

THIRD RAIL LASER MEASUREMENT SYSTEM

ENSCO's Track Geometry Measurement System can be extended to include Third Rail Laser Measurement. The system utilizes two image-based laser sensor heads to capture the transverse half profile of the third rail and its cover when it appears on either side of the track. The system processes the half profiles and extracts the following parameters:

- Third rail height referenced to the rail top of the nearest running rail.
- Third rail gage referenced to the 5/8 inch gage point of the nearest running rail.
- Vertical gap between the bottom of the third rail protection board and the top of the third rail

The system processes all these measured parameters against customer thresholds and will report location of exceptions in Chains, MP/Foot and GPS Locations. In addition, the system includes optional infrared non-contact temperature measurement transducers that measure third rail temperature and will report locations of potential hot spots.

All parameters can be measured at one-foot sampling intervals at speed from 0 to 217 mph. (350 km/h). The accuracy of measurement is 1/16 inch and does not depend on the speed of the car.

The onboard software processes all measured parameters in real time and provides exception reports at the end of the run.



Measurement Beam with Third Rail Measuring Heads