

Specifications for New Material Cable Trays in Saudi Arabia



Overview

12-SDMS-06 This SEC Distribution Material Specification requirements for design, materials, manufacturing, indoor/outdoor Metallic Cable Tray System, inten.

Key Takeaways

Cable trays in Saudi Arabia must comply with SEC Clause 5. 14, NEMA VE-1, and IEC 61537 standards, with material, load, and corrosion requirements tailored to local conditions.

Standards and Compliance

New cable trays must adhere to Saudi Electricity Company (SEC) standards, specifically Clause 5. 14, which governs load distribution, grounding, and installation practices. Metallic trays should conform to NEMA VE-1 or equivalent IEC standards.

For all projects, SEC specifications take precedence over other codes in case of discrepancies. Additionally, SASO IEC 61537: 2018 covers both metallic and non-metallic cable tray systems.

Materials

Cable trays can be manufactured from a variety of materials depending on environmental conditions and load requirements: Hot-dip galvanized carbon steel with a minimum zinc coating of 600 g/m² for coastal corrosion resistance. Aluminum alloys for lightweight and corrosion-resistant applications. Stainless steel 304 or 316L for high-corrosion or direct seawater exposure.

Fiberglass reinforced plastic (FRP) for extreme chemical or marine environments. Optional polyester powder coating for additional protection.

Load Ratings and Dimensions

Cable trays are rated based on the total cable weight plus a 20% safety margin: Light-duty: 100–150 kg/m for data or small power cables. Medium-duty: 250 kg/m for standard power distribution. Heavy-duty: 400 kg/m for industrial or high-current applications.

Standard widths range from 100 mm to 900 mm, with custom bending options available for complex layouts. Load depths for ladder-type trays typically range from 75 mm to 150 mm, with rung spacing of 150 mm, 225 mm, or 300 mm.

Installation and Accessories

Trays must be properly grounded and supported according to SEC Clause 5. 14. Supports and brackets should comply with NEMA and IEC 61537 standards, allowing flexible installation and modification.

Accessories include bends, tees, reducers, couplers, and covers, with hinged or knock-out options for conduit integration. Trays should allow for easy cable pulling, inspection, and maintenance, with designs that prevent side rail rotation and ensure structural integrity.

Environmental Considerations

For coastal or high-humidity areas, hot-dip galvanized or stainless steel trays are recommended. For desert or high-UV exposure, powder-coated or FRP trays provide long-term durability. All materials must withstand extreme temperatures and mechanical stress typical of industrial and utility installations.

Summary

When specifying new cable trays in Saudi Arabia, ensure: Compliance with SEC Clause 5. 14, NEMA VE-1, and IEC 61537. Selection of materials suitable for environmental conditions (galvanized steel, aluminum, stainless steel, or FRP).

Correct load rating and dimensions for the intended application. Proper installation with certified supports, brackets, and accessories. Consideration of long-term durability, corrosion resistance, and ease of maintenance.

Article Content

12-SDMS-06

Scope This SEC Distribution Material Specification requirements for design, materials, manufacturing, indoor/outdoor Metallic Cable Tray System, intended to be used in the distribution network of the

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This document provides an overview of cable tray systems manufactured by SFSP. It includes information about their factories' locations in Saudi Arabia, UAE, Egypt, and Jordan. It also lists the

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Cable Trays

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Widths are available from 100mm to 900mm, with custom bending options for complex plant layouts. Material Durability: Zinc coating exceeds 600g/m² for coastal corrosion resistance. Load Capacity:

Aramco Cable Tray Inspection Guidelines | PDF

Aramco Cable Tray Inspection Guidelines The document is a checklist for inspecting cable tray materials upon receiving. It lists acceptance criteria for general electrical material requirements and specific

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Cable Tray System

Materials available is Aluminum, Mill-galvanized steel, Hotdipped galvanized steel, stainless steel 304/316, Painted, PVC coated, Powder coated and epoxy coated.
Ladder Tray used in applications

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