ZITHA TECH SPECIALTY CABLES (Pty) Ltd

National Standard Thickness of Cable Tray Raw Materials



Overview

An Overview of Cable Tray Thickness: Standards, Grades, and The thickness of a cable tray directly influences its load capacity, durability, environmental.

Key Takeaways

The standard thickness of cable tray raw materials varies by material type, typically ranging from 1.5 mm to 3.0 mm for steel, aluminum, and stainless steel trays according to national standards.Material Types and Thickness

Steel Cable Trays: In China, steel trays commonly use Q235A or Q235B steel, with Q235B containing titanium and niobium for added strength. The standard thickness for steel trays generally ranges from 1.5 mm to 3.0 mm, depending on the tray type (ladder, perforated, or solid-bottom) and load requirements . Galvanized steel trays may have slightly higher thickness to ensure corrosion resistance in harsh environments . Aluminum Alloy Trays: Aluminum trays are lighter and corrosion-resistant. Their standard thickness typically ranges from 1.5 mm to 2.5 mm, with thicker sections used for longer spans or higher load ratings . Stainless Steel Trays: Stainless steel trays, used in highly corrosive or hygienic environments, usually have a thickness of 1.5 mm to 3.0 mm, depending on structural requirements and load capacity .

National Standards and Compliance
• China: GB/T 34394-2017 specifies classification, testing, and installation requirements, including material thickness and load ratings .

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• United States: NEMA VE 1 and UL standards define material quality, thickness, and performance for steel and fiberglass trays .

• Europe: EN 61537 and EN 50102 cover mechanical strength, corrosion resistance, and fire safety, including minimum material thickness .

• Other Regions: Local standards in India (IS 8623, IS 13947), Australia/New Zealand (AS/NZS 2053, AS/NZS 61439), and the Middle East specify thickness based on environmental and load conditions .
Practical Considerations
• Load and Span: Thicker trays are required for higher loads or longer spans. Ladder-type trays often require thicker side rails than perforated trays.

• Surface Treatment: Galvanizing, powder coating, or VCR bimetallic coatings may increase effective thickness and corrosion resistance .

• Installation Environment: Outdoor or corrosive environments may necessitate thicker materials to maintain structural integrity over time. In summary, the national standard thickness for cable tray raw materials is determined by material type, tray design, load rating, and environmental conditions, with steel, aluminum, and stainless steel trays typically ranging from 1.5 mm to 3.0 mm in thickness according to GB/T 34394-2017 and other international standards .

Article Content

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Technical specifications for FRP cable tray refurbishment, including supply, erection, and cable re-laying. Compliant with NEMA FG-1

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There are many national standards for cable tray, and the technical specification of T/CECS 31-2017 steel cable tray is the latest

VOLUME II

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Cable Tray

Ladder Type Cable Tray with Accessories: Ladder type Cable Trays are fabricated out of Steel Sheets conforming to IS: 1079, 1973

12-SDMS-06

4.1.2 The Metallic cable trays shall be manufactured in accordance with NEMA VE-1 standard and/or equivalent IEC standard. 4.1.3

Cable Tray Specifications and Sizes

The data sheet provides specifications for standard cable trays and accessories. Standard cable trays are 2.5 meters in length with a

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