

Article Overview

On-site fabrication and installation of cable trays involves careful material handling, support preparation, alignment, and adherence to standards to ensure a safe and reliable electrical distribution system.

Material Inspection and Preparation

All cable trays, ladders, and accessories must be inspected upon delivery to ensure compliance with approved material submittals and project specifications. Damaged or non-conforming materials should be reported and removed from the site immediately. Trays should be stored horizontally on flat surfaces with timber supports at regular intervals and protected from moisture and direct sunlight to prevent corrosion or deformation .

Support and Layout

- o Supports must be installed according to the approved shop drawings, ensuring proper spacing: typically 2 meters for perforated trays and 3 meters for ladder-type trays to avoid strain on the system .
- o Trays should be self-supporting and fixed to steel structures, concrete, or standard steel shapes using high-tensile bolts, washers, and nuts.
- o The layout should follow Issued for Construction (IFC) drawings, maintaining adequate space for cable installation and future maintenance .

Installation Procedure

- o Review Shop Drawings: Confirm tray routing, lengths, and locations.
- o Install Supports: Ensure stability and alignment of the tray system.
- o Assemble Trays: Connect sections using bolted mechanical connectors or bonding jumpers to maintain electrical continuity.
- o Cable Fixing: On horizontal trays, cables are grouped and secured every 2-3 meters; on vertical or edgewise trays, use stainless steel strips at 1-meter intervals .
- o Load Considerations: Design trays to carry the specified load (commonly 100 kg/m) and allow 20% extra space for future expansion .
- o Earthing and Bonding: Ensure proper grounding of all tray sections to prevent electrical hazards .

Standards and Best Practices

- o Follow IEC 61537, NEMA VE1/VE2, and project-specific standards such as ARAMCO for industrial installations .
- o Maintain thermal spacing to prevent overheating of high-voltage cables.
- o Use galvanized or stainless steel trays in corrosive environments to enhance durability .
- o Ensure trays are perforated or ladder-type to allow ventilation and prevent water retention .

Safety and Quality Checks

- o Conduct inspections according to the Inspection & Test Plan (ITP) before and after installation.
- o Verify alignment, support spacing, and secure connections.
- o Ensure stress-free cable laying to prevent damage to insulation or conductors .

Summary

Successful on-site fabrication and installation of cable trays requires careful planning, adherence to standards, proper material handling, and precise installation techniques. Following these guidelines ensures a reliable, safe, and maintainable cable management system for industrial and commercial electrical infrastructure.

We offer a wide range of cable tray systems to support tubing, electrical cables and instrumentation. Our

Cable Trays We are instrumental in designing and manufacturing an industrially verified range of

METHOD OF STATEMENT Cable tray fabrication and installation - Free download as Word Doc (.doc), PDF File (.pdf), Text File

INTRODUCTION The B-Line series Cable Tray Manual was produced by our technical staff. We recognize the need for a complete

We offer a wide Range of Cable Tray, Accessories & Support Systems for Light, Medium &

Cable trays for industrial and marine use. Includes distribution trays, cable routes and NATO-type models. Request a quote directly

EAE cable trays and ladders provide high-strength cable protection that protects the cables from external factors. EAE cable trays

Cable Tray Technical Guide A practical guide to product selection and installation This guide for engineers and installers has been

Below is a complete method statement for installation of cable tray, cable trunking and cable ladders in compliance with project

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

On-site fabricated cable trays

ABB designs and manufactures cable tray systems, including perforated tray, cable ladder, channel tray and strut (metal framing).

Wire Mesh Cable Tray Engineered for optimal airflow, this adaptable system minimizes heat buildup to

A cable tray is a type of a containment used to support insulated electrical cables used for power

Step-by-step on-site guide: learn how to plan, mark, support, and install cable trays correctly, from shop

Cable Trays are designed to meet most requirements of cable and electrical wire installations and comply to local and international

We at Integrated Steel hold a pan-Saudi Arabia presence to supply cable trays of the highest industrial standards to businesses,

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