Construction process of fiberglass cable trays



Overview

Fiberglass cable tray installation Therefore, this article outlines the installation procedures and precautions for Fiberglass Cable Trays, Fiberglass Cabl.

Key Takeaways

Fiberglass cable trays are installed by carefully planning the route, preparing supports, cutting and handling the trays, and securing them according to design specifications to ensure durability and safety.1. Planning and Site Preparation

Before installation, review the construction drawings to determine tray routes, installation height, support spacing, and layer structure. Conduct on-site inspections to adjust for obstacles, bends, ramps, and T-junctions. Ensure the load-bearing capacity of the fiberglass tray matches the cable quantity to prevent deformation or loosening. Clear the installation area and coordinate with other services to avoid clashes and maintain proper clearance for cable pulling and future maintenance .

2. Material Inspection and Handling

Check all materials, including GRP tray sections, supports, connectors, and fasteners, for quality, cracks, broken edges, or fiber delamination. During transport and handling, protect trays from heavy impacts, drops, or prolonged sun exposure to preserve structural integrity. Store trays horizontally on flat surfaces with timber supports at intervals of about 1 meter, and cover them to protect from moisture and sunlight .

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3. Cutting and Drilling

Field cutting can be done using a circular power saw with an abrasive wheel or a hack saw. Drill fiberglass like hardwood using standard twist drills. Any cut, drilled, or sanded surfaces must be sealed with compatible resin to prevent fiber damage. Support the tray firmly during cutting to avoid chipping .

4. Installing Supports

Install supports first, which can be wall-mounted, column-mounted, or suspended, depending on site and load requirements. Typical support spacing is 1.5 to 2 meters. Ensure supports are level and aligned with the tray route. Use appropriate clamps or threaded rods, fully engaged, to maintain load safety. The design load safety factor is generally 3:1 .

5. Tray Placement and Securing

Place tray sections on the supports, ensuring splice locations are at quarter spans when possible. Secure trays using bolts, nuts, and connectors with a torque of 3–4 ft-lbs. Maintain proper alignment and spacing between trays and supports. Fittings such as bends, T-junctions, and ramps should be supported according to standards like NEMA FG-1 .

6. Final Checks

After installation, verify that all trays are level, properly supported, and free from stress or deformation. Ensure that cable tray covers, if used, are correctly installed. Confirm that the installation complies with design drawings, load requirements, and safety standards. Document any deviations or adjustments for future maintenance .

7. Precautions
• Avoid using trays as walkways or lifting apparatus.

• Protect trays from UV exposure and mechanical damage during installation.

• Ensure proper clearance for cable pulling and maintenance access.

• Follow all relevant electrical codes and GRP installation standards . By following these steps, fiberglass cable trays can be installed safely, providing long-term corrosion resistance, insulation, and structural integrity in industrial and corrosive environments.

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