Case Study
Detection of Wheel Tread Damages in Railway Applications

Reducing Maintenance Time For Mechanics & Electronics on Railroad Vehicles Through Predictive Maintenance

REQUIREMENT

- Improve train availability and reliability while reducing transport times by avoiding train disruptions with inputs from Department for Transport (DfT)
- System must include ability to add or remove train-cars based on traffic, passengers and crowding on stations
- The infrastructural investment in new technology must result in a significant operational cost reduction

ADVANTAGES

- Improved Availability | Fewer and shorter maintenance intervals
- Reduction of Costs & Manpower | Previously identifying maintenance needs were reactive through manual audits resulting in higher costs due to unplanned down time, more man power, spare part inventory costs, etc
- Efficient Monitoring | Future state must be proactive and include electronic sensors that are either located on-board or trackside in an outdoor enclosure that monitors the mechanical and electronic functionality of the train and detect critical situations before failures occur
- Certified & Durable | The cabinets had to be railway certified for outdoor use and ensure reliable operation in extreme environmental conditions

SOLUTION

By replacing costly and time consuming manual audits with an automated Out-of-Round (OOR) process, maintenance intervals and duration have been shortened.

The inspection takes place during operation of the rolling stock through electronic sensors, which either are located directly on-board of the train or trackside in an outdoor cabinet.

The acoustic sensor, which is located directly on the rail, transmits measurement data either via radio or via optical fiber directly to the operator of the train.

Shock & Vibration   EMC Protection   Ingress Protection   RoHS Compliance

Our powerful portfolio of brands:

CADDY    ERICO    HOFFMAN    RAYCHEM    SCHROFF    TRACER

©2020 nVent. All nVent marks and logos are owned or licensed by nVent Services GmbH or its affiliates. All other trademarks are the property of their respective owners.

nVent reserves the right to change specifications without notice.

SCHROFF-WPCS-HB628-Outdoor-PredMaintenance-EN-2005