# National Standard for Hot-Dip Galvanized Cable Tray Wall Thickness

Article Overview

Hot-dip galvanized cable trays typically require a steel thickness of 1.5-3 mm with a minimum zinc coating of 45 um (325 g/m2), following GB/T 13912-2020 or equivalent standards.

Steel Sheet Thickness

The side plates and base plates of standard cable trays generally range from 1.5 mm to 3 mm in thickness, depending on the mechanical load and application environment. Heavier components, such as brackets and supports exceeding 3 mm, require higher coating standards to ensure corrosion resistance .

Zinc Coating Requirements

o Minimum Local Thickness: The zinc layer should be no less than 45 um (corresponding to 325 g/m2) for standard trays. For thicker components, a minimum of 55 um is recommended .
o Mean Coating Mass: This refers to the average zinc mass per unit area of the entire tray, which can be measured gravimetrically for quality control .
o Outdoor and Corrosive Environments: For trays exposed to marine or highly corrosive conditions, a coating mass of >=275 g/m2 (?39 um) is recommended as a cost-effective threshold to prevent rust during storage and transit .

Applicable Standards

o GB/T 13912-2020: Specifies hot-dip galvanized coatings on fabricated iron and steel articles, including local thickness, mean coating mass, and appearance requirements .
o ASTM A123/A123M: Defines zinc coating grades for hot-dip galvanized steel, commonly used in North America .
o NEMA VE-1 / IEC Equivalents: Used for metallic cable trays, ensuring mechanical strength, rigidity, and corrosion protection .

Additional Considerations

o Appearance: Coatings should be continuous, uniform, and free from defects such as bare spots, blisters, or excessive zinc dross .
o Repair: Any cuts or damaged areas must be repaired with compatible materials to maintain coating integrity .
o Electro-galvanized vs Hot-Dip: Hot-dip galvanizing provides superior corrosion resistance compared to electro-galvanized trays, especially for long-term outdoor or marine exposure . In summary, for compliance

with national and international standards, hot-dip galvanized cable trays should use steel sheets of 1.5-3 mm thickness with a zinc coating of at least 45 um (325 g/m2), increasing for heavier components or harsh environments, following GB/T 13912-2020, ASTM A123/A123M, or NEMA VE-1 standards .

The basic specification for hot dip galvanized coatings on iron and steel articles is defined by a single standard, (BS) EN ISO 1461,

Hot dipped galvanized after fabrication (H.D.G.A.F.) (see ASTM A123) steel, aluminum, and stainless steel cable tray and fiberglass

4. Zinc layer thickness requirements for zinc plating zinc layer thickness > = 12um, suitable for bridge

The standard stipulates that the zinc coating thickness for electro-galvanized trays and

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Hot Dip Galvanized (GI) Ladder Cable Trays are metal trays with a ladder-like design, coated with a layer of zinc through the hot-dip

Hot-dipped galvanized (HDG) steel and structural steel are recommended for metal cable trays. Aluminum cable trays have

Any further dimensions and specs can be arranged on request *for type R flanged minimum height is 50 mm *thickness 1.0 mm is

Hardware shall be zinc plated in accordance with ASTM B633 SC1 for pre-galvanized cable trays, or Chromium Zinc in accordance

llary action, to avoid any seepage of water through the lateral overlap. The feed material is manufactured out of nominal 0.45 mm

[Published October 2024] For the vast majority of applications, hot dip galvanizing can be simply specified using the following

GALVANISED CABLE TRAY SUPPORT SYSTEM (WELDED): Hot dip Galvanized MS channels and angles listed in the BOQ

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The ASTM specifications A143/A143M, ASTM A384/A384M, and ASTM A385 provide guidelines for preparing products

Cable tray installed in a hazardous location must contain only those cables that are appropriate for this type of environment as

National Electric Code (NEC) permits Cable Trays in a wide variety of indoor and outdoor applications. The NEC also permits Cable

The document provides technical specifications for perforated galvanized iron (GI) cable trays with tray covers. It outlines 5 key

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