

Press Release

Munich, September 24, 2014

**Driver assistance systems in the rail freight sector:
Knorr-Bremse conducts joint tests with DB Schenker Rail**

Knorr-Bremse Systeme für Schienenfahrzeuge GmbH and DB Schenker Rail have been testing the ability of a driver assistance system for locomotive drivers to support energy-efficient operation on selected routes in the German rail freight sector.

Over a three-month period, a number of DB Schenker Rail trains in normal operations were equipped with the LEADER® driver assistance system from Knorr-Bremse. Based on data concerning the track topography, the train itself and its schedule, the driver assistance system computes an energy-optimized plan and issues the appropriate recommendations to the driver.

By way of background information: Reducing carbon dioxide emissions in the transport sector to promote sustainability is a declared aim of the European Union and this is driving the development of energy-efficient products. While driver assistance systems are already playing a significant part in reducing CO₂ emissions in the passenger transport sector and are in use on scheduled services around the world, in the European rail freight sector such developments are still at a very early stage.

Implementing product improvements to conserve energy and cut emissions of greenhouse gases is assigned high priority at Knorr-Bremse. To drive progress in this respect, Knorr-Bremse is currently investing €80 million in the construction of a development center at its Munich headquarters, where the testing and development operations of the Group's two divisions – Rail Vehicle Systems and Commercial Vehicle Systems – will be based. On some 17,000 square meters of built-over space, more than 100 test benches are to be set up for the technical testing and quality assurance of components for braking systems and their sub-systems. The center will create up to 350 attractive new workplaces for highly specialized engineers and technicians.

A comparison shows that the use of the driver assistance system could make a difference not only in terms of CO₂ emissions but also in the absolute amount of energy consumed over each run. The system thus makes a valuable contribution to improving both the overall environmental performance and the competitiveness of rail freight transport. Building on these highly positive outcomes, Knorr-Bremse Systeme für Schienenfahrzeuge GmbH and DB Schenker Rail are planning the progressive introduction of the system in normal operations.

The **Knorr-Bremse Group** is the world's leading manufacturer of braking systems for rail and commercial vehicles. For more than 100 years now the company has pioneered the development, production, marketing, and servicing of state-of-the-art braking systems. In the rail vehicle systems sector, the product portfolio also includes intelligent entrance systems, HVAC systems, auxiliary power supply systems, control components, and windscreen wiper systems, as well as platform screen doors, friction material, and driver advisory systems. Knorr-Bremse also offers driving simulators and e-learning systems for optimum train crew training. In the commercial vehicle systems sector, the product range includes complete braking systems with driver assistance systems, as well as torsional vibration dampers, powertrain-related solutions, and transmission control systems for enhanced energy efficiency and fuel economy.

Contact:

Eva Seifert

Head of Corporate Communications

Tel: +49 (0)89 3547 1402

Fax: +49 (0)89 3547 1403

E-mail: eva.seifert@knorr-bremse.com

Knorr-Bremse AG

Moosacher Str. 80

80809 Munich

Germany

www.knorr-bremse.com