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< Track & Infrastructure

Harsco Rail

Minimise Human Error and Protect Workers with Protran Technology Railway Worker Protection Systems



Railroad worker safety is a global concern. Railroad workers have an important role in keeping the railroads safe for passenger and freight trains through rail system inspections, maintenance and repairs on the trackway.

While performing these duties to help provide safe railroad tracks for the industry, the track workers

themselves are faced with safety risks unique to their line of work. Traditional worker protections rely

mainly on other workers providing a notification of an approaching train which leads to a wide array of

potentially dangerous situations caused by human error.

Common safety risks with traditional railroad worker protection standard operating procedures include:

- Relying on a lookout or watchman provides a single point of failure
- Worker complacency, boredom, inattention and fatigue
- Workers being given more responsibilities with less time to complete tasks
- No advanced warning to train operators of workers ahead
- No advanced warning to track workers of an approaching train
- Increased equipment/convoy movements on tracks

Protran Technology offers several railway worker protection systems utilising innovative technology to protect both railway workers and railroad equipment, in an effort to mitigate various types of dangerous scenarios found on the railroad. Typical hazard scenarios working on the railroad include the following:

Fixed Work Zones

When track workers are engaged in work activities on the railroad in fixed work zones, they must enter the track area and rely on themselves and a variety of rules, procedures and other personnel to protect them from moving traffic. Generally, any fixed work zone is defined by a set of pre-approved “limits” with starting/ending locations. For trains or equipment to enter these active work areas, they must be given authorisation before proceeding into the pre-determined work area. There are times when the work limits are

miscommunicated, locations are not clearly defined, and those who are flagging or moving equipment become distracted and fail to provide ample warning to track workers.

Moving Work Zones

When track workers are engaged in work activities on the railroad which require them to continuously be moving (i.e. inspections, tree/vegetation cutting, etc.), they must enter the track area and are exposed to hazards unique to this type of access. Generally, this type of activity relies on “notification” of the workers’ locations to trains from controllers, and/or the roadway worker is required to use visual train detection to move to a place of safety when they observe a train approaching. Unfortunately, these types of moving work zones can place railway workers in places where train operators are not aware of their current location due to poor communication with controllers and at times the physical characteristics of the railroad do not allow the workers to see the trains with enough time to clear without urgent movement. Additionally, due to a variety of physical characteristics of the railroad, workers can find themselves in areas where there is no safe clearing location.

Equipment Movement – Collision Avoidance

Track work requires the use of multiple pieces of heavy maintenance equipment to maintain the track structure. In a typical work area, there can be many activities which are run concurrently or in a sequential

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manner. During these activities, equipment is constantly moving, operators are usually focused on their work (i.e. tamping, ballast regulating, grinding, etc.) and workers can be placed in danger of being struck by this equipment. Even when railway workers are not involved, slow-speed collisions between maintenance equipment can injure operators and damage costly equipment.

Protran Technology Roadway Worker Protection (RWP) systems are secondary warning systems that provide advance warning of approaching trains to wayside workers, as well as warnings to the train operators of workers present on the tracks. The Protran RWP systems are range-based systems that use GPS location along with proprietary ranging RF technology to give the most accurate alerts possible.





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PREVENTING YOUR FLEET FROM COLLISIONS & KEEPING YOUR WORKERS SAFE

Protran Technology provides safety products to reduce accidents and fatalities in the railway industry.



Collision Avoidance - Railway Worker Protection System.

Our products provide secondary advanced warning when working on or around the tracks. With multiple features in one system, the Collision Avoidance System, keeps the vehicle operator's attention when approaching other vehicles, workers, and work site limits.



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