What to pay attention to when splicing armored optical cables



Overview

The document outlines the Construction Quality Requirements for fiber optic splicing, providing essential guidelines for technicians, managers, and vendors to ensure quality builds and successful inspections.

Key Takeaways

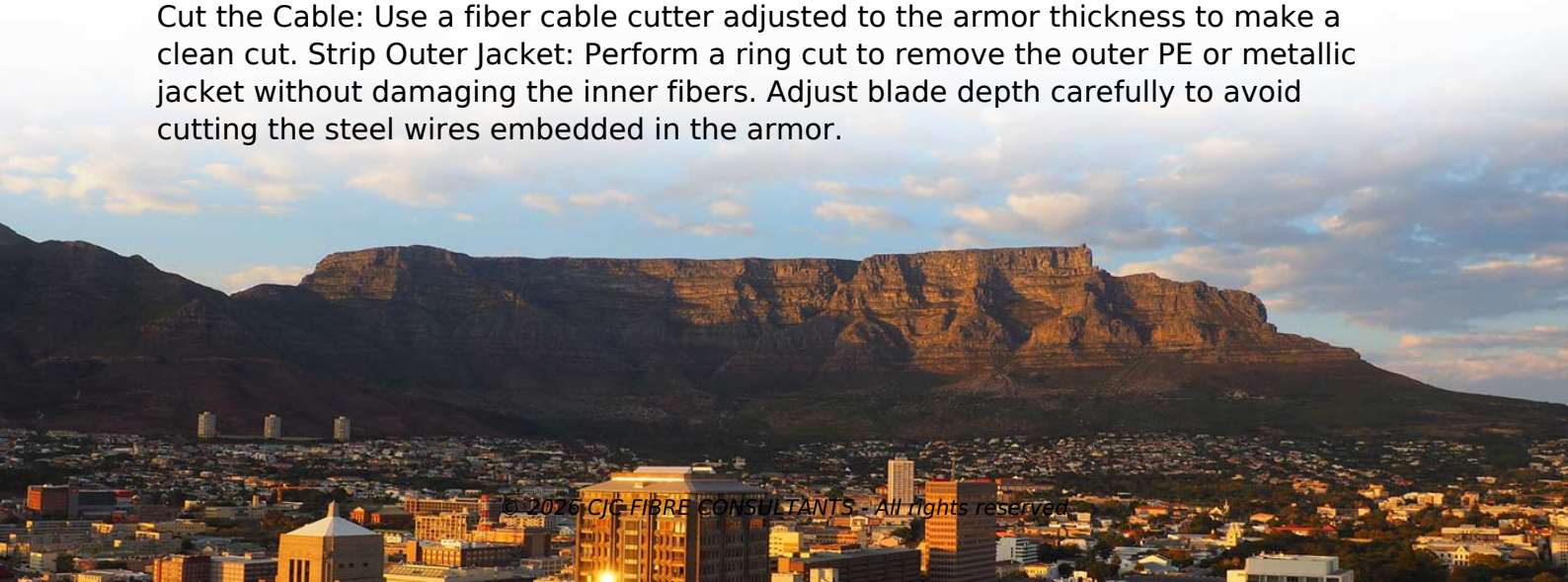
Splicing armored optical cables involves careful preparation, stripping of protective layers, precise fiber alignment, and testing to ensure signal integrity.

Preparation and Tools

Before splicing, gather essential tools such as fiber cutters, strippers, cleavers, cleaning kits, microscopes, and fusion splicers. Verify that all tools are in good working condition and suitable for armored cable handling. Measure and mark the required cable length according to the installation plan, ensuring proper allowance for the splice closure or enclosure.

Cable End Preparation

Cut the Cable: Use a fiber cable cutter adjusted to the armor thickness to make a clean cut. Strip Outer Jacket: Perform a ring cut to remove the outer PE or metallic jacket without damaging the inner fibers. Adjust blade depth carefully to avoid cutting the steel wires embedded in the armor.



© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Expose Armor and Kevlar: Use a hook blade or needle-nose pliers to peel back the armor tape and expose ripcords and Kevlar strength members. Cut Kevlar fibers with specialized scissors to prevent fraying. Clean Fibers: Strip the primary and secondary coatings (e.g., polyimide or acrylate) using mechanical strippers and clean with alcohol and lint-free wipes to remove debris.

Splicing Procedure

Slide Protective Tubing: Place heat-shrink tubing and stainless steel tubes over the cable ends before splicing to protect the splice later. Align Fibers: Use a fusion splicer and microscope to precisely align the fiber cores. Ensure the fiber end faces are clean and free of dust or oil.

Fusion Splicing: Perform the fusion splice according to the splicer manufacturer's instructions. The splicer melts the fiber ends together to form a low-loss joint. Protect the Splice: Slide the heat-shrink tubing over the splice and shrink it using a heat source to secure and protect the joint.

Stainless steel tubes may be used for additional mechanical protection.

