

Brake



DiLoc® (A)

- ▲ Automatic brake test
- ▲ Brake test while driving
- ▲ Train composition
- ▲ Documentation

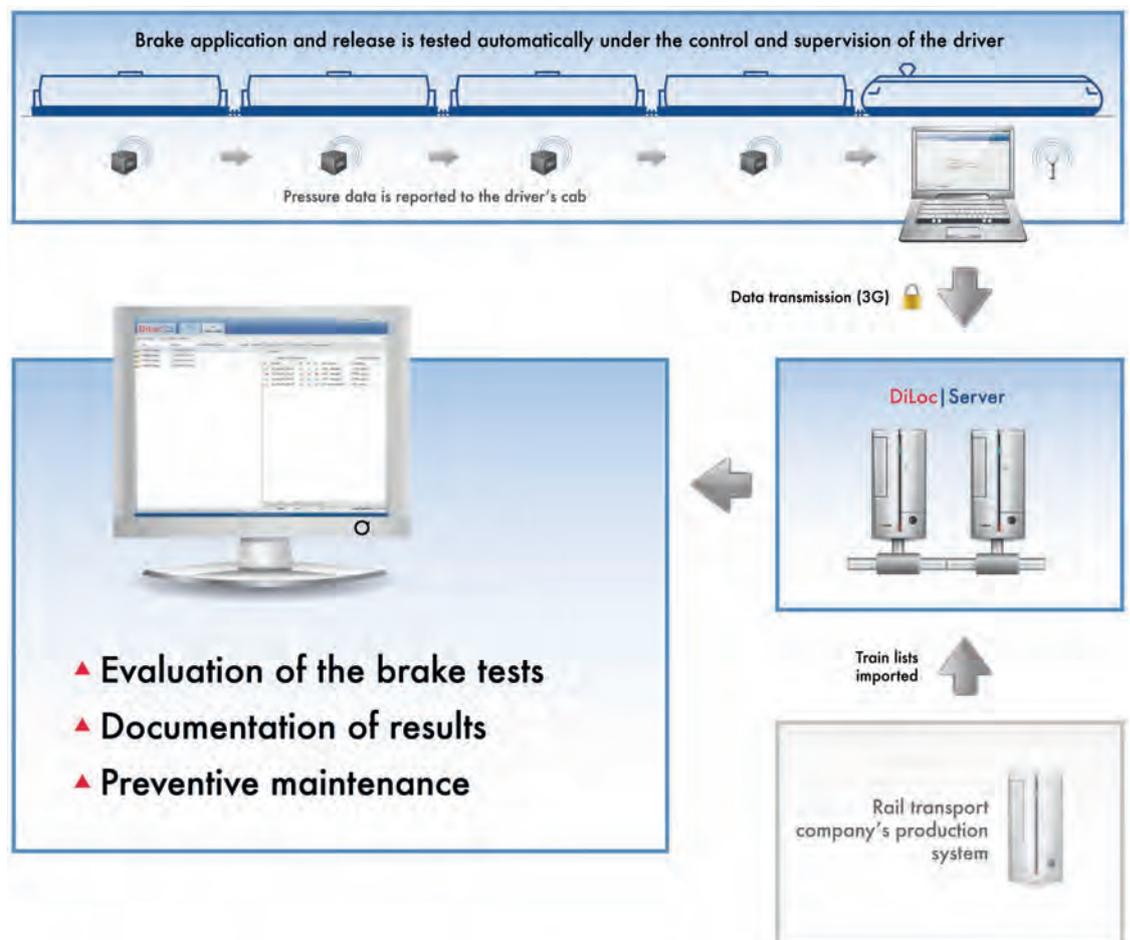
Collaborating partners

- AIS Automation Dresden GmbH
- CN-Consult GmbH
- Chemnitz Institute of Machine Tools and Plant Engineering
- Motion Control and Power Electronics GmbH
- Berlin Technical University; School V – Transport and Mechanical Systems; Institute of Land and Sea Transport, specialising in Rail Vehicles

Automatic brake test for rail freight traffic

In the course of a cooperation project promoted by the Federal Ministry of Economics and Technology, CN-Consult designed and developed the telematics and evaluation components for an automated brake test.

