

 Directory

Track & Infrastructure

LPS

LASER PRECISION SOLUTIONS

Autumn-Proof Your Railways: Introducing LPS LaserTrain

Advanced Technology to Ensure Smooth and Reliable Train Services



Get ready for autumn! While its beautiful landscapes and falling leaves bring us joy, they also present serious challenges for rail companies that disrupt the efficiency of their operations.

Leaves on the line pose a significant problem. When compressed by train wheels they create an oily film that impacts coefficient of friction (COF) levels on the rail. Trains struggle to accelerate and brake properly, leading to dangerous slip-slide conditions. As a result,

delays and cancellations become inevitable, disrupting schedules and causing frustration among passengers. At Laser Precision Solutions (LPS), we understand the pressing need to overcome these hurdles and keep the railway industry on track.

The LaserTrain Advantage

Introducing the LPS LaserTrain, a progressive rail cleaning solution designed to combat the leaf-related issues that plague the autumn months. Equipped with an advanced control system for seamless autonomous

operation and high-intensity lasers, the LaserTrain offers precise cleaning without damaging tracks. One pass improves slip-slide conditions for 24 hours for safer and more efficient operations. By doing so, disruptions are minimised, and overall passenger satisfaction is improved.

Safety First

Safety is paramount to any rail operation. LaserTrain features such as automatic laser shut-off at speeds below 2mph prevents excessive exposure and unnecessary treatment, ensuring precise and controlled cleaning operations. The control system seamlessly transitions between 'Transport Mode' and 'Cleaning Mode' avoiding rail obstacles without operator intervention. Transport Mode raises the Laser Technology to avoid rail obstacles, while Cleaning Mode lowers it for track cleaning.

Optimised COF levels guarantee safe braking and accelerations with no speed restrictions, detection of trains and SPAD. Variable cleaning speeds are also available to accommodate the diverse requirements of rail networks.

Cut Maintenance Costs

Maintenance costs resulting from wheel truing are a financial burden for rail companies. Employing the LPS LaserTrain offers a dual benefit of enhanced safety and reduced expenses. By effectively addressing slippage risks, it ensures the availability of more operational cars, preventing delays and cancellations and optimising overall rail capacity. Improved friction levels significantly reduce the occurrence of flat spots, which in turn minimises track damage, reducing maintenance requirements and costs. In addition, the technology has lowest long-term running costs in the market, making it a financially savvy investment for rail networks.

Drive Sustainability

With no harmful by-products and minimal CO2 emissions, the LaserTrain aligns with efforts to reduce the environmental impact of rail operations. Precise cleaning capabilities consume minimal water and energy in comparison to conventional cleaning methods and by eliminating the need for harsh chemicals or abrasive methods, it reduces waste and contamination.

Leading the Way: Our Expertise in Action

At LPS we are proud to be at the forefront of innovation in rail-cleaning technology. We strongly believe in the potential of the railway industry and are committed to enabling global train networks to operate efficient, safe, and reliable services. Positively impacting network services, people's lives and the planet.

Showcasing Our Impact

The success of the LaserTrain is evident in real-world applications. Metro-North Railroad, a leading rail operator, has successfully implemented Laser Precision Solutions' LaserTrain to combat residue from crushed leaves and reduce slip-slide incidents. The retrofitted 'Comet III' train operates at 60mph speeds, safely covering over 12,000 miles without incident.

The removal of contaminants resulted in a 40% decrease in slip-slide events and the lowest wheel-true cost season on record during leaf season 2022. This achievement has garnered Metro-North the Gold Award for Rail Safety, highlighting their commitment to innovation and safety.

President and Long Island Rail Road Interim President Catherine Rinaldi said: "The LIRR led the way in using this technology and has seen an incredible decrease in delays and equipment issues brought on by slip-slide using this system prompting Metro-North's successful pilot last fall. It's a game changer."

Keeping Journeys on Track

The persistent challenge of slippage on the line has far-reaching implications for the railway industry. Safety concerns, environmental impact and operational inefficiencies demand innovative solutions. By investing in the LaserTrain, rail operators not only ensure efficient operations but also contribute to a brighter future for rail transportation. Empower your rail operations today. For compatibility, tailored installation options are available. Get in touch.

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Keeping trains on track

Minimize the impacts of slip-slide conditions and keep performance, maintenance and safety on track with high speed rail cleaning laser technology.

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