

GLM Lasermeßtechnik GmbH – Railway vehicles

Measuring rail vehicles using a 3D measuring system

Exact dimensional accuracy – this is a challenge all rail vehicles face nowadays. Rely on GLM as a partner with more than 100 installed 3D measurement systems in railway companies throughout Europe 3D measuring systems from GLM play an important role in the manufacture and inspection (revision) of rail vehicle frames.

Since 1992 GLM Lasermeßtechnik has delivered and installed far more than hundred 3D measuring systems in the workshops of various railway companies throughout Europe.

For this reason, more than 100 3D measuring systems installed by GML are by now in use in the workshops of heavy maintenance and repair facilities (C plants), in combination plants, and in production operations. Increasingly, this system is also used for on-site maintenance and repairs

The high-precision 3D measurement systems capture the geometry of the vehicle frame, wagon body or bogie. Shape and position of various elements thus can be checked for geometrical properties (such as parallelism, flatness, squareness) and actual dimensions can be compared to nominal dimensions. The resulting dimension is documented, taking into account allowable tolerances as well as other metadata (such as bogie type, locomotive number, service level). This is done both for functional as well as safety reasons

This is based on a variety of standards and guidelines, such as DIN 27202-10, RIL 984.0300, EN 13775 and VPI02. The 3D measurement system is used for the following purposes, among others:

- Measuring during and after production
- Measuring in case of revision (maintenance)
- Measuring after an accident
 - Deformation of a chassis or bogie
 - If necessary, before and after the repair

Here you will find more information about the [3D measuring systems](#) used in rail vehicles:

[Brochure](#)