Operational procedures are accelerated and their quality is improved by automatic provision of documentation and quicker preparation of trains. Fewer staff are required and health and safety hazards are minimised.



Solution

1. Carriage identification

The train consist is established using a mobile outdoor device. This is done by entering the carriage numbers or by manually scanning the barcodes or RFID tags. These train data are a precondition for conducting the brake test.

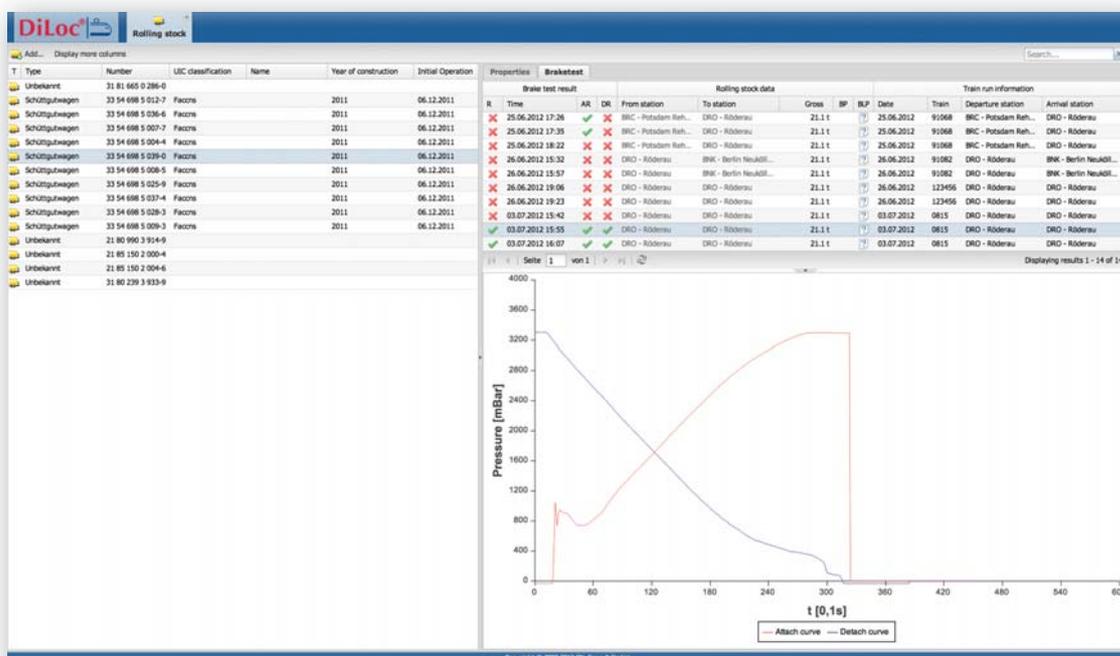
2. Conducting of brake test

A brake test wizard is incorporated in the DiLoc|Sync software. This guides the user step by step and documents the results. The status of each individual carriage is recorded and saved together with that of the whole train. The software runs on any Windows XP or Windows 7 device (laptop, netbook).

The brake pressures at each carriage can also be checked while the train is in motion.

3. Data transmission and backup

Communication with the server is via GPRS or 3G. A report is generated for each brake test, and provides a record for the employee and the company. Because all the information being transmitted is safety-related, a reliable communication interface was developed for this. The data that are saved can be analysed at any time to enable conclusions to be drawn on the status of the brakes.



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05/2013

Advantages

As well as saving time, the system provides traceability and documentation of brake tests, which is important for rail transport companies, train drivers and carriage examiners. Automatic documentation for certification (QM) is also supported.

“DiLoc|Brake” can also be used to test the brakes while the train is in motion. Information about the maintenance status of the brakes can also be called up. The loading of each carriage can also be determined by reference to door contacts and temperature sensors (option).