

# Aurora Xi<sup>TM</sup>



Next-generation  
Inspection Technology



# Inspecting ties beyond the surface.



## Wood Tie Grading

## Meet the rail industry's first internal tie inspection system.

Traditional track inspection methods spot problems at the surface, but it's usually flaws that start deep within components that cause the biggest problems. Aurora X<sup>i</sup>™ from GREX allows you to see exactly what's happening inside your wood ties.

Developed in partnership with the University of Florida Nuclear Engineering Department, Aurora X<sup>i</sup>™ harnesses patented backscatter x-ray technology to see inside individual ties. Aurora X<sup>i</sup>™ safely bounces x-rays off of each tie in a segment. By measuring how those x-rays reflect back, the system can produce an image of each wood tie's internal structure that reveals flaws that other inspection methods might miss – everything from hollow sections caused by decay to the depth and size of cracks.

Loram Technologies provides easy-to-understand reports to assist you in making action plans after each Aurora X<sup>i</sup>™ scan. With that information, you can estimate the lifetime left of your existing ties and create accurate, efficient and cost-effective maintenance programs to replace damaged components as needed. It helps you stay safe and compliant today while allowing you to conserve capital for tomorrow.

Aurora X<sup>i</sup>™ assigns one of four grades to each and every wood tie based on the severity of decay and deterioration.

- Create customized tie models for your railroad
- Easily prioritize ties for replacement
- Plan out maintenance with precision





JS Patent #8405837  
JS Patent #8711222  
JS Patent #8958079



## Compliance Reports

Detailed compliance reports can help you ensure you're in line with regulations.

- Confirm minimum number of effective wood ties in a segment
- Ensure adherence with federal requirements
- More reliable than manual inspections



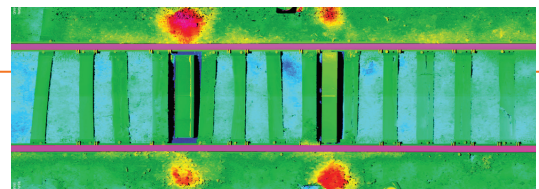
## Custom Reports

Loram Technologies will work with your railroad to create custom reports tailored to your specific inspection requirements.

- Discover flawed fasteners
- Analyze rail base corrosion
- Search for other damaged components

## Combine with Aurora® for comprehensive inspections

Aurora Xi™ can work in tandem with our proven Aurora® track inspection system that has scanned more than 120,000 miles of track globally. As Aurora Xi™ scans the internal structure of wood ties, Aurora® can simultaneously scan the surface of track components to assess wood ties on 20 additional variables, check for rail seat deterioration in concrete ties or determine the severity of corrosion at the rail base.



### Patent Numbers:

US Patent #7616329  
US Patent #8081320  
US Patent #8209145  
US Patent #8405837  
US Patent #8711222  
US Patent #8958079  
US Patent #9031188

# Aurora Xi™

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