



ENGINEERING THROUGH INNOVATION
Train Loading Improvement System - Product Information

Train Loading Improvement System

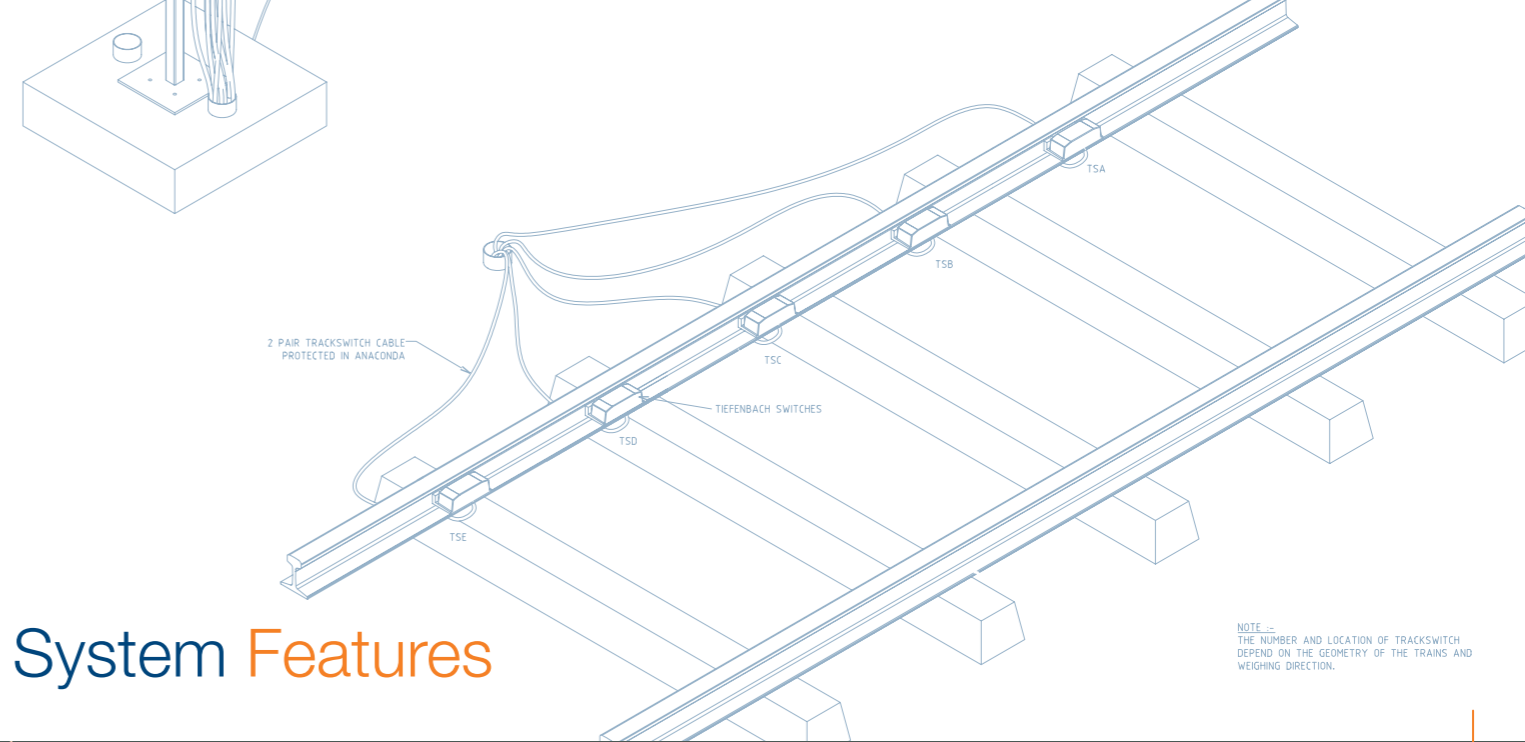
Loading wagons to a Target Weight has traditionally required a “Weigh Hopper” under the loading bin. Not any more, thanks to the Meridian Train Loading Improvement (TLI) system.

The TLI system has been developed from leading edge engineering, combined with clever design and innovative thinking making it surely the most versatile and cost effective system of its kind on the world market today. The TLI system enables ‘mass based’ train loading without the need for a weigh-hopper under the loading surge bin and can be applied to new or existing ‘volumetric based’ train load outs. With the elimination of the weigh-hopper, bin height is reduced delivering lower capital and operating costs.

Meridian Engineers provide a complete system tailored to the individual requirements of each client, including modern hardware, software, reporting and communication. Monitoring and software upgrades can be done remotely.

