

Safety Bulletin

The Importance of Qualified Splicing and Frequent Inspections: Reducing the 29% Failure Rate



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In utility stringing operations, maintaining the strength and reliability of your stringing lines is essential for safe and efficient operations. However, recent studies conducted by Scope have revealed an alarming statistic: 29% of inspected splices were improperly executed, leading to a significant and unnecessary reduction in break strength. These improperly executed splices can weaken the line by up to 50%, turning a simple repair into a potential point of failure.

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In this document, we'll explore why proper splicing performed by a certified rope technician and frequent inspections are critical for reducing the risk of line failures. We'll discuss the dangers of improperly executed repairs, the role of proper splicing techniques in maintaining line integrity, and how regular inspections can help ensure that your lines remain safe and fit for service.

Why Certification Matters for Splicing

Splicing a stringing line is not a simple task. It requires a deep understanding of the line's material, construction, size, and the specific conditions under which it is being used. Certified professionals are trained to evaluate these factors and perform a splice that restores the line's strength as close as possible to its original break strength.

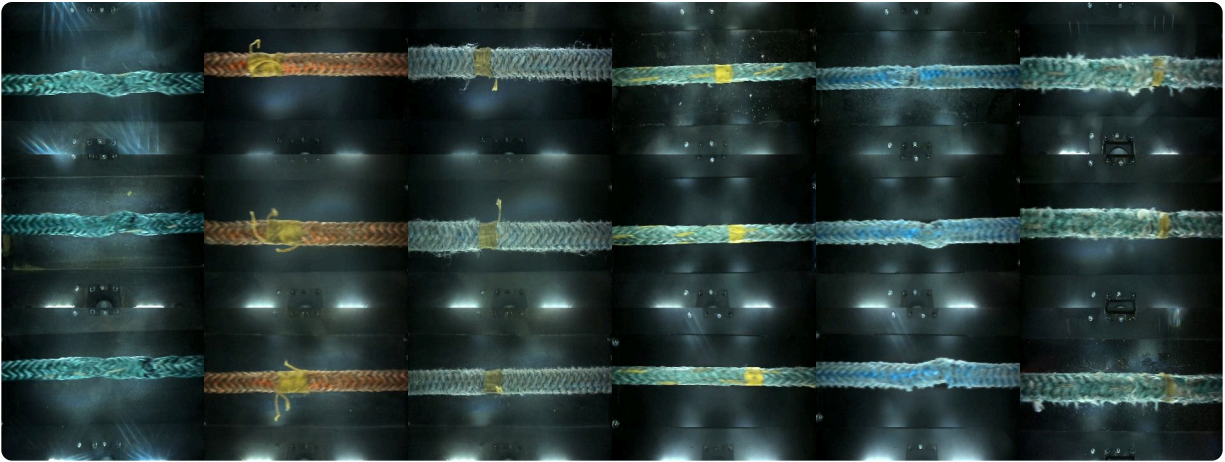
Unfortunately, not all repairs are performed by certified personnel. In some cases, when a trained professional is unavailable, operators may attempt to repair a damaged line themselves. While this might seem like a quick solution to get the job done, these repairs often result in splices that are far weaker than the surrounding line.



Improperly executed splices can easily become the weakest point in the line. If the line is subjected to high tension during a pull, this weak point can fail, leading to potentially disastrous consequences. Downtime, equipment damage, and even injury or loss of life can occur as a result of improper repairs.

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Certified splicing is the only way to ensure that a splice is performed correctly and that a line retains its strength. Operators should always rely on trained, certified rope technicians for any repairs to avoid these dangerous weak points.



The Risks of Unapproved Splices

One of the most significant dangers posed by unapproved or uncertified splices is the drastic reduction in break strength. When a splice is improperly executed, it can weaken the line by up to 50%, creating a point of failure that is far more likely to break under tension. This is especially concerning in overhead stringing operations, where these lines are subjected to thousands of pounds of force.

Scope inspections have revealed that 29% of splices are improperly executed, meaning that nearly one-third of the repairs in the field could be compromising the integrity of your stringing line. These unsafe splices often go unnoticed until it's too late, leading to costly failures and potentially putting people at risk.

By ensuring that all splices are performed by certified rope technicians and inspected regularly, companies can significantly reduce the number of unsafe splices in operation.

How Frequent Inspections Can Reduce Splice Failures

Frequent inspections are essential for identifying improper splices before they become a serious problem. Visual inspections by operators alone are often insufficient in detecting poor splices. Comprehensive inspections by trained professionals, combined with advanced technologies like Scope's platform, can more accurately identify weak sections of the line and ensure that repairs meet proper standards.

By increasing the frequency of inspections, particularly after high-stress operations or following in field repairs, companies can catch improperly executed splices and fatigued sections of line early and prevent failures.

Moving to Event-Based Inspections

One of the most effective ways to reduce the risk of improper splicing is by shifting from time-based inspections to event-based inspections. Rather than inspecting lines on a predetermined schedule, event-based inspections focus on key moments in the line's lifecycle—after high-tension pulls, before major operations, or following in-field repairs.

Event-based inspections ensure that lines are checked when they are most vulnerable, increasing the odds of catching poor splices before they lead to failures. This proactive approach enhances safety, reduces downtime, and ensures that repairs are performed correctly.

Conclusion

The integrity of your stringing lines is only as strong as their weakest point, and with 29% of splices improperly executed, the risks of failure are high. Certified splicing and frequent inspections are the most effective ways to ensure that your lines remain safe, reliable, and fit for service. By increasing the frequency of inspections and ensuring that all splices are performed by trained professionals, utility companies can significantly reduce their risk and protect their operations from costly stringing line failures.

Stringing Line Safety Best Practices

Guidelines for Maintaining Fiber Rope Stringing Lines in the Overhead Electric Utility Sector

visionbyscope.com/Best-Practices

Scope Computer Vision Technologies

Prevent critical line failures, increase safety, and protect operations.

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