

Article Overview

Fiber optic cable coatings can be removed using mechanical, thermal, or chemical methods, depending on the type of coating and the precision required.

Mechanical Stripping

Mechanical stripping is the most common and preferred method for removing fiber coatings. Specialized fiber optic strippers, such as the Clauss CFS-1, Fitel S-210, or adjustable strippers, are designed to remove coatings without damaging the glass core . For non-standard fiber diameters, adjustable strippers are recommended. Mechanical strippers may also include thermal-assisted versions that slightly heat the coating to reduce adhesion, minimizing the risk of introducing surface flaws .

Thermal Stripping

Thermal strippers, like those attached to the Vytran FFS-2000 or Schleuniger FiberStrip 7030, use controlled heat to soften the coating for easy removal . This method is particularly useful for hard coatings such as polyimide, carbon, or gold. Thermal stripping is non-contact and chemical-free, reducing the risk of contamination or fiber weakening .

Chemical Stripping

Chemical stripping involves using solvents or acids to dissolve the coating. Common approaches include:

- o Paint strippers or gel-based solvents applied near the fiber tip, softening the coating in about a minute for removal with lens tissue .
 - o Sulfuric acid (H_2SO_4) at 120°C for one minute, with precautions such as sealing the fiber tip to prevent damage .
 - o High-purity alcohols (99% isopropyl alcohol) for cleaning residual coating after chemical stripping .
- Chemical methods require careful handling to avoid fiber damage, poorly defined coating termination, or residual solvent effects that can compromise mechanical reliability . Local regulations may restrict the use of certain chemicals like dichloromethane.

Best Practices

- o Always use lint-free wipes or pads when cleaning fibers after stripping to prevent contamination .
- o Minimize the number of passes with mechanical tools to avoid introducing surface flaws .
- o For mid-span or end-stripping, consult specialized tools like 3SAE Technologies' non-contact or

diameter-adjustable strippers for precise coating removal .

- o Dry the fiber thoroughly after chemical stripping to prevent prolonged exposure to solvents .

- o Inspect the fiber under a microscope after stripping to ensure a clean, well-defined termination point. By selecting the appropriate method and following careful handling procedures, fiber optic coatings can be safely removed while maintaining the integrity and strength of the fiber.

The study demonstrates effective optical fiber coating removal using a 40 W CO₂ laser at 10.6 μ m. Optimal scanning speeds range

This study focuses on finding the cladding and coating stripping methods for four recent specialty optical fibers, namely:

From removing the outer jacket to cleaning the bare fiber and achieving a perfect cleave,

This is a vital step as fibers often come with different types of coatings - from acrylate and polyimide to metal - each requiring

Lesson 3: Fiber Optic Cable And Fiber Preparation Objectives: From this lesson you should learn: How to

Fiber & Cable Stripper for Fiber Tools 1. FOS03 Fiber strippers remove the coating from the fiber optic cable to expose

These coatings are made from acrylate composite materials applied to the outside of the fiber during the production process. Optical

Learning the Different Coating Stripping Methods The cladding power stripper also referred to as the multimode

Although demonstrated on a short range of two meters using optical frequency-domain reflectometry, the technique can

Explore Optical Fiber Stripper types and uses. Learn pro techniques for precise stripping to

This article describes a rapid method of recoating optical fibers employing the dip-coating technique, using a

We provide fiber optic stripping tools for fiber coating removal, including end-stripping and mid-span tools, ideal for

As described above, according to the present invention, by extracting the coating portion to be removed in a heated state, it is

Conventional techniques Optical fibers can be stripped by mechanical, chemical, or thermo-mechanical methods.

Good fiber optic stripping techniques in your cable assembly process are crucial. See best

Optical fibers are typically protected with fiber coatings made from polymers such as acrylate, silicone or polyimide. For splicing,

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