A history of successful performance over many installations makes the Meridian TLI system the preferred option in the resources industry.





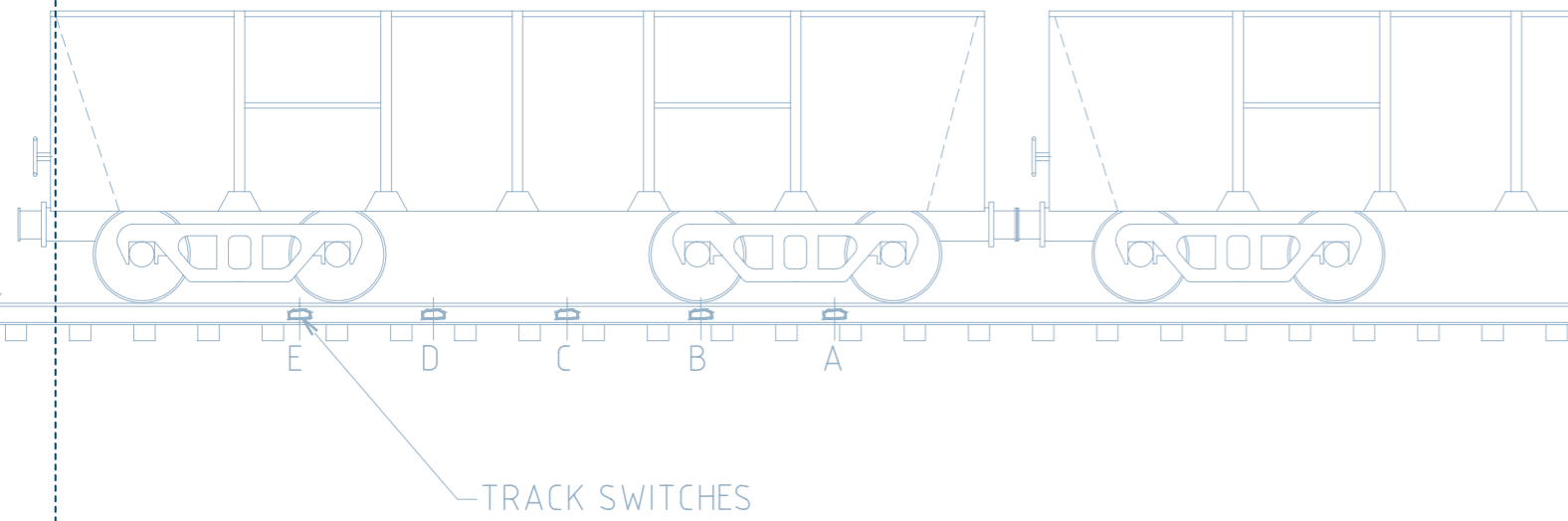
System Features

Features

- Accurate total train loading (0.25% can be achieved with favourable site conditions).
- Low variation in wagon loads (standard deviation of 0.5 tonnes can be achieved)
- Accurate bin contents weight is provided continuously (typically better than 1%).
- No impact on structural costs. Meridian load cells are attached directly to the support columns, not under them as is typical with traditional load cell installations.
- Capital, operating and maintenance costs are considerably less than a system using a weigh-hopper under the surge bin.
- Being bolted to the columns, our loadcells are not subjected to the physical abuse that conventional load cells can receive when placed under weigh-hoppers.
- The TLI system can easily interface with plant control systems to provide a fully automated, mass controlled loading station. Alternatively, it can be used in a manually operated loading system to provide the operator with live load readings, allowing gate closure when required.

Train Speed and Position System

Train speed is an important factor in improving loading performance and so it is vital to have regular and accurate updates during the loading process. The Meridian system provides real time train speed and position data from track switches and a special purpose controller. The number of track switches depends on the update rate required for speed indication, length of rail wagons and the typical train speed range. The system is fully automatic, readily interfaces with other systems and produces fluid SCADA animations of the train's movement (including stoppages and reversals) through the loading station.



System Deliverables

The Meridian TLI system will enable accurate train loading without overloads. We provide a customised SCADA style interface to show the train loading information to the operators, including:

- System status
- Position and speed of the train under the load out (in real time updated several times per second)
- Current load in the train
- Load in the current wagon (in real time updated several times per second)
- Target load for the current wagon and the train
- Loading statistics
- Report printing and emails

The above information is presented in an easy to read, intuitive interface that requires minimal operator training. The position of the train under the load out is animated to match the actual location of wagons with respect to the loading chute.





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