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Railway Noise Reduction:

EuropeTrain, the international freight test train managed by Deutsche Bahn and the International Union of Railways (UIC) to test the innovative noise reducing composite brake blocks, successfully completes 163,000 kilometres over 13 runs

Experts expect the LL-brake block system, the system with the highest potential of reducing noise of existing freight wagons, to perform successfully, both technically and economically

(Paris, 9 May 2012) Railways are a sustainable and climate-friendly means of transport. Nonetheless, their presence is felt by many people living nearby a railway line as a burden. The reason: railway noise. The railway lines often pass through densely populated areas and freight trains are mostly operated at night. The railways have a long history of noise control. Numerous projects have developed and analysed different abatement possibilities. The noise control measures most often implemented are noise barriers or insulated windows.

The largest potential, however, lies in noise reduction at the source (wheel-rail-contact). One of the solutions for freight trains, that in general have a low renewal rate, is the removal of the cast-iron brake blocks by retrofitting them with composite brake blocks that smoothen the wheel surface. The composite brake blocks have an approximately 10 dB noise reduction potential which means that perceived noise is decreased by half. Two principle technologies are known: K-blocks, fully homologated and have been used for years on new wagons and LL-blocks, still only homologated provisionally, but due to its 1:1 compatibility with commonly used cast-iron brake blocks it can be retrofitted to existing freight wagon fleets at significantly reduced cost as technical modifications to the freight wagons will not be needed. These composite brake blocks, also called “whisper brakes” exist, but a number of points are still unresolved in the homologation process, and cannot currently be used directly on a large scale in Europe.

LL-blocks are currently tested by EuropeTrain. The EuropeTrain project is a project coordinated by UIC and Deutsche Bahn and is supported by 29 railway companies, 7 partners from the industry sector, the Community of European Railway and Infrastructure Companies (CER) and the European Rail Infrastructure Managers (EIM).

EuropeTrain is a special test train with about 30 representative freight wagons, which has been travelling across Europe since December 2010 to speed up the solution process of the points yet to be finalised in homologation and to further improve the LL brake block. All operational, topographical and climatic conditions relevant for Europe are covered in a balanced way, e.g. running on different gradients with different operational modes, arctic winter areas and high temperature zones.

Today, EuropeTrain has completed 13 runs totalling 163,000 of the planned 200,000 kilometres. The remaining 37,000 kilometres will be completed in three runs by September

2012. The experts are optimistic after the very positive experiences with EuropeTrain so far, and expect the LL-block system to perform successfully, both technically and economically. Assuming positive results UIC will carry on at full speed with the final approval steps.

EuropeTrain makes a special stop in the Rhine Valley in Germany.

On 4 May EuropeTrain made a special stop in the Rhine Valley at the end of the third and last run in Germany.

In recent years, almost 300 million Euros of the voluntary governmental noise abatement programme have been implemented by Deutsche Bahn for noise abatement measures along the Rhine. The installation of noise barriers and insulated windows for example has perceptibly relieved the residents. Deutsche Bahn has made it its mission to reduce noise even further by using the innovative noise-reducing technologies in vehicles and on the track ahead and thus combat the noise at the source. Within the project "Quiet Rhine", the German federal government is also supporting among others the retrofitting of 1,250 DB Schenker Rail freight wagons with composite brake blocks. For many years all new procured freight wagons have been equipped with quiet brake blocks. About 7,000 silent freight wagons are already in operation.

You'll find more information on the special EuropeTrain website: www.europetrain.uic.org

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About UIC – International Union of Railways

UIC, the international railway association which celebrates its 90th anniversary in 2012, counts 200 members across 5 continents (railway companies, infrastructure managers, rail-related transport operators, etc.). UIC's members represent 1 million kilometres of lines, 2,800 billion passenger-km, 9,500 billion tonne-km, and a workforce of 6.7 million people.

UIC's chief task is to promote railway transport around the world and help its members to meet all the current and future challenges of mobility and sustainable development.

UIC's cooperative undertakings aim to boost the railway system's competitiveness and interoperability, particularly on an international scale. The 700 technical leaflets which make up the "UIC Code" constitute a technical benchmark across the globe. UIC also comprises 8 forums and cooperation platforms, 6 regional assemblies, 30 study bodies coordinating circa 180 railway projects, world congresses, conferences and information sessions organised each year, as well as a host of services offered to its members.

www.uic.org