Railway Track Maintenance and Modernisation Solution

Trimble has introduced an addition to its Railway Solutions portfolio: the Trimble GEDO CE Trolley System. The new trolley system and software provide as-built survey and documentation for railway track maintenance and modernisation. The GEDO CE Trolley System and software were acquired from Sinning Vermessungsbedarf GmbH of Wiesentheid, Bavaria, Germany.

Railway track recording and documentation can be completed easily and economically with the robust and high-precision Trimble GEDO CE Trolley System. The modular track surveying system, using optical and imaging total-station technology onboard the vehicle, is ideally suited for surveying older railway tracks for maintenance and modernisation. Combined data collected by the Trimble GEDO CE Trolley and Trimble GEDO Rec software enables users to quickly survey tracks from start to finish without using alignment data. The collected data forms the basis for further data processing and analysis of the state of the track. For maximum track recording speed, Trimble also offers a GNSS version of the vehicle and software.

Railway construction requires the highest possible performance from surveying equipment. For complete construction information and data processing, the Trimble GEDO CE Trolley System includes three powerful software components: Trimble GEDO Track for correction values directly on site, Trimble GEDO Office for data handling with continuous and integrated data transfer and Trimble GEDO Calc for verification and documentation for the construction of slab track.

For alignment based pre-surveying for tamping machines it is essential to forward data to the machine as fast as possible. Any workflow interruption of the machine becomes a critical factor in the alignment based pre-surveying process and all data input requires the highest level of accuracy. For this application, the Trimble GEDO CE Trolley and Trimble’s GEDO Track, Trimble GEDO Office, and Trimble GEDO Tamp software used in combination offer a practical system with which a highly accurate nominal/actual comparison can be easily generated. In addition, it can serve as basis for position and height correction of tracks with tamping machines.

When a track has to be brought back to its designed position during maintenance work with a tamping machine, under extreme time pressure, a flexible measuring system for data collection for the machine has a distinct advantage compared to common surveying techniques. With the Trimble GEDO CE Trolley, the Trimble GEDO Vorsys software used as a pre-measurement system, and Trimble GEDO Tamp software the data may be processed in line with the tamping run (residual uplift, ramps). Due to the extremely high measurement velocity (more than 1,200 metres per hour) and the great flexibility (low weight), the system is ideally suited for this use. The solution creates a highly efficient nominal/actual comparison producing data that can be passed to the tamping machine digitally.