

Article Overview

Proper low-voltage cable pulling in cable trays requires careful planning, use of rollers and pulling equipment, correct handling, and adherence to safety and installation standards.

Pre-Installation Preparation

Before pulling cables, ensure that the cable trays are properly installed, supported, and free of sharp edges. Trays should be independently supported at intervals not exceeding 1.5 meters, with bends and intersections reinforced and grommets or bushings installed at cable entry points to prevent damage to the cable sheath. Clearances of at least 20mm behind trays should be maintained, and all tray connections must be mechanically secure.

Cable Handling and Transportation

- o Cable reels should be placed on stable surfaces and lifted using proper equipment such as drum jacks, cranes, or forklifts with slings to avoid damage.
- o Avoid dropping reels or dragging cables over sharp edges.
- o Use steel plate bases for cable stands to prevent sinking into soft ground.
- o Check the roll direction of the cable before pulling to prevent twisting.

Pulling Techniques

- o Use cable rollers along the tray, especially at bends and offsets, to reduce friction and prevent sheath damage.
- o Apply approved lubricants to facilitate smooth pulling, particularly for long runs.
- o For long or heavy cables, use winches or pulling machines with tension indicators to control pulling force and avoid overstressing the cable.
- o Swivels can be fitted to prevent twisting during pulling.
- o Cables can be flaked or coiled to prevent jams when feeding into the tray.

Installation Practices

- o Pull cables one at a time for large diameters and maintain proper separation according to voltage classification.
- o Ensure cable continuity and insulation tests are completed before and after pulling.
- o Dress cables neatly in the tray and secure them with UV-protected or stainless steel cable ties, maintaining spacing as per approved drawings.

Cable tray low-voltage cable pulling techniques

- o Grounding cables should be laid parallel to LV cables .
- o Barricades and warning signs should be installed to protect the work area .

Safety Considerations

- o Use job-specific PPE and follow HSE plans .
- o Ensure all lifting and pulling equipment is inspected and in good condition .
- o Avoid pulling cables around sharp corners without proper sheaves or pulleys .
- o Maintain communication devices during pulling operations for coordination .

Post-Installation

- o Conduct continuity and insulation resistance tests to verify cable integrity .
- o Seal cable ends until glanding and termination are completed .
- o Document the cable pulling process, including route, tension, and test results . By following these techniques, low-voltage cables can be safely and efficiently installed in cable trays, minimizing the risk of damage and ensuring compliance with electrical standards .

Do not pull cables at a radius smaller than the recommended pulling radius. Make sure all equipment's used during

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

Low, Medium & High Voltage Cables LV MV HV Pulling & Cable Drum Handling Equipment Thorne &

Cable pulling Method statement - Free download as Word Doc (.doc), PDF File (.pdf), Text File (.txt) or read online for free. This

PDF | The common methods of cable laying are: o Direct in the ground in trenches (underground cables).o In cable

It details the scope of works, responsibilities of personnel, pre-installation requirements, cable pulling process, and connections to

Hey everyone,As a career educator, I wanted to take the time to pass on information in

Cable tray low-voltage cable pulling techniques

Comprehensive Course Exams The Cable Pulling Course downloadable package includes professional exams to test low-voltage

Pull all cable diameters, one at a time, by hand. Hand feed cables around corners using large sweeping

A simplified but complete introduction for the absolute beginner to pulling wire through

The first video of the four-part cable installation training program, the Cable Pulling

Cable Pulling Equipment & Preparation Duct Cables installed into cable ducts are typically

The document provides guidelines for installing cable in cable trays, including design considerations and formulas for calculating

Cable pulling is the process of installing a cable through a duct, trench, conduit, tunnel, cable tray or cable route using

The use of the correct cable pulling equipment ensures accurate and faultless installation of LV-HV cables

What you're about to read is the first workbook in a four-workbook series on low voltage cable pulling. Before beginning, it is

Web: <https://supremeacademicresearch.co.za>

