



LINMAT
group

RAILWAY SOLUTIONS

SURVEY ENGINEERING



ROLLING STOCK & ONBOARD EQUIPMENT

3D laser scanning collects accurate as-is data on sites, and our team can use data sets to create 3D models of real spaces. This means that our clients does not have to spend time measuring and re-measuring parts of a vehicle to develop a precise model.

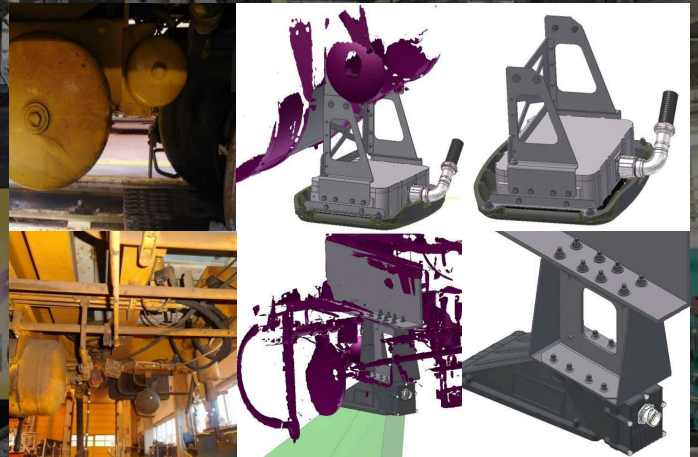
This methodology prevents mistakes from occurring by ensuring engineers notice design issues or weaknesses in the structural integrity before the vehicle is stopped to perform the refurbishment or the installation of the new systems.

ROLLING STOCK

- Refurbishment & repair
- Energy storage applications
- Forensic engineering
- Reverse engineering

ONBOARD EQUIPMENT

- ETCS engineering
- ATC & ATS
- GSM-R



ADVANTAGES

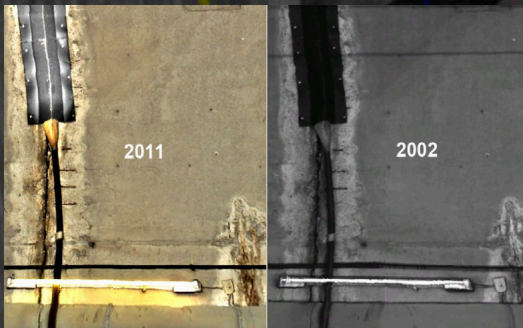
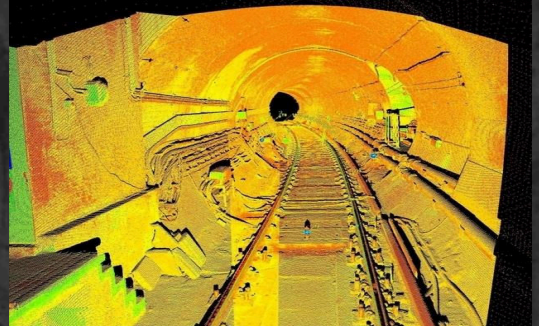
- Reduction of the vehicles times out of service
- Savings in engineering and prototyping
- Vehicle inspection on computer screen
- Reverse engineering (missing documentation)

TUNNELS

Laser scanning in railways and tunnels is being used at a rapidly increasing rate and becoming the quickest, safest and most accurate approach to document valuable 3D information for transportation related surveys.

APPLICATIONS

- Tunnel heading guidance
- Rehabilitation & modernization
- Clearance analysis
- Inventory of structures & systems
- Documentation As-built
- Inspection & evidence of state



ADVANTAGES

- Control of the profile & geological
- Quantity determination
- Detection of fault zones
- Tunnel inspection on computer screen
- Mapping of cracks & damages
- Inventory of components & installations

MOBILE MAPPING

Mobile mapping system was seen as the solution to keep staff safe, reduce time and money and maintain high accuracy across each railway project.

APPLICATIONS

- 3D Modelling and BIM Methodology
- Geographic information system GIS
- Track rehabilitation & modernization
- Inventory of structures & systems
- Electrification
- Auscultation of construction works
- ERTMS
- Documentation As-built



ADVANTAGES

- Reduce errors during the design
- Better geographic information recordkeeping
- Measurement of hard-to-reach locations
- Quantity determination
- Provide profiles or cross sections
- Detail location of elements



LIMMAT
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WWW.LIMMAT-GROUP.COM
info@limmat-group.com

SPAIN

Cuellar 11 | 40003 Segovia | T: +34 644 121 775

SWITZERLAND

Eulenweg 25 | 8048 Zurich | T: +41 786 771 474