Cable Tray Bill of Quantities Measurement Rules

Article Overview

Cable tray BOQ measurement involves calculating the total length of trays, number of supports, fittings, and accessories based on tray type, size, and installation standards.

Key Components of a Cable Tray BOQ

o Cable Tray Lengths Measure the total linear length of each type of tray (ladder, perforated, or solid-bottom) including straight runs, elbows, tees, and reducers. Each section should be measured separately to account for variations in size and orientation .

o Supports and Hangers Calculate the number of supports using the formula: Support Quantity = Total Length / Support Spacing + 1 For example, a 20-meter tray with 2-meter spacing requires 11 supports. Support spacing depends on tray type, load, and installation standards, typically ranging from 1.5 to 3 meters .

o Fittings and Accessories Include elbows, tees, reducers, couplers, and end caps. Each fitting should be counted individually based on the design layout. Accessories like clamps, brackets, and fasteners must also be included in the BOQ .

o Tray Sizing and Cable Fill Determine tray width and depth based on the number and type of cables, ensuring compliance with IEC 61537 and NEC 392 standards. Proper sizing prevents overcrowding, overheating, and allows for future expansion. Use cable datasheets to calculate the actual cross-sectional area and compare it with the tray's allowable fill .

o Material Specifications Specify tray material (steel, aluminum, or fiberglass), galvanization, and thickness. Include certificates and type test documentation as required for procurement .

Tools and Software for BOQ Generation

o Bentley Raceway and Cable Management allows 3D modeling of cable trays, routing, and automatic generation of BOQs, cable pull cards, and schedules. It supports steel and aluminum ladder trays and integrates with project design files .

o Cable Tray Sizing Calculators help convert cable schedules into verified tray widths and fill percentages, ensuring accurate BOQ preparation .

Steps to Prepare a Cable Tray BOQ

o Review the project layout and cable schedule.

o Identify tray types, sizes, and materials.

o Measure all tray runs, including straight sections and fittings.

o Calculate support quantities based on spacing standards.

o Include all accessories and fittings.

o Verify tray fill and sizing against standards.

o Compile the quantities into a structured BOQ for procurement and cost estimation. By following these steps,

engineers can produce an accurate and comprehensive cable tray BOQ that ensures proper material planning, compliance with standards, and efficient installation.

The document outlines the bill of quantities for electrical installations in a main building, detailing various types of cable trays and

Two basic skills are at the heart of the measurement process: quantification and description. Descriptions answer the question, what

work Quantity Units Supply & delivery of 300 MM. width FRP cable tr. cope . rk. 2100 Mtrs. 2 Supply & delivery of 150 MM. width

The document is a Bill of Quantities (BOQ) for cable trays, detailing various products including GI perforated cable trays and

A Bill of Quantities in Construction is a comprehensive document listing all the materials, labour, and services needed

The document provides a bill of quantities for cable tray routing and layout in Area 13 including quantities of cable trays of various

Part 2 also sets out the rules of measurement of building items, and the rules for dealing with preliminaries, non-measurable works,

This chapter explores the bill of quantities and new rules of measurement so that their composition, application and usage are

confirms the method of measurement (NRM 2), how to interpret the BQ and any special methods of measurement (where the

BOG for Cable Tray Installation at Rahmat Nagar Site sen, "Name of Materials "Quantity | Unie Remarks i 500 X50X2.5mmMS Gl

This document provides a description and quantities for various cable tray and cable installation works. It includes the removal and

5. Compliance and standards Ensure that your Bill of Quantities adheres to the relevant standards and guidelines in

Cable Tray Bill of Quantities Measurement Rules

Specifies requirements for metal cable trays and associated fittings designed for use in accordance with the rules of Canadian

The RICS new rules of measurement (NRM) is a suite of documents issued by the RICS Quantity Surveying and Construction

NEMA Standards Publication VE 2-2006 Cable Tray Installation Guidelines Published by: National Electrical Manufacturers

The quantities, unit rates, and total prices for each item are provided. Additional notes specify the parameters for the

Web: https://www.supremeacademicresearch.co.za