetic coupling and nuisance RCD trips.

Trunking Cutting Techniques Guide | PDF | Metalworking | Tools

The document provides instructions for forming various bends and joints in electrical trunking and cable trays. It describes: 1) How to mark and cut a right-angle internal bend in a section of trunking,

Cable tray manual

One of the most important features of cable tray is that tray cable can easily be installed in existing trays if there is space available. Cable tray wiring systems allow wiring additions or modifications to be

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

Cable tray is considered to be a system. It must provide continuous support for cables, and the electrical continuity of the cable tray system must be maintained.

Cable Tray Erection Method Statement | PDF | Welding | Construction

This method statement refers to various work procedures contained within Honeywell Automation India Ltd. and Design / Drawing / Contractual specifications / Customer Quality

Power Cable Tray Bending Radius Regulations : Electrical

Power cable installations inside trays must follow strict bending requirements to protect insulation, conductor integrity, and long-term electrical performance.

NEMA BI 50016-2024

343 WARNING—Do not use a cable tray as a walkway, ladder, or support for people; a cable tray is a 344 mechanical support system for cables and raceways. Using cable trays as walkways can cause

LEGRAND CABLE TRAYS TECHNICAL GUIDE

When fitting cable trays and their accessories, the products are cut on site to create changes of direction, adjust sections, etc. Damage can also occur during handling; as a result, both the

Cable Tray SHIB NAL

A generic guideline developed by the Cable Tray Institute indicates that cable trays should not be filled in excess of 40-50% of the inside area of the tray or of the tray's maximum weight based on the cable

Document DICOS

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

Cable Tray Installation Cost per Meter

Cable tray installation cost per meter varies by specifications; GangLong Fiberglass offers kits for raised floor system and facility needs. Cable trays are vital in electrical installations,

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.

Wire Mesh Tray Technical Guide

The cable tray's metallic structure and perfect electrical continuity, combined with a high-quality earth network, provides effective defense against electromagnetic interference.

90 Degrees Bends in Cable Tray

This video is to inspire them as they work towards 107 task B. In this video they are producing 90 degrees bend in steel cable tray. The learners fabricate (make) flat, internal and external 90

Bending Cable Tray

You can buy a manufactured 90 degree bend or make one on a cable tray bending machine but in this video I show you how to make one using a metal bar.

How to install industrial wiring systems

Tips and techniques for electrical apprentices learning how to industrial wiring systems such as steel conduit, trunking and cable tray.

Cable tray horizontal bends | Information by Electrical Professionals ...

Ladder style, 48" wide 6" tall aluminum I beam, open bottom 6" rung spacing. Manufacturer offers factory bends 30 degrees to 90. We are installing tray around a clarifier at a

How To Bend Cable Tray

Techniques for Bending Cable Tray When it comes to bending cable trays, there are several techniques that can be employed to achieve accurate and precise bends. The choice of

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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