

DB Cargo equips 100 wagons with automatic load weight monitoring from PJM

Graz, September 2023: DB Cargo optimises the loading process of bulk cargo and equips 100 EAOS wagons with PJM's automatic load weight monitoring system. The WaggonTracker Load Monitoring System determines and displays relevant data in real time, in particular weight, overload, asymmetric loading and free capacity. Optionally, the loads on wheel discs, wheelsets and bogies can also be determined. The real-time results are displayed in the web portal or - depending on customer specifications – the results are visualised directly on the wagon by means of signal lamps. In the DB Cargo application, the automated system fulfils several parameters:

- Control of the weighing data provided by customers
- Avoiding of overloading
- Avoiding time-consuming weighing carried out manually
- Best possible utilisation and optimal utilisation of transports

 Increased safety, as overloading of individual components is excluded

"Automatic load weight monitoring does optimise operations. By using sensors in future, the automated process will reduce the time required by determining the load weight, including its distribution," says Michael Wolkow, Head of Procurement, Equipment and Technology at DB Cargo AG.

"In general, the automated load monitoring system is a great support for the shipper on site. Overloading or asymmetrical loading are indicated by signal lamps directly on the wagon and the person responsible for loading can take corrective action during the loading process. The wagon owner subsequently benefits from cost savings, as damage to the wagon that can occur due to incorrect loading is excluded," says Günter Petschnig, CEO of PJM.





The load monitoring system is already in use at international customers, e.g. Europe's largest timber logistics company Mercer, Lenzing AG and Mercitalia. A novelty in this project is that DB Cargo is doing the upgrading itself: System integration and wagon installation are carried out independently in the workshops of the leading German rail logistics company.

The basis for automatic weight monitoring is the WaggonTracker digital overall system

The digital backbone for the application of automated weight monitoring is the Waggon-Tracker system. The patented and award-winning WaggonTracker is the only system in the world that records comprehensive information about freight wagons in real time and at the same time automates time-consuming processes such as brake testing or load weight control. These numerous functionalities are made possible thanks to an autonomous and powerful power supply produced by a wheel hub generator. The WaggonTracker system is freely scalable, open for further customer-specific applications and DAC-compatible.

Wood and bulk goods are "difficult" transport goods

Loading wood and bulk goods is still challenging for transporters today in terms of efficient capacity utilisation. Every bulk good can absorb a certain amount of liquid and wood can have weight differences of up to 50 % due to the different density and moisture content of the wood. Volume is therefore not the decisive factor, because the risk of either overloading the wagon or underloading it is too great. In both cases, this is at the expense of efficiency and economy. Overloading shortens the life of the wagon, is a safety issue and leads to removing the waggons at infrastructure points. Thanks to the automatic load weight control, the load weight as well as its distribution (bogie load) is recorded in real time. This ensures the best possible loading capacity of all wagons.

Further information Birgit Rami-Jauk

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PJM at a glance

PJM is an internationally renowned system specialist for rail transport and has successfully implemented projects in 30 countries on 6 continents.

PJ Monitoring GmbH is a technology leader in the automation of rail freight transport with forward-looking comprehensive solutions (e.g. automated brake test).

As an accredited test centre according to ISO/IEC 17025, PJ Messtechnik GmbH carries out tests for the approval of rail vehicles worldwide.

PJM was founded in 2006. Over 60 employees at the Graz site ensure "100 % Made in Austria": R&D, hardware and software development, production & administration come exclusively from Austria.





100 EAOS wagons of DB Cargo are being equipped with PJM's automatic load weight monitoring system.

Credit: PJM, free of charge



Track scales with PJM know-how for calibration of the loading system.

Credit: PJM, free of charge