Post-

Splice Testing

After splicing, perform optical testing using an Optical Time-Domain Reflectometer (OTDR) or power meter to verify signal continuity, insertion loss, and overall splice quality. Ensure the splice meets the required specifications before final deployment.

Best Practices

Avoid contact with fibers during stripping to prevent microbends or scratches. Maintain proper bend radius when routing fibers in closures or trays. Follow manufacturer-specific instructions for armored cable types, as blade depth and stripping techniques may vary.

Use flexible spiral split tubing if recommended to control bend radius and provide additional protection within the closure. By following these steps, armored optical cables can be spliced safely and reliably, ensuring long-term performance and protection against mechanical and environmental stresses.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Article Content

Optical Fiber Splicing: The Complete Technical Guide to Methods ...

This guide breaks down the fundamentals of optical fiber splicing, compares fusion and mechanical techniques, explains factors that influence splice loss, and outlines best practices for protection and

Fiber Optic Splicing Standards Guide | PDF | Optical Fiber | Screw

The document outlines the Construction Quality Requirements for fiber optic splicing, providing essential guidelines for technicians, managers, and vendors to ensure quality builds and successful inspections.

Preparing your Fiber Optic Cable for Connectors or Splices

In this guide, we''ll walk you through the entire process of preparing fiber optic cable for splicing and termination to fiber connectors. We''ll explore the

Application Note: Planning for slack and preparation length when ...

Termination of fiber optic cabling via fusion splicing requires planning and coordination to successfully allow for acceptable performance, slack storage, transition from outer jacketing, grounding of

ARMORED CABLE SPLICING

4.2 Check for final packaging requirements. 4.3 Check that the minimum cable diameter is 2.8mm or greater. 4.4 Check for length of armored cable required and distance from sensor to armored cable.

492_Active_Design Template_Cable Preparation Guide

The purpose of this document is to provide guidelines for accessing the fibers of STL armored IBR optical fiber cables, made with a corrugated armor tape, and two steel wires embedded in the HDPE

What are the key considerations for terminating and splicing armored ...

Terminating and splicing armored power cables (such as BS 5467 or IEC 60502-1 types) requires strict management of mechanical integrity, electrical continuity, and environmental sealing.

Fiber Optic Splicing: Examining the Factors that Affect Splice Perform

Learn the the intrinsic and extrinsic factors that can impact fiber optic splice performance and how you can create the best fiber optic network.

Fiber Optic Cable Splicing Methods: A Practical Guide

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

While this guide provides a solid overview of fiber optic cable splicing, the successful execution of these methods requires extensive training, hands-on experience, and a significant

Armored Fiber Optic Cable Installation Guide | FiberMania

Installing armored fiber optic cords requires careful planning, proper tools, and attention to bend radius, tension, and handling of the armor layer. While more robust and durable than

What Is Fiber Optic Cable Splicing? A Beginner''s Guide

Fiber optic splicing is often the preferred way to connect two fiber optic cables because it has lower light loss (attenuation) and back reflection than

ARMORED CABLE SPLICING

1. PURPOSE This procedure describes the method for splicing 3 mm diameter metallic armored cable to 3 mm diameter metallic armored cable.

Splicing Fiber Optic Cables: Best Tips & Techniques (2023)

Discover the art of splicing fiber optic cables in our comprehensive guide. Learn about fusion and mechanical splicing, cable preparation, termination, maintenance, troubleshooting, and future trends.

Guide for splicing of fiber optic fibers | EFB-Elektronik

Using the proper tool allows to connect the individual fibers of fiber optic cables extremely professionally. However, there are a few points to keep in mind during the splicing process. Our product expert for

Fiber Optic Splicing Guide & Demo

Part of UTEL''s Knowledge Base series of videos about fiber optics, this guide provides a thorough introduction to fusion and mechanical splicing as well as a demonstration of fusion splicing.

Fibre Splicing Explained: A Complete Guide to

Fibre Splicing Explained: A Guide to Seamless Optical Connectivity What is Fibre Splicing? Fibre splicing refers to the process of joining two optical

Fibre Optic Cable Splicing Guidelines | PDF | Optical Fiber | Wire

The document provides guidelines for splicing fibre optic cable. It outlines the necessary tools, materials and steps for preparing the cable ends, splicing the optical fibers using fusion splicing, reinforcing the

Splicing for Fiber Optic Cable: A Comprehensive Guide

© 2026 CJC FIBRE CONSULTANTS - All rights reserved

Fiber optic splicing is the process of joining two fiber optic cables to create a continuous path for optical signals. This comprehensive guide covers splicing fundamentals, techniques,

Related Video Reference

This video was associated with the source search result. Verify technical details against current product documentation and project requirements.

Contact Us

Continue your research online:

Website: https://cjcconsultants.co.za
Technical inquiry: https://cjcconsultants.co.za/contact.html

This document is for preliminary research. Verify specifications against current standards, product documentation and project requirements.

© 2026 CJC FIBRE CONSULTANTS - All rights reserved