

Track Measurement Systems



Track Geometry and Rail Profile Measurement System.

ENSCO, Inc. has the largest installed base of track measuring and imaging systems in North America and is recognized around the world as a leader in the supply of track evaluation systems. ENSCO understands the needs of rail customers and provides production worthy solutions that deliver both safety and economic benefits. ENSCO's 40 years of railway engineering experience assures that customers will receive the best possible measurement technology and technical support available. ENSCO's track measurement systems are based on a modular approach and scalable architecture to support a variety of measurement and imaging systems on a track recording vehicle.

Track Geometry Measurement System (TGMS)

The ENSCO TGMS provides non-contact, inertial measures of all critical track geometry parameters and real-time notification of defects based on a wide range of user-configurable thresholds. Track grade and low speed longitudinal profile/alignment measurement options are also available. ENSCO is the only TGMS provider that uses its own systems on a daily basis in service operations, allowing customers to benefit from continuous product improvement.

Rail Profile Measurement System (RPMS)

ENSCO uses the same proven non-contact laser technology in its TGMS to measure the cross-sectional shape and orientation of each rail to identify wear and cant. The system utilizes enhanced processing algorithms for real time rail weight identification to produce the most accurate assessment of rail wear possible.

Rail Corrugation Measurement System (RCMS)

ENSCO's highly accurate laser-based measurement system evaluates corrugation over four critical wavelength bands. The system provides rail quality assessments on a section-by-section basis to facilitate rail grinding and replacement planning.

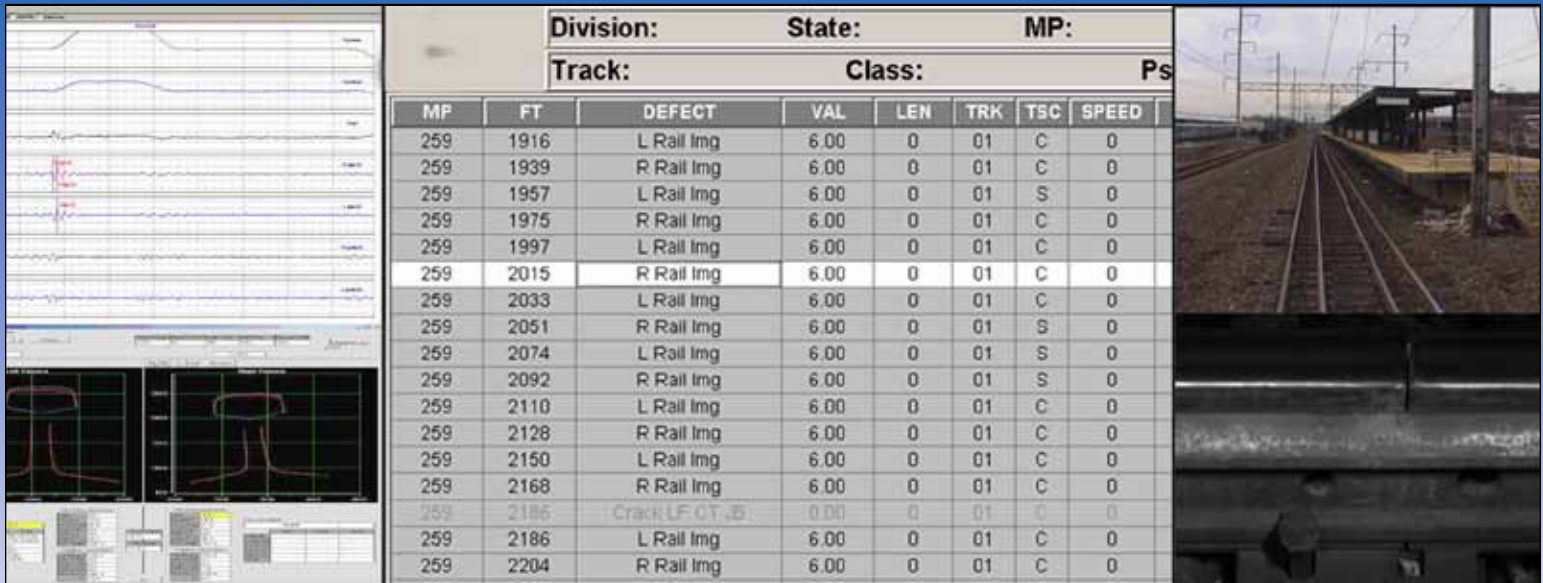
Gage Restraint Measurement System (GRMS)

ENSCO offers the patented deployable GRMS that safely and accurately measures lateral track strength at survey speeds up to 50 mph. The ability to locate bad ties and weak track with the deployable GRMS is essential to providing critical inputs for track maintenance and tie replacement planning.

The highest quality track measurement systems using technologies refined through daily operational use and backed by a 40-year record of industry excellence



Deployable Gage Restraint Measurement System.



ENSCO's modular approach and scalable architecture is tailored to support a range of measurement systems on a single inspection vehicle.

Ride Quality and Wheel Impact Measurement System (RQMS)

ENSCO's RQMS quantifies overall passenger ride quality and accurately locates wheel/rail impacts indicative of rail and sub-grade conditions.

Overhead Wire (Catenary) Measurement System (OWMS)

The ENSCO OWMS uses non-contact, time-of-flight laser sensors to measure the wire position and stagger with respect to the running rails.

Track Clearance and Ballast Profile Measurement System (TC/BPMS)

This sweeping laser scanner-based system allows operators to accurately assess clearance envelopes, potential encroachments and ballast volume.

Third Rail Laser Measurement System

ENSCO offers an option for our TGMS that measures third rail height, gage and temperature against customer-provided thresholds allowing transits to gather critical maintenance information.

High-Speed Imaging and Machine-Vision Inspection Systems

ENSCO provides a number of video-based track inspection systems to identify and evaluate critical track components. Using our patented machine-vision technology and techniques, these state-of-the-art systems can be configured to capture continuous high-resolution images of the track and automatically identify components for further review from the safety of an office environment, reducing walking inspection costs and improving worker safety.

Control, Reporting, Analysis, Navigation and Editing (CRANE)

ENSCO's modular approach relies on its CRANE system to provide the key onboard network computing infrastructure, operator interfaces, common display/reporting and inertial aided GPS to all ENSCO measurement systems. The CRANE facilitates the integration of modular systems to improve reliability by eliminating hardware and software duplication.



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