

Reasons for persistent failures in fusion splicing of pigtails



Overview

Inconsistent or weak arc/laser discharges can result in incomplete fusion or high splice loss. Clean or replace the electrodes if necessary. Fusion Splicing Problems are a daily reality for fiber technicians, ranging from simple dust contamination to complex arc instabilities. While the Sangken Splicing machines are designed for high-precision work, even the best equipment requires proper troubleshooting when splices fall outside of. Fibre fusion splicers are critical instruments in modern optical fibre installation and maintenance. The system continuously analyzes the splice process and provides feedback when something is not optimal. The guide provides the complete workflow, covering safety precautions, tool selection, fiber preparation, fusion operation, quality control, and.



Article Content

Dec 13, 2025

Six Common Problems and Solutions During Fiber Splicing

There are several possible causes for this: ① Poor fiber quality; ② Uneven fiber cut surfaces, resulting in poor splicing; ③ The operator applying excessive force when manipulating the

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Pigtails

Traditional Fusion Splice-On Connectors with pigtails provide factory-polished performance with field-termination convenience within harsh environments.

Jan 08, 2026

What Is Fusion Splicing in Fiber Optics? (Beginner's Guide)

Introduction Fusion splicing is the backbone of modern fiber optic installations—and it's the primary method used when working with fiber optic pigtails.

Feb 23, 2026

"Fiber Splicing Pigtails | Step-by-Step Guide for Beginners"

📺 Fiber Splicing Pigtails | Complete Step-by-Step Tutorial for Beginners and Technicians Welcome to our channel! In this detailed video, we'll walk you through the fiber optic pigtail ...

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Tutorial Passive Fiber Optics, Part 6: Fiber Joints

Another technique is fusion splicing, where the fibers are fused together, e.g. using an electrical arc. This leads to particularly low insertion loss and high return loss,

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Fusion Splicing Issues Explained – Causes and Prevention

Learn how to identify fusion splicing issues, understand their causes, prevent splice errors through proper preparation and arc calibration.

Mar 03, 2026

101 Series: Know When to Splice & Where Not to

Fusion splicing at the building entrance or at fiber panels can be achieved using splice-on pigtails or splice-on connectors. Splice-on pigtails are pre-polished

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Welding faults for fusion splicer

There could be several possible reasons for this issue. Here are some common causes of fusion splicing failures and some troubleshooting steps you can try: 1. Preparation: Ensure that the fiber ends

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How Do You Splice Fiber with a Fusion Splicer?

In this video and step by step tutorial, we take you through the basic steps on how to fusion splice pigtails using a fusion splicer.

Jul 29, 2025

Pigtails ease fiber termination

Pigtails, which some say resemble the tail of their namesake, are attached to cables by fusion or mechanical splicing, both of which provide a fast termination

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Fiber Optic Fusion Splicing Guide: From Safety to Troubleshooting

If there are errors in the fusion point or surface irregularities (bubbles, inconsistent thickness of fusion), stop and

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Mechanical vs. Fusion Splicing: Which Is Right for You?

Comparing mechanical and fusion splicing for fiber optic cabling: costs, performance, and more. Discover the right splicing technique for your

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Why Fusion May Be the Best Choice for Fiber Cable Splicing

When fiber is already being used in a small AV application, fusion splicing may still be chosen over mechanical splicing for the performance benefits alone. Sometimes, the thought of

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What is a Fiber Optic Pigtail, and What Is It Used For?

To learn more about mechanical splicing and fusion splicing, read our article, Fiber Optic Splicing: Examining the Factors that Affect Splice

Jul 11, 2026

What Is Fiber Optic Pigtail and How to Splice It?

High-quality pigtail cables, coupled with correct fusion splicing practices offer the best performance possible for fiber optic cable terminations.

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Mechanical Splicing vs. Fusion Splicing

Mechanical Splicing vs. Fusion Splicing Fiber has become more widely integrated thanks to its bandwidth, reliability, durability and cost. In fact, many integrators

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Fusion Splicer Troubleshooting: Maximize Quality

When fusion splicing in the field, a number of issues can arise leading to high splice loss. Use this checklist to troubleshoot common issues.

Sep 25, 2025

Fiber Fusion Splicer Fusion Failure Analysis

Fiber Fusion Splicer Fusion Failure Analysis When we use the fiber optic fusion splicing machine, we will encounter various problems, which makes fusion

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The FOA Reference For Fiber Optics

Few installers tackle singlemode field termination, generally fusion splicing factory-made pigtails onto the fibers, since SM polishing is not so easy in the field,

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Fiber Fusion Splicer Fusion Failure Analysis

We will analyze the reasons for this phenomenon for you. 1. Fusion splicer itself problem. 2. Fiber reason, the end face of the fiber may be uneven or angled. 3.

May 19, 2026

Fiber Fusion Splicer Troubleshooting with OptiFiber Pro

A fusion splice is when two fibers are fused together using an electric arc. Often used with pigtails for connecting 250-micron outside plant

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How to choose fiber optic pigtails?

Splicing of pigtails to each fiber in the trunk "breaks out" the multi-fiber cable into its component fibers for connection to the end equipment. High quality fiber pigtails

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Fiber Optic Fusion Splicing Guide: From Safety to Troubleshooting

Frustrated with splice failures or elevated loss rates? Regardless of your level of experience, creating high-quality, high

Feb 21, 2026

Common Fusion Splicing Problems and How to Fix Them

Troubleshoot and fix common Fusion Splicing Problems like high loss and arc errors. Learn how to ensures perfect fiber installs.

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The ins and outs of fusion splicing

The process of fusion splicing has been around for several decades, and in outside plant (OSP) applications, it remains the most common and trusted method for

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Fiber Optic Pigtail: The Complete Guide to Types, Splicing Methods ...

Confused about fiber optic pigtails—which connector type, which polish, fusion or mechanical splice? Our guide covers LC vs SC, APC vs UPC, splicing methods, and real-world use

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Common Problems That Arise When Using a Fusion Splicer:

Learn how to identify and troubleshoot common problems that may arise when using a fusion splicer. Discover tips on safety, quick fixes, and more.

Oct 02, 2025

Common Fusion Splicer Problems and How to Fix Them

Struggling with fibre fusion splicer problems? Learn how to fix high splice loss, misalignment, electrode issues, and cleaving errors with step-by

Jan 04, 2026

Understand pigtail Splicing for Termination

Fusion Splicing: This is the gold standard. It uses an electric arc to permanently weld the two fibers together, creating a nearly seamless connection. Fusion splices offer the lowest loss (typically <0.05

Contact Us

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